



Our ref: CORP F2025/000281
 Receipt No: 22098855

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3 October 2025

The Hon Dr Nicola Centofanti MLC
 Member of the Legislative Council
 Parliament House
 ADELAIDE SA 5000

Dear Dr Centofanti

Determination under the *Freedom of Information Act 1991*

I refer to your application made under the *Freedom of Information Act 1991* which was received by the Department of Primary Industries and Regions (PIRSA) on 3 September 2025, seeking access to the following:

“Stock levels of key species in the South Australian fishery, including but not limited to: King George Whiting, Southern Garfish, Snapper and Southern Calamari. Specifically, the stock levels prior to 1 January 2025 compared with the most recent (to 3rd September 2025) assessment of stock levels.”

Timeframe: 1/01/2024 to 3/09/2025

Accordingly, the following determination has been finalised.

I have located eighteen documents that are captured within the scope of your request.

Determination

I have determined that access to the following documents is **granted in full**:

Doc No.	Description of document	No. of Pages
1	SARDI Publication No. F2007/000720-5 – SARDI Research Report Series No. 1223 – Southern Garfish (<i>Hyporhamphus melanochir</i>) Fishery – August 2024 – Stock Assessment Report to PIRSA Fisheries and Aquaculture Refer link: Southern Garfish (Hyporhamphus melanochir) Fishery. Stock Assessment Report to PIRSA Fisheries and Aquaculture	116
2	Chair’s Report – Marine Scalefish Fishery Management Advisory Committee – Meeting 9 – 7 and 8 May 2025	25
3	Chair’s Report – Marine Scalefish Fishery Management Advisory Committee – Meeting 6 – 9 and 10 May 2024	31

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4	SARDI Publication No. F2007/000729-21 - SARDI Research Report Series No. 1252 – Blue Crab (<i>Portunus armatus</i>) Fishery 2023/24 – June 2025 – Fishery Assessment Report to PIRSA Fisheries and Aquaculture Refer link: Blue Crab (Portunus armatus) Fishery 2023/24. Fishery Assessment Report to PIRSA Fisheries and Aquaculture	65
5	SARDI Research Report Series No. 1208 – Stock Assessment of Australian Sardine (<i>Sardinops sagax</i>) off South Australia 2023 – January 2024 – report to PIRSA Fisheries and Aquaculture – Link to Document 5: Stock assessment of Australian Sardine (Sardinops sagax) off South Australia 2023. Report to PIRSA Fisheries and Aquaculture	114
6	SARDI Publication No. F2011/000332-13 - SARDI Research Report Series No. 1212 – Stock Status Report for the South Australian Giant Crab (<i>Pseudocarcinus gigas</i>) Fishery in 2022-23 – February 2024 – Final Report to PIRSA Fisheries and Aquaculture Refer link: https://pir.sa.gov.au/data/assets/pdf_file/0009/469116/stock-status-report-sa-giant-crab-fishery-2022-23.pdf	25
7	SARDI Publication No. F2020/000208-5 - SARDI Research Report Series No. 1218 – Assessment of the South Australian Lakes and Coorong Fishery in 2022/23 – June 2024 – Report to PIRSA Fisheries and Aquaculture Refer link: Assessment of the South Australian Lakes and Coorong Fishery in 2022/23	108
8	SARDI Publication No. F2007/000772-14 - SARDI Research Report Series No. 1219 – Stock Status Report for the West Coast Prawn (<i>Penaeus (Melicertus) latisulcatus</i>) Fishery in 2023 – June 2024 – Report to PIRSA Fisheries and Aquaculture Refer link: Stock Status Report for the West Coast Prawn (Penaeus (Melicertus) latisulcatus) Fishery in 2023. Report to PIRSA Fisheries and Aquaculture	35
9	SARDI Publication No. F2007/000276-17 - SARDI Research Report Series No. 1221 – Southern Zone Rock Lobster (<i>Jasus edwardsii</i>) Fishery Stock Assessment 2022/23 – August 2024 – Report to PIRSA Fisheries and Aquaculture Refer link: Southern Zone Rock Lobster (Jasus edwardsii) Fishery Stock Assessment 2022/23. Report to PIRSA Fisheries and Aquaculture	73
10	SARDI Publication No. F2007/000320-17 - SARDI Research Report Series No. 1222 – Northern Zone Rock Lobster (<i>Jasus edwardsii</i>) Fishery Stock Assessment 2022/23 – August 2024 – Report to PIRSA Fisheries and Aquaculture Refer link: Northern Zone Rock Lobster (Jasus edwardsii) Fishery Stock Assessment 2022/23. Report to PIRSA Fisheries and Aquaculture	75

11	SARDI Publication No. F2011/000332-14 - SARDI Research Report Series No. 1257 – Stock Status Report for the South Australian Giant Crab (<i>Pseudocarcinus gigas</i>) Fishery in 2023/24 – July 2025 – Fishery Status Report to PIRSA Fisheries and Aquaculture Refer link: Stock Status Report for the South Australian Giant Crab (<i>Pseudocarcinus gigas</i>) Fishery in 2023/24. Fishery Status Report to PIRSA Fisheries and Aquaculture	27
12	SARDI Publication No. F2007/000729-20 - SARDI Research Report Series No. 1227 – Blue Crab (<i>Portunus armatus</i>) Fishery 2022/23 – September 2024 – Fishery Assessment Report to PIRSA Fisheries and Aquaculture Refer link: Blue Crab (<i>Portunus armatus</i>) Fishery 2022/23. Fishery Assessment Report to PIRSA Fisheries and Aquaculture	63
13	SARDI Publication No. F2017/000427-7 - SARDI Research Report Series No. 1230 – Assessment of the South Australian Marine Scalefish Fishery in 2022/23 – October 2024 – Report to PIRSA Fisheries and Aquaculture Refer link: Assessment of the South Australian Marine Scalefish Fishery in 2022-23. Report to PIRSA Fisheries and Aquaculture	210
14	SARDI Publication No. F2007/000566-14 - SARDI Research Report Series No. 1232 – Spawning Biomass of Sardine, <i>Sardinops sagax</i> , in waters off South Australia in 2024 – November 2024 – Report to PIRSA Fisheries and Aquaculture Refer link: Spawning biomass of Sardine, <i>Sardinops sagax</i>, in waters off South Australia in 2024. Report to PIRSA Fisheries and Aquaculture	45
15	SARDI Publication No. F2007/000715-18 - SARDI Research Report Series No. 1233 – Southern Zone Rock Lobster (<i>Jasus edwardsii</i>) Fishery Status Report 2023/24 – November 2024 – Status Report to PIRSA Fisheries and Aquaculture Refer link: Southern Zone Rock Lobster (<i>Jasus edwardsii</i>) Fishery Status Report 2023/24. Status Report to PIRSA Fisheries and Aquaculture	24
16	SARDI Publication No. F2007/000714-18 - SARDI Research Report Series No. 1234 – Northern Zone Rock Lobster (<i>Jasus edwardsii</i>) Fishery Status Report 2023/24 – November 2024 – Status Report to PIRSA Fisheries and Aquaculture Refer link: Northern Zone Rock Lobster (<i>Jasus edwardsii</i>) Fishery Status Report 2023/24. Status Report to PIRSA Fisheries and Aquaculture	28
17	SARDI Publication No. F2017/000331-8 - SARDI Research Report Series No. 1246 – Western Zone Greenlip Abalone (<i>Haliotis laevis</i>) and Blacklip Abalone (<i>H. rubra</i>) Fisheries in 2023/24 – March 2025 – Report to PIRSA Fisheries and Aquaculture Refer link: Western Zone Greenlip Abalone (<i>Haliotis laevis</i>) and Blacklip Abalone (<i>H. rubra</i>) Fisheries in 2023/24. Report to PIRSA Fisheries and Aquaculture	88

18	<p>SARDI Publication No. F2007/000550-4 - SARDI Research Report Series No. 1248 – Pipi (<i>Latona deltoides</i>) Fishery – March 2025 – Stock assessment report to PIRSA Fisheries and Aquaculture</p> <p>Refer link: Pipi (<i>Latona deltoides</i>) Fishery. Stock assessment report to PIRSA Fisheries and Aquaculture</p>	56
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Links to the SARDI Research Reports have been provided in lieu of the full documents as they are available on the PIRSA website.

If you are dissatisfied with this determination, you are entitled to exercise your right of review and appeal as outlined in the attached documentation [Making a Freedom of Information Application | State Records of South Australia \(archives.sa.gov.au\)](#), by completing the “FOI Application Form for Internal Review of a Determination” and returning the completed form to:

Freedom of Information Principal Officer
 Department of Primary Industries and Regions
 GPO Box 1671
 ADELAIDE SA 5001

or via email PIRSA.FOI@sa.gov.au

In accordance with the requirements of Premier and Cabinet Circular PC045, details of your application, and the documents to which you are given access, will be published in PIRSA's disclosure log. A copy of PC045 can be found at http://dpc.sa.gov.au/data/assets/pdf_file/0019/20818/PC045-Disclosure-Log-Policy.pdf

If you disagree with publication, please advise the undersigned in writing within fourteen calendar days from the date of this determination.

Should you require further information or clarification with respect to this matter, please contact Ms Lisa Farley, Senior Freedom of Information Advisor on 8429 0422 or email PIRSA.FOI@sa.gov.au.

Yours sincerely



Michelle Griffiths
Accredited Freedom of Information Officer
DEPARTMENT OF PRIMARY INDUSTRIES AND REGIONS

Marine Scalefish Fishery Management Advisory Committee

Meeting #9 – 7 and 8 May 2025

The Marine Scalefish Fishery Management Advisory Committee (MSFMAC) held its ninth meeting on 7 and 8 May 2025 at PIRSA, West Beach, and via online video conference call.

The MSFMAC meeting recommended catch limits for 1 July 2025 to 30 June 2026 for the Management Tier 1 stocks in the Marine Scalefish Fishery (MSF) – Snapper, King George Whiting, Southern Garfish and Southern Calamari. The meeting discussed the draft Snapper Rebuilding Plan, Red Tape Reduction, Regional Management and Catch Shares, as well as Yellowfin Whiting management and Allocation Review Committee recommendations.

Recommended catch limits

The MSFMAC Science Subcommittee (SSC) had met and provided recommended catch limits for each stock of the Management Tier 1 stocks to the MSFMAC. The SSC had considered the latest available catch statistics and scientific information, including species/stock summary sheets prepared by the South Australian Research and Development Institute (SARDI). The final stock summary sheets are provided as an attachment to this report and include the full MSFMAC recommendations for each stock.

SARDI provided the MSFMAC with an overview of stock summaries and latest scientific information for each stock including updated commercial catch and effort trends. The MSFMAC noted one change to stock status (in 2022-23) from 'recovering' to 'sustainable' for Southern Garfish in Gulf St Vincent and Kangaroo Island Fishing Zone (GSVFZ) and recent commercial catch statistics indicated positive or stable trends for most stocks. Important issues were discussed for each stock, summarised below.

Southern Garfish

Improvements to the Southern Garfish stock assessment have continued, including standardisation of catch per unit effort (CPUE) and preliminary transition to a new assessment model framework. As recommended by the MSFMAC, research has commenced under a Ministerial exemption issued to a small number of MSF fishers, to determine any impact the 5m depth restriction for haul nets was having on the sex ratios of retained Garfish and implications for estimating spawning biomass.

King George Whiting (KGW)

The MSFMAC noted that the transition to a new assessment modelling framework was underway to support application of the draft Harvest Strategy. Current information indicated all KGW stocks are provisionally classified as sustainable, however the MSFMAC noted that, for the Spencer Gulf Fishing Zone (SGFZ) KGW stock, there has been a declining trend in recruitment since 2014 and a small decline in estimated biomass in recent years. The transition to the new modelling framework was expected provide a better understanding of the position of the stock for the setting of catch limits for 2026/27.

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Southern Calamari

Southern Calamari stocks were classified as sustainable, however the MSFMAC noted varying concerns about the stocks including catch rates and localised depletion, with strong concerns from some fishers in certain areas, noting this was not the view provided by the peak industry bodies for the MSF. The MSFMAC considered the SARDI stock summary information presented and application of an assessment method that is being investigated as part of an existing project ('Developing a cost-effective stock assessment program for Southern Calamari fisheries'; FRDC Project No. 2021-118). This method, known as the catch per unit effort (CPUE)-based harvest control rule (Little et al. 2011) and which assumes standardised CPUE can be used as a reasonable proxy for biomass, was applied to the control rules in the draft harvest strategy framework. The CPUE-based harvest control rule is considered an advancement to the previously used weight-of-evidence approach to assess Southern Calamari, but it is acknowledged that the outputs and findings are preliminary. The Total Allowable Commercial Catch (TACC) recommendation took into consideration this method, the existing performance of the fishery, and that the stock assessment program for Southern Calamari is under development. The MSFMAC noted the previous TACC's were set using the 5-year (2015-2019) catch average.

A reduction was recommended for the SGFZ and Gulf St Vincent Fishing Zone (GSVFZ) TACCs. Noting the significant impact of a recommended reduction, the MSFMAC recommended a staged transition noting that the TACC's would be reviewed next year following consideration of new information, further development of the stock assessment program for Southern Calamari (from the FRDC project) and the draft Harvest Strategy Framework. The MSFMAC noted that there was a need to consider management arrangements to reduce catch for sectors based on the new information.

Snapper

The Western Victorian Snapper stock is classified as sustainable including within the South Australian South East Fishing Zone (SEFZ). An increasing biomass was noted with the fishable biomass three-year average well above the previous three-year average, and high 2024/25 provisional catch rates. Non-compliance of mandatory reporting in the recreational sector (excluding Charter) was estimated to be 34% in 2024/25 (provisional), an improvement from 2023/24.

Summary

Considering the available information and discussion on key issues raised, the MSFMAC recommended reductions, through a staged approach to the catch limits in place for the 2024/25 for Southern Calamari in the SGFZ and GSVFZ to be applied for 2025/26. Dissenting views were recorded from the commercial MSF members of the MSFMAC who requested that the Southern Calamari TACC limits of 2024/25 be maintained in 2025/26. Recommendations on other TACCs for 2025/26 were to maintain the 2024/25 TACC (or catch caps or TARC where relevant).

The MSFMAC recommended commensurate reductions be applied to the recreational (non-charter) sector for SGFZ and GSVFZ Southern Calamari and that PIRSA and the relevant Prawn sectors consider mechanisms to reduce their catch commensurate with the reductions recommended for the MSF.

The MSFMAC recommended the catch limits outlined in Table 1 be applied for 2025/26. Full recommendations are further outlined in the attached stock summaries.

Table 1. MSFMAC recommended catch limits for 1 July 2025 to 30 June 2026

Fishing Zone	King George Whiting TACC (T)	Southern Garfish TACC (T)	Calamari TACC (T)	Snapper TACC / TARC (T)
West Coast	183 (catch cap)	N/A	N/A	0

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Spencer Gulf	116.963	103.451	176.0467	0
Gulf St Vincent /	46.334	75.289	146.6913	0
South East	N/A	N/A	N/A	52.5 / 17.5*

*Shared amongst the Recreational, Charter, and Aboriginal traditional sectors as per updated regional catch shares for Snapper in the South East Fishing Zone.

Quota under-catch and over-catch

For all quota managed stocks, the MSFMAC recommended the default commercial under-catch and over-catch arrangements, being up to 10% of the licence holder's quota entitlement, be implemented for the 2025/26 quota period with the exception of Southern Calamari in the SGFZ where three options were considered. The recreational members of the MSFMAC expressed dissenting views regarding these arrangements for Southern Garfish in the GSVFZ and SGFZ, and considered carry-over should not be applied based on the commercial Garfish allocation breach.

The MSFMAC supported 10% carry-over of the Charter Boat Fishery share of the Total Allowable Recreational Catch (TARC) for Snapper in the SEFZ. Carry-over of uncaught recreational non-charter share of the TARC was not supported as there remains a concern regarding non-compliance with the mandatory South East Snapper reporting requirements. The MSFMAC recommended that PIRSA develop a policy for carry over for the recreational sectors.

SE Snapper bag and boat limits

The MSFMAC noted updates that had been made to the regional catch shares for Snapper in the SEFZ applicable to the recreational sector and Charter Boat Fishery:

- Recreational regional share: from 10.7% to 19.5% (from 44% of the overall rec share (retaining statewide proportions) to 81.25% of the rec share)
- Charter regional share: from 13.3% to 4.5% (from 55% of the overall rec share (retaining statewide proportions) to 18.7% of the rec share)

The changes had been made by PIRSA to ensure consistency with the approach to calculate all other regional shares. Considering the increase in regional share for the recreation fishing sector, the MSFMAC considered the bag and boat limits. The MSFMAC recommended that the recreational non-charter bag limit for 2025/26 be increased from 2 to 3 Snapper per person and that fishers be legally required to stop fishing for Snapper when their bag limit is reached

Yellowfin Whiting (YFW)

The MSFMAC had been provided with recommendations from the SSC who had considered additional information regarding the spatial distribution of YFW catches for the last 40 years. The SARDI information indicated there had been a general reduction in the number of blocks where YFW was caught and concentration on upper east in the SGFZ. To a lesser extent, there had also been a contraction in the GSVFZ. There were ongoing concerns from the recreational sector regarding low catches in the South-West SGFZ.

The MSFMAC agreed that YFW should continue to be monitored and requested PIRSA/SARDI provide an update and overview of the FRDC project (Population biology and dynamics of Yellowfin Whiting

2019-179) at a future MSFMAC meeting. An updated assessment will be provided as part of the annual SARDI assessment of the MSF later in 2025.

Snapper Rebuilding Plan

The MSFMAC discussed the Snapper Rebuilding Plan being developed by PIRSA and SARDI in consultation with the MSFMAC. The MSFMAC noted the draft Modelling Workplan provided by SARDI and that Stage 1 modelling will be complete in early June 2025 and provided to the SSC and then the MSFMAC to inform Stage 2 modelling.

Red Tape Reduction in the MSF

PIRSA provided an update on Red Tape Reduction (RTR) in the MSF and the MSFMAC recognised the need for and value in reducing red tape in the multi species, multi gear MSF. The MSFMAC discussed whether PIRSA should seek MSFMAC advice on RTR proposals. The MSFMAC appreciated ongoing updates on RTR and noted the request from a recreational sector representative for PIRSA to consider opportunities to provide other sectors with additional information regarding RTR proposals and progress so that any concerns can be noted and considered.

