Australian Government
Australian Fisheries Management Authority

Coral Sea Fishery

2024-25 Trigger Report

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Contents

1 Purpose

The purpose of the Coral Sea Fishery (CSF) trigger reports is to assess logbook catch and effort data for the CSF against trigger limits detailed in sector specific harvest strategies. There are currently four sectors in the CSF:

- Line (previously trawl, trap, and line)
- Aquarium
- Hand collection (sea cucumber)
- Lobster and trochus

For the 2024-25 fishing season, only the Line and Aquarium sectors were active, with no effort in the Sea Cucumber Sector. The Lobster and Trochus Sector is not included in this report due to ongoing inactivity. From mid-2019 trawl and trap methods became impermissible and are, therefore, not reported on.

Harvest strategies for the CSF sectors can be found on the AFMA website:

https://www.afma.gov.au/fisheries-management/management-tools/harvest-strategies

The performance of management arrangements for the CSF undergo annual evaluation by the Australian Bureau of Agricultural Resource Economics and Sciences (ABARES) through their *Fishery Status Reports*.

2 Line Sector

2.1 Overview

Fishing in the CSF Line Sector took place during the 2024-25 fishing year (1 July 2024 – 30 June 2025), with 14,881 hooks set and 10.3 tonnes of retained catch. This is a significant increase compared to the two prior fishing seasons, with no fishing during 2023-24 and 73,000 hooks set and 5.7 tonnes of retained catch in 2022-23.

Table 1 outlines the catch and effort in the Line Sector for the past three fishing seasons. The top ten species by weight for the last three seasons are listed in Table 2.

There is a high level of latent effort in the sector, with a maximum of 1 to 2 of the available 6 permits fished annually, resulting in significant variation in fishing effort. Fishing activity in this sector is constrained by high input costs, distance from ports and fishing grounds and variable weather conditions. Operators tend to