Allocation Review processes

The MSFMAC noted the [outcomes from the recent, 2nd stage, full reviews of allocations undertaken by the Allocation Review Committee on 17 December 2024](#), and approved by the Minister on 25 February 2025. The MSFMAC noted that PIRSA has begun processes, including any necessary discussions with key stakeholders, to implement the approved outcomes for Black Bream, Sand Crab and Yellowtail Kingfish.

Regional Management and Catch Shares in the MSF

The MSFMAC noted that PIRSA is consolidating feedback provided by MSFMAC members, and an updated draft *Regional Management and Catch Shares in the MSF - PIRSA Position Paper* will be provided out-of-session. The MSFMAC endorsed PIRSA to seek focused consultation from the relevant peak bodies following consolidation and consideration of recent feedback.

The next MSFMAC meeting was expected to be held in June 2025 with a final date to be confirmed out-of-session.

Dr Ilona Stobutzki

Chair of the Marine Scalefish Fishery Management Advisory Committee

MSF Management Tier 1 stock summaries – 2025

King George Whiting

WEST COAST



Created 26 March 2025; Modified 29 April 2025

Stock status	2021/22 – Sustainable		2022/23 – Sustainable		2023/24 – Status pending	
Total catches (t) RBC – recommended biological catch RBCC – recommended biological commercial catch TACC – total allowable commercial catch		Commercial	Recreational	RBC	RBCC	TACC
	2019/20	97.2	-	-	-	-
	2020/21	81.0	-	-	-	-
	2021/22	78.3	58.9*	-	-	473
	2022/23	85.9	-	-	-	183
	2023/24	84.9	-	-	-	183
	2024/25	▼40.6 (Mar 2025)	-	-	-	183
* Based on regional catch (number) and average weight in Beckmann et al. (2023)						
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total
	MSF	49.5%	REC	45.5%	1%	100%
	NZRLF	1.0%	CHARTER	3.0%		
	SZRLF	0.0%				
	<i>Total</i>	<i>50.5%</i>	<i>Total</i>	<i>48.5%</i>	<i>1%</i>	<i>100%</i>
Stock assessment report(s)	<ul style="list-style-type: none"> Earl et al. (in prep.) – assessment of King George Whiting up to 2023/24. Dennis et al. (in prep.) – general assessment of selected MSF species/stocks up to 2023/24. 					
Assessment program	<ul style="list-style-type: none"> Annual catch and effort statistics and trends in a stock summary report. Length and age structures from market (Adelaide) and industry (regional) samples. Application of a fully integrated assessment model ('WhitEst') and production of a stock assessment report every two or three years. Recreational catch estimates obtained every several years. Current assessment by weight of evidence. No information is currently available for Aboriginal and traditional fishing. 					
Catch and effort trends	<ul style="list-style-type: none"> In 2023/24, total catch, target handline effort, and number of licences taking or targeting King George Whiting all continued to decline to be among the lowest recorded. All measures of target handline CPUE (i.e., nominal and standardised, kg/fisher-day and kg/line-hour) were among the highest recorded. 					
Triggered performance indicators	General					
	<ul style="list-style-type: none"> Total catch: 84.9 t (3rd lowest) Target handline effort: 3,080 fisher-days (lowest) Target handline CPUE: 27.5 kg fisher-day⁻¹ (2nd highest) 					
Triggered performance indicators	Biological					
	<ul style="list-style-type: none"> Recruitment: +17% (5-year average ±10% of long-term average) 					
Assessment summary	<ul style="list-style-type: none"> The current stock assessment report (Earl et al. in prep.) provides 'WhitEst' model outputs (estimates of fishable biomass, harvest fraction and recruitment) using information up to 2023/24; none of these indicators were triggered (all were within operational targets). Additionally, low levels of catch and effort in 2023/24, combined with high catch rates, suggest the West Coast stock is being lightly fished and there are no stock concerns. 					
MSFMAC recommendation	<p>NOTING:</p> <ul style="list-style-type: none"> The SSC recommendation. Sustainable status of the stock, which was lightly fished, with the CPUE indices suggesting an increasing yet uncertain biomass. The draft HSF and the progression towards an assessment in the stock synthesis 3 (SS3) modelling framework. 					

MSF Management Tier 1 stock summaries – 2025

King George Whiting

WEST COAST



Created 26 March 2025; Modified 29 April 2025

MSFMAC recommendation: The MSFMAC recommended the KGW 2024/25 commercial catch cap of 183 t in the WCFZ be maintained for 2025/26.

2025/26 RBC and RBCC (t) options

- Fishable biomass = 2,378 t (\geq LML 30 cm; Earl et al. in prep.; cf. 2,341 t in 2021/22)
- Commercial catch share (regional) = 70.9%

RBC and RBCC options for 2025/26

LML – legal minimum length
 H_{TARG} – target harvest fraction

	H_{TARG}	RBC	RBCC
2013 Management Plan	0.28	665.8	472.1
M = 0.45 (WhitEst)	0.26 (2/3 M)	618.3	438.4
M = 0.2 (2022/23 approach)	0.125 (2/3 M)	297.3	210.8
5-yr average catch			85.4
5-yr maximum catch			97.1
2022/23*			183 (TACC)
2023/24			183 (TACC)
2024/25			183 (TACC)

* Approach/method used for recommending the 2024/25 TACC

R&D needs (incl. current initiatives)

- Investigate alternative assessment model outputs for King George Whiting stocks using Stock Synthesis.
- Improve assessment through the integration of information on King George Whiting from offshore areas of the West Coast region (project proposal recently developed by Southern Fishery and Ecosystem Solutions).
- Supplement market sampling with industry-direct sampling in the regions to obtain more representative samples (commenced in 2023/24).
- Application of the harvest strategy framework under the new management plan.
- More regular and reliable estimates of recreational catch.

References

Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.

Dennis, J.D. et al. (in prep.). Assessment of the South Australian Marine Scalefish Fishery in 2023/24. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide.

Earl, J. et al. (in prep.). King George Whiting (*Sillaginodes punctatus*) Fishery. Stock Assessment Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide.

MSF Management Tier 1 stock summaries – 2025

King George Whiting

SPENCER GULF



Created 26 March 2025; Modified 29 April 2025

Stock status	2021/22 – Sustainable		2022/23 – Sustainable		2023/24 – Status pending	
Total catches (t) RBC – recommended biological catch RBCC – recommended biological commercial catch TACC – total allowable commercial catch		Commercial	Recreational	RBC	RBCC	TACC
	2019/20	95.6	-	-	-	-
	2020/21	69.2	-	-	-	-
	2021/22	71.1	161.2*	-	-	111
	2022/23	78.6	-	-	-	111
	2023/24	83.1	-	-	-	116.963
	2024/25	▼51.5 (Mar 2025)	-	-	-	116.963
* Based on regional catch (number) and average weight in Beckmann et al. (2023)						
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total
	MSF	49.5%	REC	45.5%	1%	100%
	NZRLF	1.0%	CHARTER	3.0%		
	SZRLF	0.0%				
	<i>Total</i>	<i>50.5%</i>	<i>Total</i>	<i>48.5%</i>	<i>1%</i>	<i>100%</i>
Stock assessment report(s)	<ul style="list-style-type: none"> Earl et al. (in prep.) – assessment of King George Whiting up to 2023/24. Dennis et al. (in prep.) – general assessment of selected MSF species/stocks up to 2023/24. 					
Assessment program	<ul style="list-style-type: none"> Annual catch and effort statistics and trends in a stock summary report. Length and age structures from market (Adelaide) and industry (regional) samples. Application of a fully integrated assessment model ('WhitEst') and production of a stock assessment report every two or three years. Recreational catch estimates obtained every several years. Current assessment by weight of evidence. No information is currently available for Aboriginal and traditional fishing. 					
Catch and effort trends	<ul style="list-style-type: none"> In 2023/24, total catch and number of licences taking or targeting King George Whiting increased slightly, while target handline effort remained stable. Both measures of nominal target handline CPUE—in kg/fisher-day and kg/line-hour—increased to be the highest on record. While both standardised CPUE measures declined; the CPUE expressed in kg/line-hour remained relatively high. 					
Triggered performance indicators	General					
	<ul style="list-style-type: none"> Target handline effort: 2,550 fisher-days (lowest) Target handline effort: decrease over 5 consecutive years (yes) Target handline CPUE: 22.7 kg fisher-day⁻¹ (highest) 					
Triggered performance indicators	Biological					
	<ul style="list-style-type: none"> Recruitment: -18% (5-year average ±10% of long-term average) 					
Assessment summary	<ul style="list-style-type: none"> The current stock assessment report (Earl et al. in prep.) provides 'WhitEst' model outputs (estimates of fishable biomass, harvest fraction and recruitment) using information up to 2023/24; none of these indicators were triggered (all were within operational targets). Additionally, low levels of catch and effort in 2023/24, combined with high catch rates, suggest the Spencer Gulf stock is being lightly fished and there are no stock concerns. 					

MSF Management Tier 1 stock summaries – 2025

King George Whiting

SPENCER GULF



Created 26 March 2025; Modified 29 April 2025

MSFMAC recommendation	<p>NOTING:</p> <ul style="list-style-type: none"> - The SSC recommendation - The concern with the decline in recruitment. However, caution is required when interpreting recent recruitment estimation and the need to continue to monitor for a decline in recruitment. - The highest target handline CPUE on record and stable harvest fraction. - The transition of the assessment to the SS3 modelling framework in 2026 that should provide a better understanding of the state of the stock. - The draft HSF. <p>MSFMAC recommendation: The MSFMAC recommended the KGW 2024/25 TACC of 116.963t in the SGFZ be maintained as the TACC for 2025/26.</p> <p>MSFMAC recommendation: The MSFMAC recommended the default commercial under-catch and over-catch arrangements, being up to 10% of the licence holder’s quota entitlement, be implemented for KGW in the SGFZ for the 2025/26 quota period.</p>
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2025/26 RBC and RBCC (t) options	<ul style="list-style-type: none"> • Fishable biomass = 1,097 t (\geq LML 30 cm west of 136°E, \geq LML 32 cm east of 136°E; Earl et al. in prep.; cf. 1,115 t in 2021/22) • Commercial catch share (regional) = 44.9%
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LML – legal minimum length H_{TARG} – target harvest fraction	RBC and RBCC options for 2025/26		
	H_{TARG}	RBC	RBCC
	2013 Management Plan	0.28	307.2
	M = 0.45 (WhitEst)	0.26 (2/3 M)	285.2
	M = 0.2 (2022/23 approach)	0.125 (2/3 M)	137.1
	5-yr average catch		79.5
	5-yr maximum catch		95.6
	2022/23*		111 (TACC)
	2023/24		116.963 (TACC)
	2024/25		116.963 (TACC)

* Approach/method used for recommending the 2024/25 TACC

R&D needs (incl. current initiatives)	<ul style="list-style-type: none"> • Investigate alternative assessment model outputs for King George Whiting stocks using Stock Synthesis. • Improve our understanding of the contribution of King George Whiting from Coffin Bay to the fishable biomass of the Spencer Gulf fishing zone. • Supplement market sampling with industry-direct sampling in the regions to obtain more representative samples (commenced in 2023/24). • Application of the harvest strategy framework under the new management plan. • More regular and reliable estimates of recreational catch.
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References	<p>Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.</p> <p>Dennis, J.D. et al. (in prep.). Assessment of the South Australian Marine Scalefish Fishery in 2023/24. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide.</p> <p>Earl, J. et al. (in prep.). King George Whiting (<i>Sillaginodes punctatus</i>) Fishery. Stock Assessment Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide.</p>
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MSF Management Tier 1 stock summaries – 2025

King George Whiting

GULF ST VINCENT AND KANGAROO ISLAND



Created 26 March 2025; Modified 29 April 2025

Stock status	2021/22 – Sustainable		2022/23 – Sustainable		2023/24 – Status pending	
Total catches (t) RBC – recommended biological catch RBCC – recommended biological commercial catch TACC – total allowable commercial catch		Commercial	Recreational	RBC	RBCC	TACC
	2019/20	41.6	-	-	-	-
	2020/21	30.8	-	-	-	-
	2021/22	26.8	76.3*	-	-	46
	2022/23	27.8	-	-	-	46
	2023/24	27.7	-	-	-	46.334
	2024/25	▼19.4 (Mar 2025)	-	-	-	46.334
* Based on regional catch (number) and average weight in Beckmann et al. (2023)						
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total
	MSF	49.5%	REC	45.5%	1%	100%
	NZRLF	1.0%	CHARTER	3.0%		
	SZRLF	0.0%				
	<i>Total</i>	<i>50.5%</i>	<i>Total</i>	<i>48.5%</i>	<i>1%</i>	<i>100%</i>
Stock assessment report(s)	<ul style="list-style-type: none"> Earl et al. (in prep.) – assessment of King George Whiting up to 2023/24. Dennis et al. (in prep.) – general assessment of selected MSF species/stocks up to 2023/24. 					
Assessment program	<ul style="list-style-type: none"> Annual catch and effort statistics and trends in a stock summary report. Length and age structures from market (Adelaide) and industry (regional) samples. Application of a fully integrated assessment model ('WhitEst') and production of a stock assessment report every two or three years. Recreational catch estimates obtained every several years. Current assessment by weight of evidence. No information is currently available for Aboriginal and traditional fishing. 					
Catch and effort trends	<ul style="list-style-type: none"> In 2023/24, total catch and number of licences taking or targeting King George Whiting remained stable, while target effort declined slightly. All measures of target handline CPUE increased to be the highest on record (nominal CPUE and standardised CPUE in kg/line-hour) or the highest in 20 years (standardised CPUE in kg/fisher-day). 					
Triggered performance indicators	General					
	<ul style="list-style-type: none"> Total catch: 27.7 t (2nd lowest) Target handline effort: 1,208 fisher-days (lowest) Target handline CPUE: 18.0 kg fisher-day⁻¹ (highest) Target handline CPUE: +0.65 kg fisher-day⁻¹ year⁻¹ (greatest 5-year trend, positive) 					
Assessment summary	Biological					
	<ul style="list-style-type: none"> None triggered (all within operational targets) 					
Assessment summary	<ul style="list-style-type: none"> The current stock assessment report (Earl et al. in prep.) provides 'WhitEst' model outputs (estimates of fishable biomass, harvest fraction and recruitment) using information up to 2023/24; none of these indicators were triggered (all were within operational targets). Additionally, low levels of catch and effort in 2023/24, combined with high catch rates, suggest the Gulf St Vincent/Kangaroo Island stock is being lightly fished and there are no stock concerns. 					

MSF Management Tier 1 stock summaries – 2025

King George Whiting

GULF ST VINCENT AND KANGAROO ISLAND



Created 26 March 2025; Modified 29 April 2025

<p>MSFMAC recommendation</p>	<p>NOTING:</p> <ul style="list-style-type: none"> - The SSC recommendation. - The sustainable status of the stock with indications of a high and stable biomass. - The expected transition to the SS3 modelling framework and draft HSF. <p>MSFMAC recommendation: The MSFMAC recommended that the KGW 2024/25 of 46.334 t in the GSVFZ be maintained as the TACC for 2025/26.</p> <p>MSFMAC recommendation: The MSFMAC recommended that the default commercial under-catch and over-catch arrangements, being up to 10% of the licence holder’s quota entitlement, be implemented for KGW in the GSVFZ for the 2025/26 quota period.</p>																																							
<p>2025/26 RBC and RBCC (t) options</p> <p>LML – legal minimum length</p> <p>H_{TARG} – target harvest fraction</p>	<ul style="list-style-type: none"> • Fishable biomass = 673 t (\geq LML 32 cm; Earl et al. in prep.; cf. 645 t in 2021/22) • Commercial catch share (regional) = 40.9% <p>RBC and RBCC options for 2025/26</p> <table border="1" data-bbox="359 851 1500 1220"> <thead> <tr> <th></th> <th>H_{TARG}</th> <th>RBC</th> <th>RBCC</th> </tr> </thead> <tbody> <tr> <td>2013 Management Plan</td> <td>0.28</td> <td>188.4</td> <td>77.1</td> </tr> <tr> <td>$M = 0.45$ (WhitEst)</td> <td>0.26 (2/3 M)</td> <td>175.0</td> <td>71.6</td> </tr> <tr> <td>$M = 0.2$ (2022/23 approach)</td> <td>0.125 (2/3 M)</td> <td>84.1</td> <td>34.4</td> </tr> <tr> <td>5-yr average catch</td> <td></td> <td></td> <td>30.9</td> </tr> <tr> <td>5-yr maximum catch</td> <td></td> <td></td> <td>41.6</td> </tr> <tr> <td>2022/23*</td> <td></td> <td></td> <td>46 (TACC)</td> </tr> <tr> <td>2023/24</td> <td></td> <td></td> <td>46.334 (TACC)</td> </tr> <tr> <td>2024/25</td> <td></td> <td></td> <td>46.334 (TACC)</td> </tr> </tbody> </table> <p>* Approach/method used for recommending the 2024/25 TACC</p>					H_{TARG}	RBC	RBCC	2013 Management Plan	0.28	188.4	77.1	$M = 0.45$ (WhitEst)	0.26 (2/3 M)	175.0	71.6	$M = 0.2$ (2022/23 approach)	0.125 (2/3 M)	84.1	34.4	5-yr average catch			30.9	5-yr maximum catch			41.6	2022/23*			46 (TACC)	2023/24			46.334 (TACC)	2024/25			46.334 (TACC)
	H_{TARG}	RBC	RBCC																																					
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<p>R&D needs (incl. current initiatives)</p>	<ul style="list-style-type: none"> • Investigate alternative assessment model outputs for King George Whiting stocks using Stock Synthesis. • Supplement market sampling with industry-direct sampling in the regions to obtain more representative samples (commenced in 2023/24). • Application of the harvest strategy framework under the new management plan. • More regular and reliable estimates of recreational catch. 																																							
<p>References</p>	<p>Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.</p> <p>Dennis, J.D. et al. (in prep.). Assessment of the South Australian Marine Scalefish Fishery in 2023/24. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide.</p> <p>Earl, J. et al. (in prep.). King George Whiting (<i>Sillaginodes punctatus</i>) Fishery. Stock Assessment Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide.</p>																																							

MSF Management Tier 1 stock summaries – 2025

Snapper

SOUTH EAST (WESTERN VICTORIA STOCK)



Created 26 March 2025; Modified 29 April 2025

Stock status	2022 – Sustainable (Western Victoria stock)		"Very strong recent juvenile recruitment suggests major increase in biomass expected over the next five years" (Bell et al. 2024)				
Total catches (t) RBC – recommended biological catch RBCC – recommended biological commercial catch TACC – total allowable commercial catch TARC – total allowable recreational catch		Commercial	Recreational		RBC	RBCC	TACC/TARC
			Survey	App [^] /CHB			
	2019/20	43.3	-	0.7 [‡] /0.2	-	-	†60.75/13.5
	2020/21	42.8	-	3.1/0.2	48	36	‡21.6/4.8
	2021/22	25.1	8.4 [*]	3.4/0.1	48	36	36/12
	2022/23	28.8	-	3.1/0.4	48	36	36/12
	2023/24	35.5	-	4.6/0.5	70.012	52.509	52.509/17.503
2024/25	▲27.4 (Mar 2025)	-	6.0/- (Mar '25)	70.012	52.509	52.509/17.503	
<p>* Based on regional catch (number) and average weight in Beckmann et al. (2023) [^] Estimated catch based on average weight of SE Snapper of 2.20 kg (Beckmann et al. 2023) [‡] Feb-Jun 2020 (ballot system) [†] Feb–Oct 2020 [‡] Feb–Jun 2021</p>							
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total	
	MSF	79%	REC	8%	1%	100%	
	NZRLF	0.55%	CHARTER	10%			
	SZRLF	1.45%					
	LCF	0.03%					
<i>Total</i>	<i>81%</i>	<i>Total</i>	<i>18%</i>	<i>1%</i>	<i>100%</i>		
Stock assessment report(s)	<ul style="list-style-type: none"> Drew et al. (2022) – assessment of Snapper up to 2021/22. Bell et al. (2024) – general assessment of key Victorian fish stocks up to 2022. Dennis et al. (in prep.) – general assessment of selected MSF species/stocks up to 2023/24. 						
Assessment program	<ul style="list-style-type: none"> Annual catch and effort statistics and trends in a stock summary report. Length and age structures from market sampling (Adelaide). Application of a fully integrated assessment model ('SnapEst') and production of a stock assessment report every two or three years (expected once the Snapper fishery re-opens in all regions of the State). Recreational catch estimates obtained through mandatory reporting in the South East via the SA Fishing App and from State-wide surveys every several years. Current assessment by weight of evidence. No information is currently available for Aboriginal and traditional fishing. 						
Catch and effort trends	<ul style="list-style-type: none"> Total catch has been periodic since 1983/84 (when logbook data became available); it rarely exceeded 10 t until 2004/05, then increased to more than 200 t in 2009/10, before falling to <10 t again in 2015/16, and thereafter remaining at relatively moderate levels (<50 t). In 2023/24, total catch increased by 23%, target effort increased by 70%, and the number of licence holders that caught Snapper increased from 7 to 8. All measures of target longline and handline CPUE (nominal and standard, kg/fisher-day, kg/hook and kg/line-hour) fluctuate greatly, with no apparent trend; in 2024, all indices were below their historic mean. 						
Triggered performance indicators	<p>General</p> <ul style="list-style-type: none"> Target longline CPUE: -12.6 kg fisher-day⁻¹ year⁻¹ (greatest 5-year trend, negative) Proportion of target longline catches > 200 kg: -0.09 year⁻¹ (greatest 5-year trend, negative) 						

MSF Management Tier 1 stock summaries – 2025

Snapper

SOUTH EAST (WESTERN VICTORIA STOCK)



Created 26 March 2025; Modified 29 April 2025

	<p>Biological</p> <ul style="list-style-type: none"> • Fishable biomass: +27% (3-year average \pm10% of previous 3-year average) • Egg production: 6.5% (<20% of pristine population) • Recruitment: -97% (3-year average \pm10% of long-term average) • Age composition: 18.5% (proportion of fish 10+ years of age <20% of fished population)
<p>Assessment summary</p>	<ul style="list-style-type: none"> • The last stock assessment that provided ‘SnapEst’ model outputs (estimates of fishable biomass, egg production, harvest fraction and recruitment) was delivered in November 2022 using information up to 2021/22 (inclusive) (Drew et al. 2022). • Although some performance indicators were triggered (biological in 2021/22, general in 2023/24), stock status for the South East regional population is determined by the Victorian Fisheries Authority since the South East region represents the western extremity of the Western Victoria stock. • Catch and effort in the South East is largely influenced by the recruitment strength in Port Phillip Bay (VIC), and subsequent growth, mortality, movement and, ultimately, availability of Snapper in the South East at ~5 years of age when they generally reach the legal minimum length (LML) of 38 cm. • Given the record high recruitment index (for age 0+ juveniles) recorded in Port Phillip Bay in 2018 followed by another recruitment pulse in 2022, there is some anticipation that these strong year classes might be reflected in South East catches from 2023/24 onward. • The Western Victoria stock was most recently classified as sustainable (Bell et al. 2024).
<p>MSFMAC recommendation</p>	<p>NOTING:</p> <ul style="list-style-type: none"> - <i>Noting catch is largely influenced by recruitment strength in Port Phillip Bay, and anticipating good recruitment in the next few years based on the high abundance of 0+ juveniles in Port Phillip Bay in 2018 and 2021.</i> - <i>The indicators of increasing biomass.</i> - <i>The transition to SS3 modelling framework is underway.</i> - <i>The draft HSF.</i> <p>MSFMAC recommendation: <i>The MSFMAC recommended an RBC and resultant TAC of 70t for 2025/26 with a TACC of 52.5t for SEFZ for Snapper and 17.5t TARC).</i></p> <p>MSFMAC recommendation: <i>The MSFMAC recommended that the default commercial under-catch and over-catch arrangements, being up to 10% of the licence holder’s quota entitlement, be implemented for Snapper in the SEFZ for the 2025/26 quota period.</i></p> <p>MSFMAC recommendation: <i>The MSFMAC recommended that carry over of uncaught catch, up to 10% of the Charter Boat Fishery component of the TARC, be implemented for Snapper in the SEFZ for the 2025/26 period for the Charter Boat Fishery. The MSFMAC noted that compliance with recreational Snapper catch reporting requirements has improved but remains a concern and recommended that no carry-over be applied to the recreational (non-charter) sector.</i></p> <p><u>Other sectors – catch limits</u></p> <p>NOTING:</p> <ul style="list-style-type: none"> - <i>High abundance of Snapper in the SEFZ and sustainable status of the Western Victorian stock.</i> - <i>Application of an increased recreational non-charter regional share of the TARC in 2025/26.</i> - <i>At the current bag and boat limits for the recreational non-charter sector it was considered unlikely the non-charter recreational catch would be substantially less than the 2025/26 TARC.</i> - <i>Any increase in bag and boat limits should be set at a level that would allow recreational catch to be close to the TARC while avoiding the TARC being exceeded prior to the end of the fishing season to avoid the recreational fishery being closed.</i>

MSF Management Tier 1 stock summaries – 2025

Snapper

SOUTH EAST (WESTERN VICTORIA STOCK)



Created 26 March 2025; Modified 29 April 2025

- Compliance with recreational catch reporting of snapper was improving.
 - The Recreational Fishing App is being updated from 1 July 2025 which should improve the mandatory reporting process.
- MSFMAC recommendation:** The MSFMAC recommended that the daily recreational non-charter bag limit for 2025/26 be increased from 2 to 3 Snapper per person, daily boat limits increased to 9 fish and that fishers be reminded they are legally required to stop fishing for Snapper when their bag limit was reached.

2025/26 RBC, RBCC and RBRC (t) options

- Fishable biomass = 349 t (\geq LML 38 cm; Drew et al. 2022)
- Catch share (regional) = 75.3% commercial; 23.7% recreational; 1% Aboriginal traditional

RBC and RBCC/RBRC options for 2025/26

	H_{TARG}	RBC	RBCC/RBRC
2013 Management Plan	0.32	111.7	84.1/26.5
Previous	0.3	104.7	78.8/24.8
Updated (2023/24)*	0.20	70	52.7/16.6
5-yr average catch			35.1/-
5-yr maximum catch			43.3/-
2022/23			36 (TACC)/12 (TARC)
2023/24			52.5 (TACC)/17.5 (TARC)
2024/25			52.5 (TACC)/17.5 (TARC)

* Approach/method used for recommending the 2024/25 TACC/TARC

R&D needs (incl. current initiatives)

- Investigate alternative assessment model outputs for Snapper stocks using Stock Synthesis.
- Various research themes within the State Government and FRDC-funded Snapper Science Program – see ‘Snapper Hub’ at pir.sa.gov.au/snapper-recovery for details.
- ‘Quantifying post-release survival and movement of Snapper (*Chrysophrys auratus*): Informing strategies to engage the fishing community in practices to enhance the sustainability of an important multi-sector fishery’ (FRDC Project 2019/044).
- ‘Cost-effective, non-destructive solutions to developing a pre-recruit index for Snapper’ (FRDC project 2019/046).
- Application of the harvest strategy framework under the new management plan.
- Ongoing improvements and refinements to the reporting of recreational catch.

References

Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.

Bell, J.D., Ingram, B.A., Gorfine, H.K., Conron, S.D. (2024). Review of key Victorian fish stocks – 2022. Victorian Fisheries Authority Science Report Series No. 38. Victorian Fisheries Authority.

Dennis, J.D. et al. (in prep.). Assessment of the South Australian Marine Scalefish Fishery in 2023/24. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide.

Drew, M.J., Rogers, T.A., McGarvey, R., Feenstra, J., Matthews, D., Matthews, J.M., Earl, J., Smart, J., Noell, C.J., Fowler, A.J. (2022). Snapper (*Chrysophrys auratus*) stock assessment report 2022. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2007/000523-7. SARDI Research Report Series No. 1155. 178pp.

MSF Management Tier 1 stock summaries – 2025

Southern Garfish

SPENCER GULF



Created 27 March 2025; Modified 29 April 2025

Stock status	2021/22 – Recovering		2022/23 – Recovering		2023/24 – Status pending	
Total catches (t) RBC – recommended biological catch RBCC – recommended biological commercial catch TACC – total allowable commercial catch		Commercial	Recreational	RBC	RBCC	TACC
	2019/20	99.1	-	-	-	-
	2020/21	109.1	-	-	-	-
	2021/22	83.8	11.6*	-	-	100
	2022/23	74.1	-	-	-	100
	2023/24	71.3	-	-	-	103.451
	2024/25	▲ 62.8 (Mar 2025)	-	-	-	103.451
* Based on regional catch (number) and average weight in Beckmann et al. (2023)						
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total
	MSF	79.33%	19.5%		1%	100%
	NZRLF	0.04%				
	SZRLF	0.13%				
<i>Total</i>	79.5%	<i>Total</i>	19.5%	1%	100%	
Stock assessment report(s)	<ul style="list-style-type: none"> Earl et al. (2024) – assessment of Southern Garfish up to 2022/23. Dennis et al. (in prep.) – general assessment of selected MSF species/stocks up to 2023/24. 					
Assessment program	<ul style="list-style-type: none"> Annual catch and effort statistics and trends in a stock summary report. Length and age structures from market (Adelaide) and industry (regional) samples. Application of a fully integrated assessment model ('GarEst') and production of a stock assessment report every two or three years. Recreational catch estimates obtained every several years. Current assessment by weight of evidence. No information is currently available for Aboriginal and traditional fishing. 					
Catch and effort trends	<ul style="list-style-type: none"> In 2023/24, total catch, target haul net and dab net effort, and number of licences taking or targeting Southern Garfish using dab net continued to decline. All measures of target haul net CPUE (nominal and standardised, kg/fisher-day and kg/haul) declined steeply from 2010/11 to 2015/16, but have since recovered to the historic mean. 					
Triggered performance indicators	General					
	<ul style="list-style-type: none"> Total catch: 71.3 t (lowest) Target haul net effort: 782 fisher-days (lowest) Target dab net effort: 126 fisher-days (lowest) 					
Assessment summary	Biological					
	<ul style="list-style-type: none"> Fishable biomass: -14% (3-year average ±10% of long-term average) Egg production: 14% (<30% of pristine population) Recruitment: +13% (±10% of previous 5-year average) Age composition: -14% (reduced proportion of fish 3+ years of age; <u>note</u> this has been influenced by LML reduction since previous assessment) 					
Assessment summary	<ul style="list-style-type: none"> The latest stock assessment report (Earl et al. 2024) provided 'GarEst' model outputs (estimates of fishable biomass, harvest fraction and recruitment) using information up to 2021/22. Despite estimates of harvest fraction and egg production not meeting operational objectives of the 2013 Management Plan, these may have been overly optimistic, particularly since harvest fraction was at a historic low and declining, and egg production was comparable to estimates of the previous 30 years. 					

MSF Management Tier 1 stock summaries – 2025

Southern Garfish

SPENCER GULF



Created 27 March 2025; Modified 29 April 2025

- The increase in the fishable biomass in 2021/22 suggests that the stock may have recovered, although the level at which the stock was depleted, and the extent of the recovery was uncertain given the lack of target and limit biomass reference points.
- Additional catch and effort data for 2022/23 and 2023/24 does not indicate any stock concerns; rather the CPUE indices suggest abundance has returned to a long-term average following a period of recovery, and this is consistent with the latest estimates and trajectory for fishable biomass.

MSFMAC recommendation

- NOTING:**
- The SSC recommendation.
 - The recovering status of the stock and the indicators of stable biomass.
 - Transition to SS3 modelling framework was underway and a trial to collect sex ratio data had commenced.
 - The draft Harvest Strategy.
- MSFMAC recommendation:** The MSFMAC recommended the Southern Garfish 2024/25 TACC of 103.45 t in the SGFZ be maintained for 2025/26.
- MSFMAC recommendation:** The MSFMAC recommended that the default commercial under-catch and over-catch arrangements, being up to 10% of the licence holder’s quota entitlement, be implemented for Southern Garfish in the SGFZ for the 2025/26 quota period.

2025/26 RBC and RBCC (t) options

- Fishable biomass = 281 t (\geq LML 23 cm; Earl et al. 2024)
- Commercial catch share (regional) = 78.5%

RBC and RBCC options for 2025/26

LML – legal minimum length
 H_{TARG} – target harvest fraction

	H_{TARG}	RBC	RBCC
2013 Management Plan	0.30	84.3	66.2
$M = 0.42$ (max. age 10)	0.24 (2/3 M)	67.4	52.9
5-yr average catch			87.5
5-yr maximum catch			109.1
2022/23*			100 (TACC)
2023/24			103.451 (TACC)
2024/25			103.451 (TACC)

* Approach/method used for recommending the 2024/25 TACC

R&D needs (incl. current initiatives)

- Investigate alternative assessment model outputs for Southern Garfish stocks using Stock Synthesis.
- Confirm spatial and temporal distribution of Southern Garfish by sex to improve model estimates of spawning biomass (data to support this will be collected during deepwater haul netting trials as part of the red tape reduction initiatives).
- Supplement market sampling with industry-direct sampling in the regions to obtain more representative samples (commenced in 2023/24).
- Application of the harvest strategy framework under the new management plan.
- More regular and reliable estimates of recreational catch.

References

Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.

Dennis, J.D. et al. (in prep.). Assessment of the South Australian Marine Scalefish Fishery in 2023/24. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide.

Earl, J., Feenstra, J., Mark, K., McGarvey, R., Matthews, D., Noell, C. (2024). Southern Garfish (*Hyporhamphus melanochir*) Fishery. Stock Assessment Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2007/000720-5. SARDI Research Report Series No. 1223. 106pp.

MSF Management Tier 1 stock summaries – 2025

Southern Garfish

SPENCER GULF



Created 27 March 2025; Modified 29 April 2025

Stock status	2021/22 – Recovering		2022/23 – Sustainable		2023/24 – Status pending	
Total catches (t) RBC – recommended biological catch RBCC – recommended biological commercial catch TACC – total allowable commercial catch		Commercial	Recreational	RBC	RBCC	TACC
	2019/20	61.8	-	-	-	-
	2020/21	67.5	-	-	-	-
	2021/22	68.5	8.9*	-	-	71
	2022/23	64.0	-	-	-	71
	2023/24	69.7	-	-	-	75.289
	2024/25	▼50.8 (Mar 2025)	-	-	-	75.289
* Based on regional catch (number) and average weight in Beckmann et al. (2023)						
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total
	MSF	79.33%	19.5%		1%	100%
	NZRLF	0.04%				
	SZRLF	0.13%				
<i>Total</i>	<i>79.5%</i>	<i>Total</i>	<i>19.5%</i>	<i>1%</i>	<i>100%</i>	
Stock assessment report(s)	<ul style="list-style-type: none"> Earl et al. (2024) – assessment of Southern Garfish up to 2022/23. Dennis et al. (in prep.) – general assessment of selected MSF species/stocks up to 2023/24. 					
Assessment program	<ul style="list-style-type: none"> Annual catch and effort statistics and trends in a stock summary report. Length and age structures from market (Adelaide) and industry (regional) samples. Application of a fully integrated assessment model ('GarEst') and production of a stock assessment report every two or three years. Recreational catch estimates obtained every several years. Current assessment by weight of evidence. No information is currently available for Aboriginal and traditional fishing. 					
Catch and effort trends	<ul style="list-style-type: none"> In 2023/24, total catch is stable at ~70 t, and target haul net and dab net effort increased slightly. Number of licences taking or targeting Southern Garfish using haul nets and dab nets show a long-term decline, and in 2023/24 are all at historic lows. All measures of target haul net CPUE (nominal and standardised, kg/fisher-day and kg/haul) or on an increasing trend since 2015/16, and in 2023/24 are above historic means. 					
Triggered performance indicators	General					
	<ul style="list-style-type: none"> Target haul net effort: 771 fisher-days (2nd lowest) Target dab net effort: 121 fisher-days (3rd lowest) 					
Triggered performance indicators	Biological					
	<ul style="list-style-type: none"> Egg production: 16% (<30% of pristine population) Recruitment: +12% (±10% of previous 5-year average) Age composition: -3% (reduced proportion of fish 3+ years of age; note this has been influenced by LML reduction since previous assessment) 					
Assessment summary	<ul style="list-style-type: none"> The latest stock assessment report (Earl et al. 2024) provided 'GarEst' model outputs (estimates of fishable biomass, harvest fraction and recruitment) using information up to 2021/22. Despite estimates of harvest fraction and egg production not meeting operational objectives of the 2013 Management Plan, these may have been overly optimistic, particularly since harvest fraction was at a historic low and declining, and egg production was comparable or higher than most estimates of the past 30 years. 					

MSF Management Tier 1 stock summaries – 2025

Southern Garfish

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Created 27 March 2025; Modified 29 April 2025

	<ul style="list-style-type: none"> The increase in the fishable biomass in 2021/22 suggests that the stock may have recovered, although the level at which the stock was depleted, and the extent of the recovery is uncertain given the current lack of target and limit biomass reference points. Consideration of additional catch and effort data for 2022/23 does not indicate any stock concerns (see general performance indicators above); rather the CPUE indices suggest abundance has returned to above the long-term average following a period of recovery, and which is consistent with the latest estimates and trajectory for fishable biomass.
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MSFMAC recommendation	<p>NOTING:</p> <ul style="list-style-type: none"> The SSC recommendation. The indicators of improvement in recruitment and egg production. Stable catches with increasing HN CPUE trends since 2015/16 Transition to SS3 modelling framework was underway. The draft Harvest Strategy. <p>MSFMAC recommendation: The MSFMAC recommended that the Southern Garfish 2024/25 TACC of 75.2t t in the GSVFZ be maintained for 2025/26.</p> <p>MSFMAC recommendation: The MSFMAC recommended that the default commercial under-catch and over-catch arrangements, being up to 10% of the licence holder’s quota entitlement, be implemented for Southern Garfish in the GSVFZ for the 2025/26 quota period.</p>
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2025/26 RBC and RBCC (t) options	<ul style="list-style-type: none"> Fishable biomass = 248 t (≥ LML 23 cm; Earl et al. 2024) Commercial catch share (regional) = 82.2% 		
LML – legal minimum length			
H _{TARG} – target harvest fraction			
RBC and RBCC options for 2025/26			
	H_{TARG}	RBC	RBCC
2013 Management Plan	0.30	74.4	61.2
M = 0.42 (max. age 10)	0.24 (2/3 M)	59.5	48.9
5-yr average catch			66.3
5-yr maximum catch			69.7
2022/23*			71 (TACC)
2023/24			75.289 (TACC)
2024/25			75.289 (TACC)
* Approach/method used for recommending the 2024/25 TACC			

R&D needs (incl. current initiatives)	<ul style="list-style-type: none"> Investigate alternative assessment model outputs for Southern Garfish stocks using Stock Synthesis. Confirm spatial and temporal distribution of Southern Garfish by sex to improve model estimates of spawning biomass (data to support this will be collected during deepwater haul netting trials as part of the red tape reduction initiatives). Supplement market sampling with industry-direct sampling in the regions to obtain more representative samples (commenced in 2023/24). Application of the harvest strategy framework under the new management plan. More regular and reliable estimates of recreational catch.
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References	<p>Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.</p> <p>Dennis, J.D. et al. (in prep.). Assessment of the South Australian Marine Scalefish Fishery in 2023/24. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide.</p> <p>Earl, J., Feenstra, J., Mark, K., McGarvey, R., Matthews, D., Noell, C. (2024). Southern Garfish (<i>Hyporhamphus melanochir</i>) Fishery. Stock Assessment Report to PIRSA Fisheries and Aquaculture. South Australian Research and</p>
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MSF Management Tier 1 stock summaries – 2025

Southern Garfish

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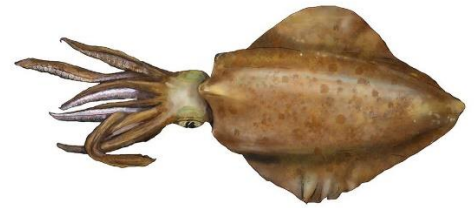
Created 27 March 2025; Modified 29 April 2025

Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2007/000720-5. SARDI Research Report Series No. 1223. 106pp.

MSF Management Tier 1 stock summaries – 2025

Southern Calamari

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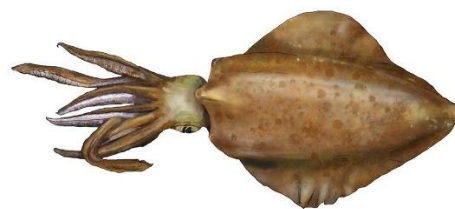
Created 27 March 2025; Modified 29 April 2025

Stock status	2021/22 – Sustainable		2022/23 – Sustainable		2023/24 – Status pending		
Total catches (t) RBC – recommended biological catch RBCC – recommended biological <i>commercial</i> catch TACC – total allowable commercial catch		Commercial		Recreational	RBC	RBCC	TACC
		MSF	Prawn trawl				
	2019/20	184.9	29.7	-	-	-	-
	2020/21	206.3	42.9	-	-	-	-
	2021/22	151.5	39.3	114.8*	-	-	204
	2022/23	147.8	59.5	-	-	-	204
	2023/24	156.3	37.0	-	-	-	207.52
2024/25	▲133.5 (Mar '25)	-	-	-	-	207.52	
* Based on regional catch (number) and average weight in Beckmann et al. (2023)							
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total	
	MSF	56%	37.4%		1%	100%	
	NZRLF	0.45%					
	WCPF	0.1%					
	SGPF	4.6%					
	GSVPF	0.45%	Total		37.4%	1%	100%
<i>Total</i>	61.6%	<i>Total</i>					
Stock assessment report(s)	<ul style="list-style-type: none"> Noell et al. (in prep) – progress update from FRDC Project No. 2021-118 on assessment of Southern Calamari up to 2023/24. Dennis et al. (in prep.) – general assessment of selected MSF species/stocks up to 2023/24. 						
Assessment program	<ul style="list-style-type: none"> Annual catch and effort statistics and trends in a stock summary report. Recreational catch estimates obtained every several years. Current assessment by weight of evidence and/or application of a CPUE-based harvest control rule (Little et al. 2011). No information is currently available for Aboriginal and traditional fishing. 						
Catch and effort trends	<ul style="list-style-type: none"> Total catch increased in 2023/24; however, the last three years represent the lowest total catches since 2008/09. Target squid jig effort and number of licences taking or targeting Southern Calamari using squid jigs indicate a general decline since 2011/12, although increased slightly in 2023/24. Since 2003/04, nominal and standardised squid jig target CPUE (in kg/fisher-day and kg/line-hour) have fluctuated around the historic mean and appear stable, although in 2023/24, the standardised CPUE (kg/fisher-day) was at its lowest. 						
Triggered performance indicators	General <ul style="list-style-type: none"> None triggered 						
Assessment summary	<ul style="list-style-type: none"> In the last stock summary (Dennis et al. 2024), the stock was classified as sustainable. Consideration of additional catch and effort data for 2023/24 does not indicate any stock concerns at the zonal scale; rather the CPUE indices suggest abundance is stable. However, there have been serious stock concerns expressed by the commercial sector, particularly those that target Southern Calamari, that the traditional catch and effort statistics are not indicative of the stock or localised depletion. The complex life-history characteristics of Southern Calamari makes assessment of this species (and other cephalopods in general) using conventional fisheries population dynamic models challenging and is the focus of a FRDC-funded project (see R&D needs below). 						

MSF Management Tier 1 stock summaries – 2025

Southern Calamari

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Created 27 March 2025; Modified 29 April 2025

- Previous assessments for Southern Calamari were based on a weight-of-evidence approach at the zonal scale.
- In addition to the information used in previous assessments, this stock summary considers information at a finer spatial scale and application of a CPUE-based harvest control rule (HCR) (Little et al. 2011) to provide an RBCC for 2025/26; this additional information is presented below.
- While the CPUE-based HCR (a category 5 assessment under the draft HSF) is considered more advanced than the weight-of-evidence approach (category 6), both are still considered ‘data-poor’ assessments.

Assessment category 5: Standardised CPUE (draft HSF)

- Assessment category 5 relies on interpretation of standardised CPUE trends, and is based on the premise that standardised CPUE is a proxy for biomass (or an index thereof).
- Standardisation of CPUE for both squid jig and haul net was achieved using a general linear model, where fishing year was the main effect, and licence holder, month, area, and, for haul net CPUE, targeting behaviour were explanatory terms (Dennis et al. in prep.). Using the standardised CPUE for both gear types and annual catch time-series, a 10-year reference period 2009/10–2018/19 was chosen for the SG stock as a period of relative stability in terms of catches and catch rates, thus providing a basis for assigning proxy target and limit reference points.
- The RBCC was calculated using the CPUE-based harvest control rule developed by Little et al. (2011) using the equation:

$$RBCC = C_{\text{targ}} * \max \left(0, \frac{CPUE_{23/24} - CPUE_{\text{lim}}}{CPUE_{\text{targ}} - CPUE_{\text{lim}}} \right)$$

- Where C_{targ} and $CPUE_{\text{targ}}$ are target reference points for catch and CPUE at maximum economic yield (MEY) (based on the reference period), $CPUE_{\text{lim}} = 0.20/0.48 CPUE_{\text{targ}}$, and $CPUE_{23/24}$ is the CPUE of the assessment.
- Since Southern Calamari are taken using squid jig and haul net, an RBCC was calculated for each gear type, weighted by the proportion of the total catch taken using the respective gear, then summed to give a combined RBCC.
- Using the CPUE-based HCR, an RBCC of 113.1 t was calculated for the Southern Calamari SG stock.

MSFMAC recommendation

NOTING:

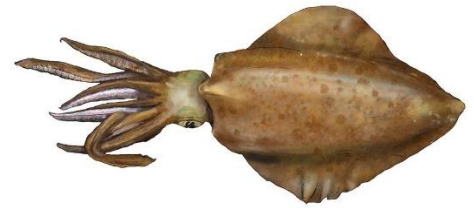
- The SSC recommendation to the MSFMAC to consider a reduction in the TACC.
- That total catch in 2023/24 was the lowest since 2008/09 and 2023/24 standardised CPUE (kg/fisher-day) was at its lowest level in 20 years.
- A new assessment—the CPUE-based harvest control rule—indicated a Recommended Biological Commercial Catch (RBCC) of 113t. While members recognised uncertainties still exist with the new assessment method, it was considered a more advanced method than the weight-of-evidence approach previously considered
- Information on varying concerns about stock status including catch rates and localised depletion, including strong concerns from some fishers
- Financial impacts of a reduction in TACC
- The draft HSF provides for a staged transition from a current TACC to a reduced TACC over a period of three years.

MSFMAC recommendation: The MSFMAC recommended that the SGFZ Calamari TACC be reduced by 15% from 207.5t in 2024/25 to 176.05t for 2025/26. Acknowledging the significant impact on industry, the MSFMAC considered that this amount (176.05t) was consistent with a staged transition, noting that the TACC would be reviewed next year following the consideration of new information and the draft HSF.

MSF Management Tier 1 stock summaries – 2025

Southern Calamari

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Created 27 March 2025; Modified 29 April 2025

Over-catch and under catch arrangements

The MSFMAC considered the default over-catch and under-catch arrangements in place for Calamari (up to 10% of the licence holder’s quota entitlement) and noted stock concerns, the risk of carry over to stock sustainability, and enabling industry individual flexibility. The SARDI position was that the default carry-over and over-catch of 10% could be applied.

Three carry over options were discussed being: 1) applying the default of up to 10%, 2) allowing 10% over-catch in 2025/26 but not carrying over any uncaught 2024/25 quota, or 3) not applying any provision for 2024/25 under catch or over catch in 2025/26. The MSFMAC was not able to reach consensus.

Management arrangements – other sectors

NOTING:

- There is a need to consider management arrangements to reduce catch for all sectors based on the new information.
- Current recreational non-charter bag and boat limits of 15 and 45 were considered too high.
- The Charter Boat Fishery bag limit is currently eight (8) per person and the catch by this sector is low.
- Estimated recreational catch of the recreational survey 2021/22, noting high level of uncertainty as the precision of harvest weight estimates for Southern Calamari are generally lower than for harvest numbers, due to additional uncertainty introduced through average weight calculations.
- Prawn Sector catches of between 29.7 and 59.5t in the past five years and an allocation review of the SGPF was underway.

MSFMAC recommendation: The MSFMAC recommended that a reduction in catch, commensurate with the recommended TACC reduction, be applied to the recreational non-charter sector in the SGFZ and that SARDI advice be sought to inform implementation of the reduction in bag and boat limits.

MSFMAC recommendation: The MSFMAC recommended that a reduction in catch, commensurate with the recommended TACC reduction, be applied to the prawn sector in SGFZ, and the MSFMAC requests that PIRSA and the SGPF consider mechanisms available to achieve these reductions, noting that an allocation review process is underway.

2025/26 RBC and RBCC (t) options

- Commercial catch share (regional) = 66.2%

RBC and RBCC options for 2025/26

	<i>H</i> _{TARG}	RBC	RBCC
5-yr average catch			169.4
5-yr maximum catch			206.3
CPUE-based HCR		170.9*	113.1
2022/23 [^]			204 (TACC)
2023/24			207.52 (TACC)
2024/25			207.52 (TACC)

* RBC was calculated from the RBCC and commercial catch share (regional)

[^] Approach/method used for recommending the 2024/25 TACC

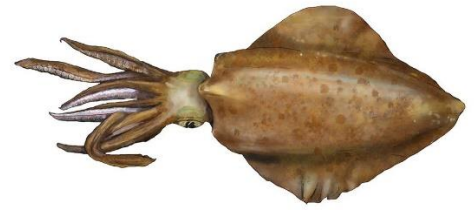
R&D needs (incl. current initiatives)

- ‘Developing a cost-effective stock assessment program for Southern Calamari fisheries’ (FRDC Project 2021/118) (project commenced March 2024).
- Application of the harvest strategy framework (including the stock assessment program being developed) under the new management plan.

MSF Management Tier 1 stock summaries – 2025

Southern Calamari

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Created 27 March 2025; Modified 29 April 2025

- More regular and reliable estimates of recreational catch.

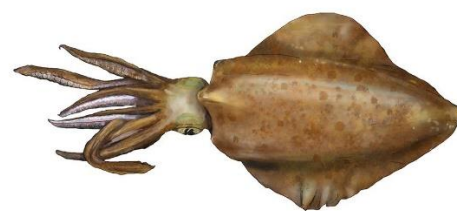
References

- Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.
- Dennis, J.D. et al. (in prep.). Assessment of the South Australian Marine Scalefish Fishery in 2023/24. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide.
- Little, L.R., Wayte, S.E., Tuck, G.N., Smith, A.D.M., Klaer, N., Haddon, M., Punt, A.E., Thomson, R., Day, J., Fuller, M. (2011). Development and evaluation of a cpue-based harvest control rule for the southern and eastern scalefish and shark fishery of Australia. *ICES Journal of Marine Science* **68**: 1699–1705.
- Noell, C.J. et al. (in prep.). Developing a cost-effective stock assessment program for Southern Calamari fisheries. FRDC Project No. 2021-118.

MSF Management Tier 1 stock summaries – 2025

Southern Calamari

GULF ST VINCENT AND KANGAROO ISLAND



Created 27 March 2025; Modified 29 April 2025

Stock status	2021/22 – Sustainable		2022/23 – Sustainable		2023/24 – Status pending		
Total catches (t) RBC – recommended biological catch RBCC – recommended biological <i>commercial</i> catch TACC – total allowable commercial catch		Commercial		Recreational	RBC	RBCC	TACC
		MSF	Prawn trawl				
	2019/20	155.3	2.5	-	-	-	-
	2020/21	131.1	1.6	-	-	-	-
	2021/22	118.0	4.3	89.9*	-	-	162
	2022/23	135.1	5.4	-	-	-	162
	2023/24	115.7	2.5	-	-	-	164.837
2024/25	▼84.1 (Mar '25)	-	-	-	-	164.837	
* Based on regional catch (number) and average weight in Beckmann et al. (2023)							
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total	
	MSF	56%	37.4%		1%	100%	
	NZRLF	0.45%					
	WCPF	0.1%					
	SGPF	4.6%					
	GSVPF	0.45%	<i>Total</i>		<i>37.4%</i>	<i>1%</i>	<i>100%</i>
<i>Total</i>	<i>61.6%</i>	<i>Total</i>	<i>37.4%</i>	<i>1%</i>	<i>100%</i>		
Stock assessment report(s)	<ul style="list-style-type: none"> Noell et al. (in prep) – progress update from FRDC Project No. 2021-118 on assessment of Southern Calamari up to 2023/24. Dennis et al. (in prep.) – general assessment of selected MSF species/stocks up to 2023/24. 						
Assessment program	<ul style="list-style-type: none"> Annual catch and effort statistics and trends in a stock summary report. Recreational catch estimates obtained every several years. Current assessment by weight of evidence and/or application of a CPUE-based harvest control rule (Little et al. 2011). No information is currently available for Aboriginal and traditional fishing. 						
Catch and effort trends	<ul style="list-style-type: none"> Total catch has generally declined since 2011/12, and in 2023/24, was the lowest since 1990/91. In 2023/24, target squid jig effort was the lowest since 1990/91, and the number of licences taking or targeting Southern Calamari using squid jigs was the lowest on record. Since 2003/04, nominal and standardised squid jig target CPUE (in kg/fisher-day and kg/line-hour) have fluctuated around the historic mean and appear stable, although in 2023/24, the standardised CPUE (kg/fisher-day) was at its lowest since 2010/11. 						
Triggered performance indicators	General <ul style="list-style-type: none"> None triggered 						
Assessment summary	<ul style="list-style-type: none"> In the last stock summary (Dennis et al. 2024), the stock was classified as sustainable. Consideration of additional catch and effort data for 2023/24 does not indicate any stock concerns at the zonal scale; rather the CPUE indices suggest abundance is stable. However, there have been serious stock concerns expressed by the commercial sector, particularly those that target Southern Calamari, that the traditional catch and effort statistics are not indicative of the stock or localised depletion. The complex life-history characteristics of Southern Calamari makes assessment of this species (and other cephalopods in general) using conventional fisheries population dynamic models challenging and is the focus of a FRDC-funded project (see R&D needs below). 						

MSF Management Tier 1 stock summaries – 2025

Southern Calamari

GULF ST VINCENT AND KANGAROO ISLAND



Created 27 March 2025; Modified 29 April 2025

- Previous assessments for Southern Calamari were based on a weight-of-evidence approach at the zonal scale.
- In addition to the information used in previous assessments, this stock summary considers information at a finer spatial scale and application of a CPUE-based harvest control rule (HCR) (Little et al. 2011) to provide an RBCC for 2025/26; this additional information is presented below.
- While the CPUE-based HCR (a category 5 assessment under the draft HSF) is considered more advanced than the weight-of-evidence approach (category 6), both are still considered ‘data-poor’ assessments.

Assessment category 5: Standardised CPUE (draft HSF)

- Assessment category 5 relies on interpretation of standardised CPUE trends, and is based on the premise that standardised CPUE is a proxy for biomass (or an index thereof).
- Standardisation of CPUE for both squid jig and haul net was achieved using a general linear model, where fishing year was the main effect, and licence holder, month, area, and, for haul net CPUE, targeting behaviour were explanatory terms (Dennis et al. in prep.). Using the standardised CPUE for both gear types and annual catch time-series, a 5-year reference period 2013/14–2017/18 was chosen as a period of relative stability for the GSV/KI stock in terms of catches and catch rates, thus providing a basis for assigning proxy target and limit reference points.
- The RBCC was calculated using the CPUE-based harvest control rule developed by Little et al. (2011) using the equation:

$$RBCC = C_{\text{targ}} * \max\left(0, \frac{CPUE_{23/24} - CPUE_{\text{lim}}}{CPUE_{\text{targ}} - CPUE_{\text{lim}}}\right)$$

- Where C_{targ} and $CPUE_{\text{targ}}$ are target reference points for catch and CPUE at maximum economic yield (MEY) (based on the reference period), $CPUE_{\text{lim}} = 0.20/0.48 CPUE_{\text{targ}}$, and $CPUE_{23/24}$ is the CPUE of the assessment.
- Since Southern Calamari are taken using squid jig and haul net, an RBCC was calculated for each gear type, weighted by the proportion of the total catch taken using the respective gear, then summed to give a combined RBCC.
- Using the CPUE-based HCR, an RBCC of 110.4 t was calculated for the Southern Calamari GSV/KI stock.

MSFMAC recommendation

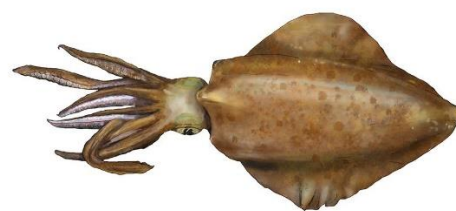
NOTING:

- SSC recommendation to consider a reduction in the TACC.
- The new assessment—the CPUE-based harvest control rule—indicated a Recommended Biological Commercial Catch (RBCC) of 110.4t.
- There is a need to consider management arrangements to reduce catch for all sectors based on the new information.
- Previous TACCs had been set using the arbitrary baseline of the 5-year catch average from 2015-2019.
- Standardised CPUE is showing a decline since 2017/18 but there are no indicators of localised depletion
- Standardised CPUE is close to $CPUE_{40}$ for squid jigs and majority (80%) of catch is taken by squid jigs.
- New assessment method is in development with further refinement required.
- Financial impacts of a reduction in TACC.
- Considering implementation of the draft HSF from 1 July 2025 and noting that the draft HSF provides for a staged transition from the current TACC to a reduced TACC over a period of three years.
- The under-catch and over-catch arrangements took into account the difference in scale of the proposed reduction in TACC, in comparison to the SGFZ.

MSF Management Tier 1 stock summaries – 2025

Southern Calamari

GULF ST VINCENT AND KANGAROO ISLAND



Created 27 March 2025; Modified 29 April 2025

MSFMAC recommendation: The MSFMAC recommended the 2024/25 TACC for the GSVFZ Calamari be reduced (from 164 t) by 11% to 146.69t commensurate with the recommended TACC reduction.

MSFMAC recommendation: The MSFMAC recommended that the default commercial under-catch and over-catch arrangements, being up to 10% of the licence holder’s quota entitlement, be implemented for Calamari in the GSVFZ for the 2025/26 quota period.

Management arrangements – other sectors

MSFMAC recommendation: The MSFMAC recommended that a reduction in the Calamari catch, commensurate with the recommended TACC reduction, be applied to the recreational non-charter sector in the GSVFZ and that SARDI advice be sought to inform the level of reduction required for the recreational catch.

MSFMAC recommendation: The MSFMAC noted that there was no allocation breach for the Gulf St Vincent Prawn Fishery (GSVFPF) Calamari catch, the use of bycatch reduction devices in the GSVFPF, and the low total catch of Calamari by the GSVFPF. MSFMAC requests PIRSA and the GSVFPF consider mechanisms that may constrain and reduce their catch commensurate with the recommended TACC reductions being applied.

2025/26 RBC and RBCC (t) options

- Commercial catch share (regional) = 61.2%

RBC and RBCC options for 2025/26

	<i>H</i> _{TARG}	RBC	RBCC/TACC
5-yr average catch			131.0
5-yr maximum catch			155.3
CPUE-based HCR		180.4*	110.4
2022/23 [^]			162 (TACC)
2023/24			164.837 (TACC)
2024/25			164.837 (TACC)

* RBC was calculated from the RBCC and commercial catch share (regional)

[^] Approach/method used for recommending the 2024/25 TACC

R&D needs (incl. current initiatives)

- ‘Developing a cost-effective stock assessment program for Southern Calamari fisheries’ (FRDC Project 2021/118) (project commenced March 2024).
- Application of the harvest strategy framework under the new management plan.
- More regular and reliable estimates of recreational catch.

References

Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.

Dennis, J.D. et al. (in prep.). Assessment of the South Australian Marine Scalefish Fishery in 2023/24. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide.

Little, L.R., Wayte, S.E., Tuck, G.N., Smith, A.D.M., Klaer, N., Haddon, M., Punt, A.E., Thomson, R., Day, J., Fuller, M. (2011). Development and evaluation of a cpue-based harvest control rule for the southern and eastern scalefish and shark fishery of Australia. *ICES Journal of Marine Science* **68**: 1699–1705.

Noell, C.J. et al. (in prep.). Developing a cost-effective stock assessment program for Southern Calamari fisheries. FRDC Project No. 2021-118.

Marine Scalefish Fishery Management Advisory Committee

Meeting #6 – 9 and 10 May 2024

The Marine Scalefish Fishery Management Advisory Committee (MSFMAC) held its sixth meeting on 9 & 10 May 2024 at PIRSA, West Beach, and via online video conference call.

The MSFMAC meeting recommended catch limits for 1 July 2024 to 30 June 2025 for the Tier 1 stocks in the Marine Scalefish Fishery (MSF) – Snapper, King George Whiting, Southern Garfish and Southern Calamari. The meeting also discussed the progress on the harvest strategy framework and management plan, as well as Yellowfin Whiting and Western Australian Salmon.

Recommended catch limits

The MSFMAC Science Subcommittee (SSC) had met and provided recommended catch limits for each stock of the Tier 1 species to the MSFMAC. The SSC had considered the latest available catch statistics and scientific information, including species/stock summary sheets prepared by the South Australian Research and Development Institute (SARDI). The final stock summary sheets are provided as an attachment to this report and include the full MSFMAC recommendations for each stock.

SARDI provided the MSFMAC with an overview of the stock summaries and latest scientific information for each stock including updated commercial catch and effort trends.

The MSFMAC noted there were no changes to stock status and recent commercial catch statistics indicated positive or stable trends for all stocks, however important issues were discussed for each stock, as summarised below.

Southern Garfish

A new SARDI stock assessment report was in preparation for Southern Garfish and the latest research using data until September 2022 was provided. The latest stock status classification is pending. Important improvements to the Southern Garfish stock assessment have been undertaken, including standardisation of catch per unit effort (CPUE) and progress towards transition to a new assessment modelling framework. This work had identified important issues to resolve for further assessment, including low recruitment, lack of historical data, highly skewed sex ratios and implications of closures, and the impact of the 2021 reduction in the legal minimum length on interpreting performance indicators. Considering this, the MSFMAC recommended research be undertaken, as a priority in 2024, to determine any impact the 5m depth restriction for haul nets was having on the sex ratios of retained Garfish and implications for spawning biomass. There was also a need to understand the abundance of Garfish in other areas closed to haul netting.

Snapper in the South East Fishing zone

The MSFMAC noted the sustainable classification of the Western Victorian Snapper stock, which includes the South East Fishing zone and the increasing biomass as a result of recent large recruitment

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events in Port Philip Bay. Recent PIRSA Compliance information on compliance with the recreational reporting requirements was discussed. Non-compliance in the recreational sector (excluding Charter) could now be quantified and was estimated to be 48% for the 1 July 2023 to 6 May 2024.

King George Whiting (KGW)

The MSFMAC noted most of KGW catch in the gulfs was taken by the recreational fishing sector. Therefore, the increasing uncertainty in recreational catch estimates due to the infrequency of the recreational fishing surveys was of particular significance to KGW stocks. PIRSA advised the MSFMAC that an allocation review of KGW was underway.

In the Spencer Gulf Fishing Zone, there had been a small decline in biomass and recruitment in 2021/22, however recent increased catch rates suggested reduced risk. It was unclear what the cause of the decline was and it was noted that the transition to the new stock assessment modelling framework may provide clarity on this matter.

Southern Calamari

Southern Calamari stocks were classified as sustainable and no new information was available other than updated commercial catch and effort data which did not indicate any stock concerns. However, SARDI had been made aware of concerns from commercial fishers regarding declining catch rates in south western Spencer Gulf. The MSFMAC noted it was unclear how this concern may or may not represent health of the wider stock. There were several possible causes for declines in catch rates in the region including water quality, nutrient load, predation from salmon, weather patterns or other environmental or anthropogenic factors. The MSFMAC didn't have the information to disentangle the fishing impacts vs other impacts and noted benefits in future in monitoring catch per fisher hour rather than fisher day, and a need to look at catch and effort data at a finer spatial scale. Importantly, the environmental drivers to recruitment were being considered as part of a 3-year FRDC project to establish a new stock assessment program for Southern Calamari stocks which commenced in March 2024.

Summary

Considering the available information and after discussing key issues raised, the MSFMAC considered there was no basis to suggest changes to the catch limits in place for the 2023/24. However, for Southern Garfish in the Spencer Gulf Fishing Zone (SGFZ) dissenting views were recorded from the recreational members of the MSFMAC who supported a Total Allowable Commercial Catch (TACC) being lower, as a precautionary approach due to uncertainties in the assessment.

The MSFMAC recommended the catch limits outlined in Table 1 be applied for 2024/25. Full recommendations are further outlined in the attached stock summaries.

Table 1. MSFMAC recommended catch limits for 1 July 2024 to 30 June 2025

Fishing Zone	King George Whiting TACC (T)	Southern Garfish TACC (T)	Calamari TACC (T)	Snapper TACC / TARC (T)
West Coast	183 (catch cap)	N/A	N/A	0
Spencer Gulf	116.963	103.451	207.52	0
Gulf St Vincent /	46.334	75.289	164.837	0
South East	N/A	N/A	N/A	52.5 / 17.5*

*Shared amongst the Recreational, Charter, and Aboriginal traditional sectors as per existing regional catch shares for Snapper in the South East Fishing Zone.

Quota under-catch and over-catch

For all quota managed stocks, the MSFMAC recommended the default commercial under-catch and over-catch arrangements, being up to 10% of the licence holder's quota entitlement, be implemented for the 2024/25 quota period. The recreational members of the MSFMAC expressed dissenting views regarding these arrangements for Southern Garfish in the SGFZ, and considered carry-over should not be applied based on a precautionary approach to the uncertainties in the assessment.

The MSFMAC supported 10% carry-over of the Charter Boat Fishery share of the Total Allowable Recreational Catch (TARC) for Snapper in the South East Fishing Zone. This carry-over was not supported for the recreational component of the TARC as there were concerns regarding non-compliance with the mandatory South East Snapper reporting requirements.

Yellowfin Whiting (YFW)

The MSFMAC noted the outcomes from a YFW stakeholder workshop in February 2024 which had indicated consensus support for management intervention to support stock rebuilding of YFW in Gulf St Vincent. It was noted the workshop participants had been unable to recommend specific management arrangements to support this stock rebuilding. The MSFMAC supported the need for management intervention and recommended PIRSA implement arrangements for YFW in GSV in the near future. The arrangements should be based on further analysis from SARDI and stakeholder consultation regarding specific management arrangements. The MSFMAC requested the SSC be advised of the SARDI advice. Measures prioritised to be assessed were a seasonal closure and an increase to the legal minimum length.

Management Plan development

Draft Harvest Strategy Framework (HSF)

The MSFMAC noted the draft HSF had undergone stakeholder consultation and PIRSA and SARDI had presented the HSF at four locations in the State. Stakeholder comments on the draft were considered by the MSFMAC. The MSFMAC supported several proposed changes to the draft HSF to address stakeholder comments and recommended additional actions/changes. The MSFMAC recommended PIRSA draft a meta-rule in the Implementation section of the HSF that provides for transitional arrangements to include a step-down in fishing mortality for up to three years where a stock was below the biomass target but above the biomass limit, and trending towards the biomass target. The MSFMAC also agreed for PIRSA to draft changes to the Exceptional Circumstances section to include guidance on what exceptional circumstances included. The MSFMAC acknowledged the helpful feedback provided by stakeholders.

Implementation Plan

A draft template Implementation Plan (IP) template had been provided to members that was reviewed by the SSC. Further work was required and a SSC working group would prepare the next draft. In addition, SARDI would provide draft reference periods for proxy target and limit reference points for individual species before meeting with industry to seek their feedback on their suitability.

Timeline

Members were provided with an updated timeline for the development of the new Management Plan. MSFMAC noted the intention for a draft Management Plan and IP to be provided in August 2024 in advance of public consultation in November and December. A stakeholder workshop was planned for 26 & 27 June 2024 to prepare a new ESD risk assessment.

Western Australian Salmon allocation

Further to the outcomes of the out-of-session (OOS) MSFMAC meeting on 18 March 2024, the Committee further discussed a potential sector allocation for Western Australian Salmon. Members noted additional information provided by PIRSA as actions from the OOS meeting to clarify various catch / management / allocation information including costs and benefits of allocation. The MSFMAC noted that under the current MSF management plan, only species with an identified need had been allocated, as informed by various factors:

- Importance to the fishery (both commercial and recreational);
- Production (total catch);
- Commercial value;
- Level of exploitation;
- Inter-annual variability in catches; and
- Reliability of catch estimates

Considering the sustainable status of the stock, fluctuating catches, and costs and benefits of allocation, the MSFMAC recommended that sector allocations for Western Australian Salmon not be determined at this time.

Regional Management and Catch Shares in the MSF

PIRSA had considered member comments and made significant updates to the draft discussion paper on Regional Management and Catch Shares in the MSF. The Committee considered the paper had improved and agreed members would be provided two weeks to provide further comments on the draft paper to PIRSA. The paper would then be finalised for MSFMAC endorsement. Following this, it was intended the paper would be used as the basis for the MSFMAC to discuss and agree on recommendations to the Minister on relevant issues. Through this process, relevant peak bodies would be invited to provide feedback on the matters for the MSFMAC to consider when preparing recommendations to the Minister.

The next MSFMAC meeting was expected to be held in August 2024 with a final date to be confirmed out-of-session.

Dr Ilona Stobutzki

Chair of the Marine Scalefish Fishery Management Advisory Committee

MSF Tier 1 stock summaries - 2024

King George Whiting

WEST COAST



Created 13 April 2024; Modified 17 April 2024

Stock status	2020 – Sustainable		2021/22 – Sustainable		2022/23 – Status pending	
		Commercial	Recreational	RBC	RBCC	TACC
Total catches (t)						
	2018/19	91	-	-	-	-
RBC – recommended biological catch	2019/20	97	-	-	-	-
RBCC – recommended biological commercial catch	2020/21	81	-	-	-	-
	2021/22	78	78*	-	-	473
TACC – total allowable commercial catch	2022/23	86	-	-	-	183
	2023/24			-	-	183
* Beckmann et al. (2023)						
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total
	MSF	49.5%	REC	45.5%	1%	100%
	NZRLF	1.0%	CHARTER	3.0%		
	SZRLF	0.0%				
	<i>Total</i>	<i>50.5%</i>	<i>Total</i>	<i>48.5%</i>	<i>1%</i>	<i>100%</i>
Stock assessment report(s)	<ul style="list-style-type: none"> • Smart et al. (2023) – for information up to 2021/22 (inclusive). • Report in preparation (due June 2024) – for provisional information up to 2022/23 (inclusive). 					
Assessment program	<ul style="list-style-type: none"> • Annual catch and effort statistics and trends in a stock summary report. • Length and age structures from market (Adelaide) and industry (regional) samples. • Application of a fully integrated assessment model ('WhitEst') and production of a stock assessment report every two or three years. • Recreational catch estimates obtained every several years. • Current assessment by weight of evidence. • No information is currently available for Aboriginal and traditional fishing. 					
Catch and effort trends	<ul style="list-style-type: none"> • Total catch increased in 2022/23 but is still historically low. • Target handline effort and number of licences taking or targeting King George Whiting continue to decline. • Nominal and standardised handline CPUE (in kg/fisher-day) continue to increase, although for the latter, this trend is not as steep. • Nominal and standardised handline CPUE (in kg/line-hour) show no apparent trend, but increased relatively sharply in 2022/23. 					
Triggered performance indicators	<p>General (includes total catch, target handline effort and CPUE)</p> <ul style="list-style-type: none"> • Total catch – 3rd lowest • Target handline effort – lowest • Target CPUE – highest 					

MSF Tier 1 stock summaries - 2024

King George Whiting

WEST COAST



Created 13 April 2024; Modified 17 April 2024

Biological (includes ‘WhitEst’ model outputs and age composition; Smart et al. 2023)

- Fishable biomass – 3-year average $\pm 10\%$ of long-term average (+27%)

Assessment summary

- The last stock assessment that provided ‘WhitEst’ model outputs (estimates of fishable biomass, harvest fraction and recruitment) was completed in 2023 using information up to 2021/22 (inclusive) (Smart et al. 2023) – in that assessment the stock was classified as sustainable.
- Consideration of additional catch and effort data for 2022/23 does not indicate any stock concerns (see general performance indicators above); rather the CPUE indices suggest abundance is stable.

RBC and RBCC (t) options

LML – legal minimum length
 H_{TARG} – target harvest fraction

2023/24 TACC justification (from the Chair’s report):
 For the West Coast Fishing Zone, the new KGW assessment incorporated the new fishing zone boundaries. The stock was classified as ‘sustainable’. There was no evidence of unsustainable fishing occurring, and there was a high but uncertain biomass and low harvest fraction. The Committee noted the biomass estimates were less certain on the West Coast than in the Spencer Gulf or Gulf St Vincent/Kangaroo Island regions, as the adult spawning stock was outside the footprint of the fishing effort. Considering these factors and the development of a new HSF, the MSFMAC recommended the 2022/23 commercial catch cap be maintained for 2023/24.

- Fishable biomass = 2,341 t (\geq LML 30 cm; Smart et al. 2023)
- Commercial catch share (regional) = 70%

RBC and RBCC options for 2024/25

	H_{TARG}	RBC	RBCC
Management Plan	0.28	655	459
M = 0.45 (WhitEst)	0.26 (2/3 M)	607	425
M = 0.2 (2022/23 approach)	0.125 (2/3 M)	292	205
5-yr average catch			87
5-yr maximum catch			97
2022/23*			183 (TACC)
2023/24			183 (TACC)

* Approach/method used for recommending the 2023/24 TACC

R&D needs (incl. current initiatives)

- Investigate alternative assessment model outputs for King George Whiting stocks using Stock Synthesis (this is planned to be undertaken following development of the Garfish assessment model, when the SARDI Fisheries Modelling team have developed their Stock Synthesis capabilities and under guidance from Dr Malcolm Haddon).
- Improve assessment through the integration of information on King George Whiting from offshore areas of the West Coast region (project proposal

MSF Tier 1 stock summaries - 2024

King George Whiting

WEST COAST



Created 13 April 2024; Modified 17 April 2024

	<p>recently developed by Southern Fishery and Ecosystem Solutions for the Marine Fishers Association and the West Coast Professional Fishers Association).</p> <ul style="list-style-type: none"> • Supplement market sampling with industry-direct sampling in the regions to obtain more representative samples (commenced in 2023/24). • CPUE standardisation (recently developed). • Application of the harvest strategy framework when finalised under the next management plan. • More regular and reliable estimates of recreational catch (various proposals are being considered).
<p>MSFMAC recommendation</p>	<p>MSFMAC RECOMMENDATION FOR KGW IN THE WCFZ</p> <p>NOTING:</p> <ul style="list-style-type: none"> • That no new assessment information was available, other than recent commercial catch and effort trends; • The sustainable status of the stock, which was lightly fished, with an increasing yet uncertain biomass; • That a new Harvest Strategy Framework was in development; <p>THE MSFMAC RECOMMENDED:</p> <ul style="list-style-type: none"> • The KGW 2023/24 commercial catch cap of 183 t in the WCFZ be maintained for 2024/25.
<p>References</p>	<p>Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.</p> <p>Smart, J.J., McGarvey, R., Feenstra, J., Drew, M.J., Earl, J., Durante, L., Beckmann, C.L., Matthews, D., Matthews, J.M., Mark, K., Bussell, J., Davey, J., Tsolos, A., Noell, C. (2023). Assessment of the South Australian Marine Scalefish Fishery in 2021/22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2017/000427-6. SARDI Research Report Series No. 1184. 296pp.</p>

MSF Tier 1 stock summaries - 2024

King George Whiting

SPENCER GULF



Created 13 April 2024; Modified 17 April 2024

Stock status	2020 – Sustainable		2021/22 – Sustainable		2022/23 – Status pending	
		Commercial	Recreational	RBC	RBCC	TACC
Total catches (t)						
	2018/19	103	-	-	-	-
RBC – recommended biological catch	2019/20	96	-	-	-	-
RBCC – recommended biological commercial catch	2020/21	69	-	-	-	-
	2021/22	71	146*	-	-	111
TACC – total allowable commercial catch	2022/23	79	-	-	-	111
	2023/24			-	-	116.963
* Beckmann et al. (2023)						
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total
	MSF	49.5%	REC	45.5%	1%	100%
	NZRLF	1.0%	CHARTER	3.0%		
	SZRLF	0.0%				
	<i>Total</i>	<i>50.5%</i>	<i>Total</i>	<i>48.5%</i>	<i>1%</i>	<i>100%</i>
Stock assessment report(s)	<ul style="list-style-type: none"> Smart et al. (2023) – for information up to 2021/22 (inclusive). Report in preparation (due June 2024) – for provisional information up to 2022/23 (inclusive). 					
Assessment program	<ul style="list-style-type: none"> Annual catch and effort statistics and trends in a stock summary report. Length and age structures from market (Adelaide) and industry (regional) samples. Application of a fully integrated assessment model ('WhitEst') and production of a stock assessment report every two or three years. Recreational catch estimates obtained every several years. Current assessment by weight of evidence. No information is currently available for Aboriginal and traditional fishing. 					
Catch and effort trends	<ul style="list-style-type: none"> Total catch increased in 2022/23 but is still historically low. Target handline effort and number of licences taking or targeting King George Whiting continue to decline. Nominal and standardised handline CPUE in kg/fisher-day have been relatively stable since 2005/06, although standardised CPUE has been near the historic mean in 2021/22 and 2022/23. Standardised handline CPUE in kg/line-hour has also been stable since 2005/06, but increased relatively sharply in 2022/23. 					
Triggered performance indicators	<p>General (includes total catch, target handline effort and CPUE)</p> <ul style="list-style-type: none"> Total catch – 3rd lowest Target handline effort – lowest Target CPUE – highest 					

MSF Tier 1 stock summaries - 2024

King George Whiting

SPENCER GULF



Created 13 April 2024; Modified 17 April 2024

	<p>Biological (includes ‘WhitEst’ model outputs and age composition; Smart et al. 2023)</p> <ul style="list-style-type: none"> • Fishable biomass – 3-year average $\pm 10\%$ of long-term average (-11%) • Recruitment – $\pm 10\%$ of previous 5-year average (-21.6%)
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Assessment summary	<ul style="list-style-type: none"> • The last stock assessment that provided ‘WhitEst’ model outputs (estimates of fishable biomass, harvest fraction and recruitment) was completed in 2023 using information up to 2021/22 (inclusive) (Smart et al. 2023) – in that assessment the stock was classified as sustainable. • Consideration of additional catch and effort data for 2022/23 does not indicate any stock concerns (see general performance indicators above); rather the CPUE indices suggest abundance is stable.
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RBC and RBCC (t) options	<p>2023/24 TACC justification (from the Chair’s report):</p> <p>An updated stock assessment had been completed for King George Whiting (KGW). The Committee noted that in the case of KGW in the Spencer Gulf Fishing Zone, the stock was classified as ‘sustainable’ and had a stable harvest fraction, but there had been a decline in recruitment and subsequent small decline in estimated biomass in recent years. Both raw and standardised CPUE were high, and did not indicate any issues with stock status. The Committee discussed these results at length, including the potential for hyperstability and the robustness of CPUE as an index of abundance. Considering the available information and status of the stock, the MSFMAC recommended the 2022/23 TACC be maintained for 2023/24, and suggested recruitment and biomass should be closely monitored.</p>
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	<ul style="list-style-type: none"> • Fishable biomass = 1,115 t (\geq LML 30 cm west of 136°E, \geq LML 32 cm east of 136°E; Smart et al. 2023) • Commercial catch share (regional) = 44%
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RBC and RBCC options for 2024/25			
	H_{TARG}	RBC	RBCC
Management Plan	0.28	312	137
M = 0.45 (WhitEst)	0.26 (2/3 M)	289	127
M = 0.2 (2022/23 approach)	0.125 (2/3 M)	139	61
5-yr average catch			84
5-yr maximum catch			103
2022/23*			111 (TACC)
2023/24			116.963 (TACC)

* Approach/method used for recommending the 2023/24 TACC

MSF Tier 1 stock summaries - 2024

King George Whiting

SPENCER GULF



Created 13 April 2024; Modified 17 April 2024

R&D needs (incl. current initiatives)

- Investigate alternative assessment model outputs for King George Whiting stocks using Stock Synthesis (this is planned to be undertaken following development of the Garfish assessment model, when the SARDI Fisheries Modelling team have developed their Stock Synthesis capabilities and under guidance from Dr Malcolm Haddon).
- An improved understanding of the contribution of King George Whiting from Coffin Bay to the fishable biomass in the broader Spencer Gulf management zone.
- Supplement market sampling with industry-direct sampling in the regions to obtain more representative samples (commenced in 2023/24).
- CPUE standardisation (recently developed).
- Application of the harvest strategy framework when finalised under the next management plan.
- More regular and reliable estimates of recreational catch (various proposals are being considered).

MSFMAC recommendation

MSFMAC RECOMMENDATION FOR KGW IN THE SGFZ

NOTING:

- A considerable proportion of the KGW catch in the SGFZ was taken by the recreational fishing sector. Therefore, the increasing uncertainty due to the infrequency of the recreational fishing surveys, and time since the last survey, is particularly significant for this stock;
- That no new assessment information was available, other than recent commercial catch and effort trends;
- The sustainable status of the stock, stable harvest fraction, strong fishery performance suggested by raw and standardised CPUE;
- The small decline in biomass and recruitment in recent years was being closely monitored; and
- That a new Harvest Strategy Framework was in development:

THE MSFMAC RECOMMENDED:

- The KGW 2023/24 TACC of 116.963 t in the SGFZ be maintained as the TACC for 2024/25.

References

Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.

Smart, J.J., McGarvey, R., Feenstra, J., Drew, M.J., Earl, J., Durante, L., Beckmann, C.L., Matthews, D., Matthews, J.M., Mark, K., Bussell, J., Davey, J., Tsolos, A., Noell, C. (2023). Assessment of the South Australian Marine Scalefish Fishery in 2021/22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2017/000427-6. SARDI Research Report Series No. 1184. 296pp.

MSF Tier 1 stock summaries - 2024

King George Whiting

GULF ST VINCENT AND KANGAROO ISLAND



Created 13 April 2024; Modified 17 April 2024

Stock status	2020 – Sustainable		2021/22 – Sustainable		2022/23 – Status pending	
		Commercial	Recreational	RBC	RBCC	TACC
Total catches (t) RBC – recommended biological catch RBCC – recommended biological <i>commercial</i> catch TACC – total allowable commercial catch	2018/19	40	-	-	-	-
	2019/20	42	-	-	-	-
	2020/21	31	-	-	-	-
	2021/22	27	74*	-	-	46
	2022/23	28	-	-	-	46
	2023/24					46.334
	* Beckmann et al. (2023)					
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total
	MSF	49.5%	REC	45.5%	1%	100%
	NZRLF	1.0%	CHARTER	3.0%		
	SZRLF	0.0%				
	<i>Total</i>	<i>50.5%</i>	<i>Total</i>	<i>48.5%</i>	<i>1%</i>	<i>100%</i>
Stock assessment report(s)	<ul style="list-style-type: none"> Smart et al. (2023) – for information up to 2021/22 (inclusive). Report in preparation (due June 2024) – for provisional information up to 2022/23 (inclusive). 					
Assessment program	<ul style="list-style-type: none"> Annual catch and effort statistics and trends in a stock summary report. Length and age structures from market (Adelaide) and industry (regional) samples. Application of a fully integrated assessment model ('WhitEst') and production of a stock assessment report every two or three years. Recreational catch estimates obtained every several years. Current assessment by weight of evidence. No information is currently available for Aboriginal and traditional fishing. 					
Catch and effort trends	<ul style="list-style-type: none"> Total catch marginally increased in 2022/23 but is still historically low. With the exception of a minor increase in target handline effort in 2022/23, target handline effort and number of licences taking or targeting King George Whiting continue to decline. Nominal and standardised handline CPUE (in both kg/fisher-day and kg/line-hour) demonstrate a decline from 2005/06 to 2011/12, followed by an increase such that, in 2022/23, all CPUE indices are either near or above the historic mean. 					
Triggered performance indicators	General (includes total catch, target handline effort and CPUE) <ul style="list-style-type: none"> Total catch – 2nd lowest Target handline effort – 2nd lowest Target CPUE – highest 					

MSF Tier 1 stock summaries - 2024

King George Whiting

GULF ST VINCENT AND KANGAROO ISLAND



Created 13 April 2024; Modified 17 April 2024

	<p>Biological (includes 'WhitEst' model outputs and age composition; Smart et al. 2023)</p> <ul style="list-style-type: none"> • None triggered
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Assessment summary	<ul style="list-style-type: none"> • The last stock assessment that provided 'WhitEst' model outputs (estimates of fishable biomass, harvest fraction and recruitment) was completed in 2023 using information up to 2021/22 (inclusive) (Smart et al. 2023) – in that assessment the stock was classified as sustainable. • Consideration of additional catch and effort data for 2022/23 does not indicate any stock concerns (see general performance indicators above); rather the CPUE indices suggest abundance is near the historic mean and possibly increasing.
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RBC and RBCC (t) options	<p>2023/24 TACC justification (from the Chair's report):</p> <p>The recent catch statistics indicated positive or stable trends for all stocks except for Spencer Gulf King George Whiting where there was a small decline in abundance. Considering this, and that there were no changes to stock status and that a new HSF was in development, when compared against the various catch options, the MSFMAC agreed there was no basis from which to suggest changes to the catch limits in place for the 2022/23 season for all stocks except for Snapper in the South East (SE) Fishing Zone where an increase in Total Allowable Catch (TAC) was recommended.</p>
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LML – legal minimum length
 H_{TARG} – target harvest fraction

- Legal-size biomass = 645 t (\geq LML 32 cm; Smart et al. 2023)
- Commercial catch share (regional) = 40%

RBC and RBCC options for 2024/25

	H_{TARG}	RBC	RBCC
Management Plan	0.28	181	72
M = 0.45 (WhitEst)	0.26 (2/3 M)	167	67
M = 0.2 (2022/23 approach)	0.125 (2/3 M)	81	32
5-yr average catch			33
5-yr maximum catch			42
2022/23*			46 (TACC)
2023/24			46.334 (TACC)

* Approach/method used for recommending the 2023/24 TACC

R&D needs (incl. current initiatives)	<ul style="list-style-type: none"> • Investigate alternative assessment model outputs for King George Whiting stocks using Stock Synthesis (this is planned to be undertaken following development of the Garfish assessment model, when the SARDI Fisheries Modelling team have developed their Stock Synthesis capabilities and under guidance from Dr Malcolm Haddon).
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MSF Tier 1 stock summaries - 2024

King George Whiting

GULF ST VINCENT AND KANGAROO ISLAND



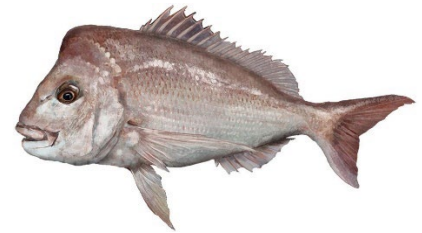
Created 13 April 2024; Modified 17 April 2024

	<ul style="list-style-type: none"> • Supplement market sampling with industry-direct sampling in the regions to obtain more representative samples (commenced in 2023/24). • CPUE standardisation (recently developed). • Application of the harvest strategy framework when finalised under the next management plan. • More regular and reliable estimates of recreational catch (various proposals are being considered).
<p>MSFMAC recommendation</p>	<p>MSFMAC RECOMMENDATION FOR KGW IN THE GSVFZ</p> <p>NOTING:</p> <ul style="list-style-type: none"> • A considerable proportion of the KGW catch in the GSVFZ was taken by the recreational fishing sector. Therefore, the increasing uncertainty due to the infrequency of the recreational fishing surveys, and time since the last survey, is particularly significant for this stock. • No new assessment information was available, other than recent commercial catch and effort trends; • The sustainable status of the stock and increasing handline catch rates with high and stable biomass; and • That a new Harvest Strategy Framework was in development: <p>THE MSFMAC RECOMMENDED:</p> <ul style="list-style-type: none"> • The KGW 2023/24 TACC of 46.334 t in the GSVFZ be maintained as the TACC for 2024/25. • The default commercial quota under-catch and over-catch arrangements, being up to 10% of the licence holder’s quota entitlement, be implemented for KGW in the GSVFZ for the 2024/25 quota period.
<p>References</p>	<p>Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.</p> <p>Smart, J.J., McGarvey, R., Feenstra, J., Drew, M.J., Earl, J., Durante, L., Beckmann, C.L., Matthews, D., Matthews, J.M., Mark, K., Bussell, J., Davey, J., Tsolos, A., Noell, C. (2023). Assessment of the South Australian Marine Scalefish Fishery in 2021/22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2017/000427-6. SARDI Research Report Series No. 1184. 296pp.</p>

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Snapper

SOUTH EAST (WESTERN VICTORIA STOCK)



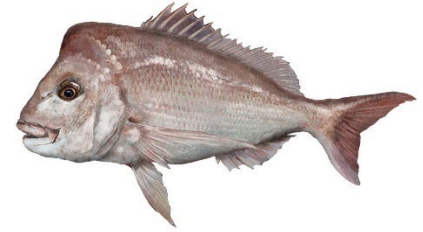
Created 13 April 2024; Modified 17 April 2024

Stock status	2020 – Sustainable (Western Victoria stock)		2021/22 – Sustainable (Western Victoria stock)		2022/23 – Sustainable (Western Victoria stock)	
Total catches (t)		Commercial	Recreational	RBC	RBCC	TACC/TAR C
RBC – recommended biological catch	2018/19	18	-	-	-	-
RBCC – recommended biological commercial catch	2019/20	43	-	-	-	†60.75/13.5
TACC – total allowable commercial catch	2020/21	43	-	48	36	‡21.6/4.8
TARC – total allowable recreational catch	2021/22	25	11*	48	36	36/12
	2022/23	29	-	48	36	36/12
	2023/24			70	52.5	52.5/17.5
	* Beckmann et al. (2023) † Feb–Oct 2020 ‡ Feb–Jun 2021					
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total
	MSF	79%	REC	8%	1%	100%
	NZRLF	0.55%	CHARTER	10%		
	SZRLF	1.45%				
	LCF	0.03%				
	<i>Total</i>	<i>81%</i>	<i>Total</i>	<i>18%</i>	<i>1%</i>	<i>100%</i>
Stock assessment report(s)	<ul style="list-style-type: none"> • Fowler et al. (2021) • Drew et al. (2022) – for information up to 2021/22 (inclusive). • Report in preparation (due June 2024) – for provisional information up to 2022/23 (inclusive). 					
Assessment program	<ul style="list-style-type: none"> • Annual catch and effort statistics and trends in a stock summary report. • Length and age structures from market sampling (Adelaide). • Application of a fully integrated assessment model ('SnapEst') and production of a stock assessment report every two or three years (expected once the Snapper fishery re-opens in all regions of the State). • Recreational catch estimates obtained through mandatory reporting in the South East via the SA Fishing App and from State-wide surveys every several years. • Current assessment by weight of evidence. • No information is currently available for Aboriginal and traditional fishing. 					
Catch and effort trends	<ul style="list-style-type: none"> • Total catch has been periodic since 1983/84 (when logbook data became available), where it rarely exceeded 10 t until 2004/05, then increased to 					

MSF Tier 1 stock summaries - 2024

Snapper

SOUTH EAST (WESTERN VICTORIA STOCK)



Created 13 April 2024; Modified 17 April 2024

	<p>more than 200 t in 2009/10, before falling to <10 t again in 2015/16, and thereafter remaining at relatively moderate levels (<50 t).</p> <ul style="list-style-type: none"> • Since 2005/06, target longline effort and number of licences taking or targeting Snapper using longline have generally mirrored the periodicity in the total catch, whereas most of the catch and effort data using handlines is confidential (<5 licence holders). • Nominal and standardised handline CPUE (in kg/fisher-day and kg/line-hour) show a declining trend since 2005/06.
<p>Triggered performance indicators</p>	<p>General (includes total catch, target handline effort and CPUE, target longline effort and CPUE)</p> <ul style="list-style-type: none"> • None triggered <p>Biological (includes ‘SnapEst’ model outputs and age composition; Drew et al. 2022)</p> <ul style="list-style-type: none"> • Fishable biomass – 3-year average $\pm 10\%$ of previous 3-year average (+27%) • Egg production – <20% of pristine population (6.5%) • Recruitment – 3-year average $\pm 10\%$ of long-term average (-97%) • Age composition – proportion of 10+ years of age <20% of fished population (18.5%)
<p>Assessment summary</p>	<ul style="list-style-type: none"> • The last stock assessment that provided ‘SnapEst’ model outputs (estimates of fishable biomass, egg production, harvest fraction and recruitment) was delivered in November 2022 using information up to 2021/22 (inclusive) (Drew et al. 2022) – in that assessment the regional population was classified as sustainable. • Consideration of additional catch and effort data for 2022/23 does not indicate any stock concerns (see general performance indicators above); however, stock status is determined by the Victorian Fisheries Authority since the South East regional population represents the western extremity of the Western Victoria stock. • Catch and effort in the South East is largely influenced by the recruitment strength in Port Phillip Bay (VIC), and subsequent growth, mortality, movement and, ultimately, availability of Snapper in the South East at ~5 years of age when they generally reach the legal minimum length (LML) of 38 cm. • Given the record high recruitment index (for age 0+ juveniles) recorded in Port Phillip Bay in 2018 followed by another recruitment pulse in 2022, there is some anticipation that these strong year classes might be reflected in South East catches from 2023/24 onward. • As part of the Status of Australian Fish Stocks (Pidcocke et al. 2021), the Western Victoria stock was most recently classified as sustainable.

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Snapper

SOUTH EAST (WESTERN VICTORIA STOCK)



Created 13 April 2024; Modified 17 April 2024

RBC, RBCC and RBRC (t) options

LML – legal minimum length

H_{TARG} – target harvest fraction

RBRC – recommended biological recreational catch

2023/24 TACC justification (from the Chair’s report):

In 2021/22, SARDI undertook assessments of Snapper stocks in South Australia, including the South East regional population. The updated stock assessment model triggered a re-evaluation of an appropriate harvest fraction for SE Snapper to guide TAC setting by applying the same approach used to set the 2021/22 TAC. Considering the updated harvest fraction, the sustainable stock status, increasing biomass, and record high recruitment of Snapper recorded in Port Phillip Bay in recent years, the MSFMAC recommended a TAC of 70t (52.5t TACC, 17.5t TARC) based on a 20% harvest fraction. Whilst this TAC represented an increase from the previous 48t TAC, the Committee considered this to still be conservative.

- Fishable biomass = 349 t (\geq LML 38 cm; Drew et al. 2022)
- Commercial catch share (regional) = 75%

RBC and RBCC/RBRC options for 2024/25

	H_{TARG}	RBC	RBCC/RBRC
Management Plan	0.32	112	84/28
Previous	0.3	105	79/26
Updated (2023/24)*	0.20	70	52/18
5-yr average catch			32/-
5-yr maximum catch			43/-
2022/23			36 (TACC)/12 (TARC)
2023/24			52.5 (TACC)/17.5 (TARC)

* Approach/method used for recommending the 2023/24 TACC/TARC

R&D needs (incl. current initiatives)

- Investigate alternative assessment model outputs for Snapper stocks using Stock Synthesis (this is planned to be undertaken upon completion of the Snapper Science Program, when the SARDI Fisheries Modelling team have developed their Stock Synthesis capabilities through development of assessments for Garfish and King George Whiting stocks and under guidance from Dr Malcolm Haddon).
- Various research themes within the State Government and FRDC-funded Snapper Science Program – see ‘Snapper Hub’ at pir.sa.gov.au/snapper-recovery for details.
- ‘Quantifying post-release survival and movement of Snapper (*Chrysophrys auratus*): Informing strategies to engage the fishing community in practices to enhance the sustainability of an important multi-sector fishery’ (FRDC Project 2019/044) (due to be completed in 2024/25).

MSF Tier 1 stock summaries - 2024

Snapper

SOUTH EAST (WESTERN VICTORIA STOCK)



Created 13 April 2024; Modified 17 April 2024

- ‘Cost-effective, non-destructive solutions to developing a pre-recruit index for Snapper’ (FRDC project 2019/046) (due to be completed in 2024/25).
- CPUE standardisation (recently developed).
- Application of the harvest strategy framework when finalised under the next management plan.
- Ongoing improvements and refinements to the reporting of recreational catch (various proposals are being considered).

MSFMAC recommendation

MSFMAC RECOMMENDATION FOR SNAPPER IN THE SEFZ

NOTING:

- That no new assessment information was available, other than recent commercial catch and effort trends;
- The sustainable status of the stock, increasing biomass and incoming recruitment from Port Phillip Bay;
- Compliance concerns for the reporting of the recreational catch of Snapper in 2023/24.

THE MSFMAC RECOMMENDED:

- The 2023/24 Total Allowable Catch of 70t, consisting of a 52.5t TACC and 17.5t TARC (Consisting of Recreational, Charter, and Aboriginal Traditional sectors) for Snapper in the SEFZ be maintained for 2024/25.
- The default commercial quota under-catch and over-catch arrangements, being up to 10% of the licence holder’s quota entitlement, be implemented for Snapper in the SEFZ for the 2024/25 quota period.
- That the 10% carry-over of the base Snapper catch limits that were applied to the Recreational Fishery and Charter Boat Fishery in 2023/24, only be maintained for the Charter Boat Fishery in 2024/25.

References

Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.

Drew, M.J., Rogers, T.A., McGarvey, R., Feenstra, J., Matthews, D., Matthews, J.M., Earl, J., Smart, J., Noell, C.J., Fowler, A.J. (2022). Snapper (*Chrysophrys auratus*) stock assessment report 2022. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2007/000523-7. SARDI Research Report Series No. 1155. 178pp.

Fowler, A.J., Stewart, J., VFA, Roelofs, A., Garland, A., Jackson, G. (2021). Snapper (*Chrysophrys auratus*), in Pidcocke T., Ashby, C., Hartmann, K., Hesp, A., Hone, P., Klemke, J., Mayfield, S., Roelofs, A., Saunders, T., Stewart, J., Wise, B., Woodhams, J.E. Status of Australian Fish Stocks Reports 2020. Fisheries Research and Development Corporation, Canberra.

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Southern Garfish

SPENCER GULF



Created 13 April 2024; Modified 17 April 2024

Stock status	2020 – Recovering (NSG)		2021/22 – Recovering		2022/23 – Status pending	
	2020 – Sustainable (SSG)					
Total catches (t) RBC – recommended biological catch RBCC – recommended biological <i>commercial</i> catch TACC – total allowable commercial catch		Commercial	Recreational	RBC	RBCC	TACC
	2018/19	110	-	-	-	-
	2019/20	99	-	-	-	-
	2020/21	109	-	-	-	-
	2021/22	84	11*	-	-	100
	2022/23	74	-	-	-	100
	2023/24				-	-
* Beckmann et al. (2023)						
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total
	MSF	79.33%	19.5%		1%	100%
	NZRLF	0.04%				
	SZRLF	0.13%				
<i>Total</i>	79.5%	<i>Total</i>	19.5%	1%	100%	
Stock assessment report(s)	<ul style="list-style-type: none"> Smart et al. (2022) – for information up to 2020/21 (inclusive). Report in preparation (due April 2024) – for provisional information up to 2022/23 (inclusive). 					
Assessment program	<ul style="list-style-type: none"> Annual catch and effort statistics and trends in a stock summary report. Length and age structures from market (Adelaide) and industry (regional) samples. Application of a fully integrated assessment model ('GarEst') and production of a stock assessment report every two or three years. Recreational catch estimates obtained every several years. Current assessment by weight of evidence. No information is currently available for Aboriginal and traditional fishing. 					
Catch and effort trends	<ul style="list-style-type: none"> Total catch continues to decline. Target haul net and dab net effort and number of licences taking or targeting Southern Garfish using haul nets continue to decline. Nominal and standardised haul net CPUE (in kg/fisher-day and kg/haul) declined steeply from 2010/11 to 2015/16, but have since recovered to the historic mean. 					

MSF Tier 1 stock summaries - 2024

Southern Garfish

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Created 13 April 2024; Modified 17 April 2024

Triggered performance indicators

General (includes total catch, target haul net effort and CPUE, target dab net effort and CPUE)

- Total catch – lowest
- Target haul net effort – lowest
- Target dab net effort – 2nd lowest

Biological (includes ‘GarEst’ model outputs and age composition; Smart et al. 2023)

- Fishable biomass – 3-year average $\pm 10\%$ of long-term average (-14%)
- Harvest fraction – $< 30\%$ (35%)
- Egg production – 30% of pristine population (14%)
- Recruitment – $\pm 10\%$ of previous 5-year average (+13%)
- Age composition – increased proportion of 3+ years of age since last assessment (-14%) (note this has been influenced by LML reduction since last assessment.)

Assessment summary

- The current stock assessment report (in prep.) will provide ‘GarEst’ model outputs (estimates of fishable biomass, harvest fraction and recruitment) using information up to 2021/22 (inclusive) (see biological performance indicators above).
- Despite estimates of harvest fraction and egg production not meeting operational objectives of the 2013 Management Plan, these may have been overly optimistic, particularly since harvest fraction is at a historic low and continues to decline, and egg production is comparable to estimates of the past 30 years.
- The increase in the fishable biomass in 2021/22 suggests that the stock may have recovered, although the level at which the stock was depleted, and the extent of the recovery is uncertain given the lack of target and limit biomass reference points.
- Consideration of additional catch and effort data for 2022/23 does not indicate any stock concerns (see general performance indicators above); rather the CPUE indices suggest abundance has returned to a long-term average following a period of recovery, and which is consistent with the latest estimates and trajectory for fishable biomass.

RBC and RBCC (t) options

LML – legal minimum length

H_{TARG} – target harvest fraction

2023/24 TACC justification (from the Chair’s report):

The recent catch statistics indicated positive or stable trends for all stocks with the exception of Spencer Gulf King George Whiting where there was a small decline in abundance. Considering this, and that there were no changes to stock status and that a new HSF was in development, when compared against the various catch options, the MSFMAC agreed there was no basis from which to suggest changes to the catch limits in place for the 2022/23 season for all

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Southern Garfish

SPENCER GULF



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stocks except for Snapper in the South East (SE) Fishing Zone where an increase in Total Allowable Catch (TAC) was recommended.

- Fishable biomass = 281 t (\geq LML 23 cm)
- Commercial catch share (regional) = 78%

RBC and RBCC options for 2024/25

	H_{TARG}	RBC	RBCC
Management Plan	0.30	84	66
M = 0.42 (max. age 10)	0.24 (2/3 M)	69	54
5-yr average catch			95
5-yr maximum catch			110
2022/23*			100 (TACC)
2023/24			103.451 (TACC)

* Approach/method used for recommending the 2023/24 TACC

R&D needs (incl. current initiatives)

- Investigate alternative assessment model outputs for Garfish stocks using Stock Synthesis (an assessment was recently developed and undertaken by Dr Malcolm Haddon, who will provide an overview of his findings at the Science Subcommittee meeting of the MSFMAC on 23 April 2024).
- Supplement market sampling with industry-direct sampling in the regions to obtain more representative samples (commenced in 2023/24).
- CPUE standardisation (recently developed).
- Application of the harvest strategy framework when finalised under the next management plan.
- More regular and reliable estimates of recreational catch (various proposals are being considered).

MSFMAC recommendation

MSFMAC RECOMMENDATION FOR SOUTHERN GARFISH IN THE SGFZ

NOTING:

- a new stock assessment for Southern Garfish had been undertaken using data for up until September 2022, and the stock classification and final report was in preparation;
- important improvements to the assessment had been undertaken during the year, including standardisation of CPUE and preliminary transition to the Stock Synthesis 3 modelling framework;
- there remained important issues to resolve for the assessment, including: low recruitment, lack of historical data, highly skewed sex ratios and implications of closures, and the impact of the 2021 reduction in the legal minimum length;

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Southern Garfish

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- uncertainties in the assessment could influence stock status in positive or negative ways;
- there were improvements in the performance indicators of the stock and stable biomass trend; and
- further development of a new Harvest Strategy Framework and further transition to SS3 were expected to be completed this year -

THE MSFMAC RECOMMENDED:

- The Southern Garfish 2023/24 TACC of 103.451 t in the SGFZ be maintained for 2024/25. This recommendation was not supported by the recreational fishing members of the MSFMAC who considered the TACC should be lower, based on a more precautionary approach due to uncertainties in the assessment.
- Research be undertaken, as a priority in 2024, to determine any impact that the 5m depth restriction for haul nets has had on the sex ratios of retained Garfish and implications for spawning biomass. This work may include catch sampling in areas adjacent to, but deeper than 5m. There was also a need to understand the abundance of Garfish in other areas closed to haul netting.
- The default commercial quota under-catch and over-catch arrangements, being up to 10% of the licence holder's quota entitlement, be implemented for Southern Garfish in the SGFZ for the 2024/25 quota period. This recommendation was not supported by the recreational fishing members of the MSFMAC who considered carry-over should not be applied based on a more precautionary approach to the uncertainties in the assessment.

References

- Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.
- Smart, J.J., Earl, J., McGarvey, R., Feenstra, J., Drew, M.J., Bailleul, F., Fowler, A.J., Matthews, D., Chaplin, G., Matthews, J.M., Freeling, B., Rogers, T.A., Beckmann, C.L., Tsolos, A. (2022). Assessment of the South Australian Marine Scalefish Fishery in 2020. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2017/000427-5. SARDI Research Report Series No. 1162. 266pp.
- Smart, J.J., McGarvey, R., Feenstra, J., Drew, M.J., Earl, J., Durante, L., Beckmann, C.L., Matthews, D., Matthews, J.M., Mark, K., Bussell, J., Davey, J., Tsolos, A., Noell, C. (2023). Assessment of the South Australian Marine Scalefish Fishery in 2021/22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2017/000427-6. SARDI Research Report Series No. 1184. 296pp.

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Southern Garfish

GULF ST VINCENT AND KANGAROO ISLAND



Created 13 April 2024; Modified 17 April 2024

Stock status	2020 – Recovering (NGSV)		2021/22 – Recovering		2022/23 – Status pending	
	2020 – Sustainable (NGSV)					
Total catches (t) RBC – recommended biological catch RBCC – recommended biological <i>commercial</i> catch TACC – total allowable commercial catch		Commercial	Recreational	RBC	RBCC	TACC
	2018/19	81	-	-	-	-
	2019/20	62	-	-	-	-
	2020/21	67	-	-	-	-
	2021/22	69	9*	-	-	71
	2022/23	64	-	-	-	71
	2023/24				-	-
* Beckmann et al. (2023)						
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total
	MSF	79.33%	19.5%		1%	100%
	NZRLF	0.04%				
	SZRLF	0.13%				
<i>Total</i>	79.5%	<i>Total</i>	19.5%	1%	100%	
Stock assessment report(s)	<ul style="list-style-type: none"> Smart et al. (2022) – for information up to 2020/21 (inclusive). Report in preparation (due April 2024) – for provisional information up to 2022/23 (inclusive). 					
Assessment program	<ul style="list-style-type: none"> Annual catch and effort statistics and trends in a stock summary report. Length and age structures from market (Adelaide) and industry (regional) samples. Application of a fully integrated assessment model ('GarEst') and production of a stock assessment report every two or three years. Recreational catch estimates obtained every several years. Current assessment by weight of evidence. No information is currently available for Aboriginal and traditional fishing. 					
Catch and effort trends	<ul style="list-style-type: none"> Total catch has declined and stabilised at 60–80 t since 2014/15. Target haul net and dab net effort and number of licences taking or targeting Southern Garfish using either gear type show a long-term decline, although the number of licence using haul nets appear to have stabilised for the past few years. Nominal and standardised haul net CPUE (in kg/fisher-day and kg/haul) declined to historic low levels around 2015/16, but have since recovered to be above the historic mean. 					
Triggered performance indicators	General (includes total catch, target haul net effort and CPUE, target dab net effort and CPUE) <ul style="list-style-type: none"> Total catch – 3rd lowest Target haul net effort – lowest 					

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Southern Garfish

GULF ST VINCENT AND KANGAROO ISLAND



Created 13 April 2024; Modified 17 April 2024

	<ul style="list-style-type: none"> • Target dab net effort – lowest <p>Biological (includes ‘GarEst’ model outputs and age composition; Smart et al. 2023)</p> <ul style="list-style-type: none"> • Harvest fraction – <30% (29%) • Egg production – 30% of pristine population (16%) • Recruitment – ±10% of previous 5-year average (+12%) • Age composition – increased proportion of 3+ years of age since last assessment (-3%) (note this has been influenced by LML reduction since last assessment.)
<p>Assessment summary</p>	<ul style="list-style-type: none"> • The current stock assessment report (in prep.) will provide ‘GarEst’ model outputs (estimates of fishable biomass, harvest fraction and recruitment) using information up to 2021/22 (inclusive) (see biological performance indicators above). • Despite estimates of harvest fraction and egg production not meeting operational objectives of the 2013 Management Plan, these may have been overly optimistic, particularly since harvest fraction is at a historic low and continues to decline, and egg production is comparable or higher than most estimates of the past 30 years. • The increase in the fishable biomass in 2021/22 suggests that the stock may have recovered, although the level at which the stock was depleted, and the extent of the recovery is uncertain given the current lack of target and limit biomass reference points. • Consideration of additional catch and effort data for 2022/23 does not indicate any stock concerns (see general performance indicators above); rather the CPUE indices suggest abundance has returned to above the long-term average following a period of recovery, and which is consistent with the latest estimates and trajectory for fishable biomass.
<p>RBC and RBCC (t) options</p> <p>LML – legal minimum length H_{TARG} – target harvest fraction</p>	<p>2023/24 TACC justification (from the Chair’s report):</p> <p>The recent catch statistics indicated positive or stable trends for all stocks except for Spencer Gulf King George Whiting where there was a small decline in abundance. Considering this, and that there were no changes to stock status and that a new HSF was in development, when compared against the various catch options, the MSFMAC agreed there was no basis from which to suggest changes to the catch limits in place for the 2022/23 season for all stocks except for Snapper in the South East (SE) Fishing Zone where an increase in Total Allowable Catch (TAC) was recommended.</p>

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Southern Garfish

GULF ST VINCENT AND KANGAROO ISLAND



Created 13 April 2024; Modified 17 April 2024

- Fishable biomass = 248 t (\geq LML 23 cm)
- Commercial catch share (regional) = 82%

RBC and RBCC options for 2024/25

	H_{TARG}	RBC	RBCC
Management Plan	0.30	74	61
M = 0.42 (max. age 10)	0.24 (2/3 M)	60	49
5-yr average catch			69
5-yr maximum catch			81
2022/23*			71 (TACC)
2023/24			75.289 (TACC)

* Approach/method used for recommending the 2023/24 TACC

R&D needs (incl. current initiatives)

- Investigate alternative assessment model outputs for Garfish stocks using Stock Synthesis (an assessment was recently developed and undertaken by Dr Malcolm Haddon, who will provide an overview of his findings at the Science Subcommittee meeting of the MSFMAC on 23 April 2024).
- Supplement market sampling with industry-direct sampling in the regions to obtain more representative samples (commenced in 2023/24).
- CPUE standardisation (recently developed).
- Application of the harvest strategy framework when finalised under the next management plan.
- More regular and reliable estimates of recreational catch (various proposals are being considered).

MSFMAC recommendation

MSFMAC RECOMMENDATION FOR SOUTHERN GARFISH IN THE GSVFZ

NOTING:

- a new stock assessment for Southern Garfish had been undertaken using data up until September 2022, and the stock classification and final report was in preparation;
- important improvements to the assessment had been undertaken during the year, including standardisation of CPUE and preliminary transition to the Stock Synthesis modelling framework;
- there remained important issues to resolve for assessment, including, low recruitment, lack of historical data, skewed sex ratios and implications of closures, and the impact of the 2021 reduction in the legal minimum length;
- uncertainties in the assessment could influence stock status in positive or negative ways;
- there were improvements in the performance indicators of the stock and stable biomass trend; and

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Southern Garfish

GULF ST VINCENT AND KANGAROO ISLAND



Created 13 April 2024; Modified 17 April 2024

- further development of a new Harvest Strategy Framework and further transition to SS3 was expected this year;

THE MSFMAC RECOMMENDED:

- The Southern Garfish 2023/24 TACC of 75.289 t in the GSVFZ be maintained for 2024/25.
- Research be undertaken, as a priority in 2024, to determine any impact that the 5m depth restriction for haul nets has had on the sex ratios of retained Garfish and implications for spawning biomass. This work may include catch sampling in areas adjacent to, but deeper than 5m. There was also a need to understand the abundance of Garfish in other areas closed to haul netting.
- The default commercial quota under-catch and over-catch arrangements, being up to 10% of the licence holder's quota entitlement, be implemented for Southern Garfish in the GSVFZ for the 2024/25 quota period.

References

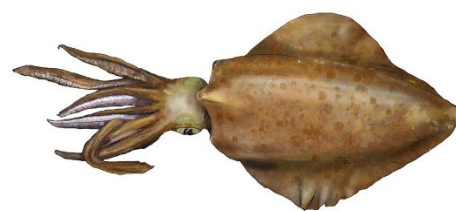
Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.

Smart, J.J., McGarvey, R., Feenstra, J., Drew, M.J., Earl, J., Durante, L., Beckmann, C.L., Matthews, D., Matthews, J.M., Mark, K., Bussell, J., Davey, J., Tsolos, A., Noell, C. (2023). Assessment of the South Australian Marine Scalefish Fishery in 2021/22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2017/000427-6. SARDI Research Report Series No. 1184. 296pp.

MSF Tier 1 stock summaries - 2024

Southern Calamari

SPENCER GULF



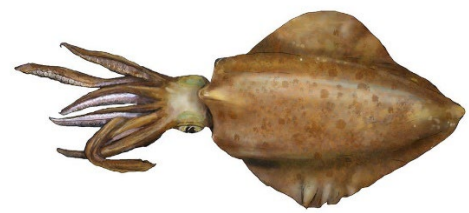
Created 13 April 2024; Modified 17 April 2024

Stock status	2020 – Sustainable (State-wide)		2021/22 – Sustainable		2022/23 – Status pending	
		Commercial	Recreational	RBC	RBCC	TACC
Total catches (t)						
	2018/19	164	-	-	-	-
	2019/20	185	-	-	-	-
	2020/21	206	-	-	-	-
	2021/22	152	115*	-	-	204
	2022/23	148	-	-	-	204
	2023/24			-	-	207.52
	* Beckmann et al. (2023)					
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total
	MSF	56%	37.4%		1%	100%
	NZRLF	0.45%				
	WCPF	0.1%				
	SGPF	4.6%				
	GSVPF	0.45%				
Total	61.6%	Total	37.4%	1%	100%	
Stock assessment report(s)	<ul style="list-style-type: none"> Smart et al. (2023) – for information up to 2021/22 (inclusive). Report in preparation (due June 2024) – for provisional information up to 2022/23 (inclusive). 					
Assessment program	<ul style="list-style-type: none"> Annual catch and effort statistics and trends in a stock summary report. Recreational catch estimates obtained every several years. Current assessment by weight of evidence. No information is currently available for Aboriginal and traditional fishing. 					
Catch and effort trends	<ul style="list-style-type: none"> Total catch has gradually reduced to its lowest level since 2011/12. Target squid jig effort and number of licences taking or targeting Southern Calamari show a general decline since 2011/12. Nominal and standardised squid jig CPUE (in kg/fisher-day and kg/line-hour) have fluctuated around the historic mean since 2004/05; however, in 2022/23, all CPUE indices had declined in consecutive years. 					
Triggered performance indicators	<p>General indicators only (includes total catch, target jig effort and CPUE)</p> <ul style="list-style-type: none"> Target haul net effort – highest Target jig effort – decreased over 5 consecutive years 					
Assessment summary	<ul style="list-style-type: none"> In the last stock summary (Smart et al. 2023), the stock was classified as sustainable. 					

MSF Tier 1 stock summaries - 2024

Southern Calamari

SPENCER GULF



Created 13 April 2024; Modified 17 April 2024

- Consideration of additional catch and effort data for 2022/23 does not indicate any stock concerns (see general performance indicators above); rather the CPUE indices suggest abundance is stable.
- However, there have been serious stock concerns expressed by the commercial sector, particularly those that target Southern Calamari, that the traditional catch and effort statistics are not indicative of the stock or localised depletion, and that other information such as percentage of quota caught and changes in individual fishers' catch rates (in kg/hour, spatially and temporally) would be more accurate and should be explored.
- The complex life-history characteristics of Southern Calamari makes assessment of this species (and other cephalopods in general) using conventional fisheries population dynamic models quite challenging, and is the focus of a FRDC-funded project (see R&D needs below).

RBC and RBCC (t) options

2023/24 TACC justification (from the Chair's report):

The recent catch statistics indicated positive or stable trends for all stocks with the exception of Spencer Gulf King George Whiting where there was a small decline in abundance. Considering this, and that there were no changes to stock status and that a new HSF was in development, when compared against the various catch options, the MSFMAC agreed there was no basis from which to suggest changes to the catch limits in place for the 2022/23 season for all stocks except for Snapper in the South East (SE) Fishing Zone where an increase in Total Allowable Catch (TAC) was recommended.

- Commercial catch share (regional) = 62%

RBC and RBCC options for 2024/25

	H_{TARG}	RBC	RBCC
5-yr average catch			171
5-yr maximum catch			206
2022/23 [^]			204 (TACC)
2023/24			207.52 (TACC)

* Approach/method used for recommending the 2023/24 TACC

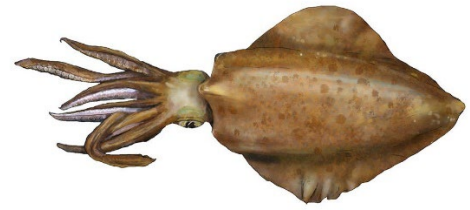
R&D needs (incl. current initiatives)

- 'Developing a cost-effective stock assessment program for Southern Calamari fisheries' (FRDC Project 2021/118) (project commenced March 2024).
- CPUE standardisation (recently developed).
- Application of the harvest strategy framework when finalised under the next management plan.
- More regular and reliable estimates of recreational catch (various proposals are being considered).

MSF Tier 1 stock summaries - 2024

Southern Calamari

SPENCER GULF



Created 13 April 2024; Modified 17 April 2024

MSFMAC recommendation

MSFMAC RECOMMENDATION FOR CALAMARI IN THE SGFZ

NOTING:

- Concerns about reduced availability of Calamari in parts of south-western Spencer Gulf, however reasons for the southern gulf decline in catch rates were unclear, and the effects were being observed in a localised area;
- There are benefits to monitoring catch per fisher hour rather than fisher day and a need to look at catch and effort data at a finer spatial scale;
- Southern Calamari is a highly variable species with a very short life cycle;
- Environmental drivers to recruitment are being considered as part of a three-year FRDC project to establish stock assessment approach for Calamari stocks which commenced in March 2024;
- No new assessment information was available, other than recent commercial catch and effort trends;
- The sustainable status of the stock; and
- Development of a new Harvest Strategy Framework;

THE MSFMAC RECOMMENDED:

- the 2023/24 Southern Calamari TACC of 207.52 t in the SGFZ be maintained in 2024/25.
- the default commercial quota under-catch and over-catch arrangements, being up to 10% of the licence holder's quota entitlement, be implemented for Southern Calamari in the SGFZ for the 2024/25 quota period.

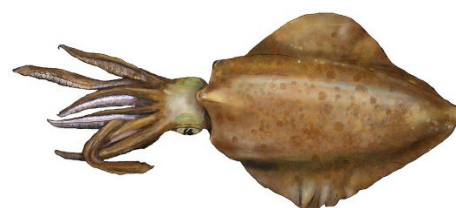
References

- Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.
- Smart, J.J., McGarvey, R., Feenstra, J., Drew, M.J., Earl, J., Durante, L., Beckmann, C.L., Matthews, D., Matthews, J.M., Mark, K., Bussell, J., Davey, J., Tsolos, A., Noell, C. (2023). Assessment of the South Australian Marine Scalefish Fishery in 2021/22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2017/000427-6. SARDI Research Report Series No. 1184. 296pp.

MSF Tier 1 stock summaries - 2024

Southern Calamari

GULF ST VINCENT AND KANGAROO ISLAND



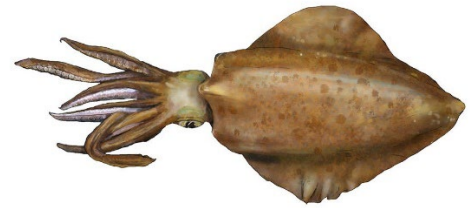
Created 13 April 2024; Modified 17 April 2024

Stock status	2020 – Sustainable (State-wide)		2021/22 – Sustainable		2022/23 – Status pending	
		Commercial	Recreational	RBC	RBCC	TACC
Total catches (t)						
	2018/19	150	-	-	-	-
	2019/20	155	-	-	-	-
	2020/21	131	-	-	-	-
	2021/22	118	90*	-	-	162
	2022/23	135	-	-	-	162
	2023/24			-	-	164.837
	* Beckmann et al. (2023)					
Sector allocations (State-wide)	Commercial		Recreational		Aboriginal	Total
	MSF	56%	37.4%		1%	100%
	NZRLF	0.45%				
	WCPF	0.1%				
	SGPF	4.6%				
	GSVPF	0.45%				
Total	61.6%	Total	37.4%	1%	100%	
Stock assessment report(s)	<ul style="list-style-type: none"> Smart et al. (2023) – for information up to 2021/22 (inclusive). Report in preparation (due June 2024) – for provisional information up to 2022/23 (inclusive). 					
Assessment program	<ul style="list-style-type: none"> Annual catch and effort statistics and trends in a stock summary report. Recreational catch estimates obtained every several years. Current assessment by weight of evidence. No information is currently available for Aboriginal and traditional fishing. 					
Catch and effort trends	<ul style="list-style-type: none"> Total catch shows no apparent trend since the early 1990s, until 2020/21–2022/23, when the lowest catches over this 30-year period were recorded. Target squid jig effort and number of licences taking or targeting Southern Calamari show a general decline since 2011/12. Nominal and standardised squid jig CPUE (in kg/fisher-day and kg/line-hour) have fluctuated around the historic mean following a peak in 2004/05. 					
Triggered performance indicators	<p>General indicators only (includes total catch, target jig effort and CPUE)</p> <ul style="list-style-type: none"> Target haul net effort – 2nd highest 					
Assessment summary	<ul style="list-style-type: none"> In the last stock summary (Smart et al. 2023), the stock was classified as sustainable. 					

MSF Tier 1 stock summaries - 2024

Southern Calamari

GULF ST VINCENT AND KANGAROO ISLAND



Created 13 April 2024; Modified 17 April 2024

- Consideration of additional catch and effort data for 2022/23 does not indicate any stock concerns (see general performance indicators above); rather the CPUE indices suggest abundance is stable.
- However, there have been serious stock concerns expressed by the commercial sector, particularly those that target Southern Calamari, that the traditional catch and effort statistics are not indicative of the stock or localised depletion, and that other information such as percentage of quota caught and changes in individual fishers' catch rates (in kg/hour, spatially and temporally) would be more accurate and should be explored.
- The complex life-history characteristics of Southern Calamari makes assessment of this species (and other cephalopods in general) using conventional fisheries population dynamic models quite challenging, and is the focus of a FRDC-funded project (see R&D needs below).

RBC and RBCC (t) options

2023/24 TACC justification (from the Chair's report):

The recent catch statistics indicated positive or stable trends for all stocks with the exception of Spencer Gulf King George Whiting where there was a small decline in abundance. Considering this, and that there were no changes to stock status and that a new HSF was in development, when compared against the various catch options, the MSFMAC agreed there was no basis from which to suggest changes to the catch limits in place for the 2022/23 season for all stocks except for Snapper in the South East (SE) Fishing Zone where an increase in Total Allowable Catch (TAC) was recommended.

- Commercial catch share (regional) = 60%

RBC and RBCC options for 2024/25

	H_{TARG}	RBC	RBCC/TACC
5-yr average catch			138
5-yr maximum catch			155
2022/23*			162 (TACC)
2023/24			164.837 (TACC)

* Approach/method used for recommending the 2023/24 TACC

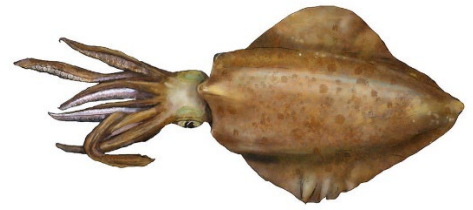
R&D needs (incl. current initiatives)

- 'Developing a cost-effective stock assessment program for Southern Calamari fisheries' (FRDC Project 2021/118) (project commenced March 2024).
- CPUE standardisation (recently developed).
- Application of the harvest strategy framework when finalised under the next management plan.
- More regular and reliable estimates of recreational catch (various proposals are being considered).

MSF Tier 1 stock summaries - 2024

Southern Calamari

GULF ST VINCENT AND KANGAROO ISLAND



Created 13 April 2024; Modified 17 April 2024

<p>MSFMAC recommendation</p>	<p>MSFMAC RECOMMENDATION FOR CALAMARI IN THE GSVFZ</p> <p>NOTING:</p> <ul style="list-style-type: none"> • Southern Calamari is a highly variable species with a very short life cycle; • Environmental drivers to recruitment are being considered as part of a three-year FRDC project to establish a new stock assessment approach for Calamari stocks, which commenced in March 2024; • No new assessment information was available, other than recent commercial catch and effort trends; • The sustainable status of the stock; and • Development of a new Harvest Strategy Framework; <p>THE MSFMAC RECOMMENDED:</p> <ul style="list-style-type: none"> • The 2023/24 Southern Calamari TACC of 164.837 t in the GSVFZ be maintained in 2024/25. • The default commercial quota under-catch and over-catch arrangements, being up to 10% of the licence holder’s quota entitlement, be implemented for Southern Calamari in the GSVFZ for the 2024/25 quota period.
<p>References</p>	<p>Beckmann, C.L., Durante, L.M., Graba-Landry, A., Stark, K.E., Tracey, S.R. (2023). Survey of recreational fishing in South Australia 2021–22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2022/000385-1. SARDI Research Report Series No. 1161. 185pp.</p> <p>Smart, J.J., McGarvey, R., Feenstra, J., Drew, M.J., Earl, J., Durante, L., Beckmann, C.L., Matthews, D., Matthews, J.M., Mark, K., Bussell, J., Davey, J., Tsolos, A., Noell, C. (2023). Assessment of the South Australian Marine Scalefish Fishery in 2021/22. Report to PIRSA Fisheries and Aquaculture. South Australian Research and Development Institute (Aquatic and Livestock Sciences), Adelaide. SARDI Publication No. F2017/000427-6. SARDI Research Report Series No. 1184. 296pp.</p>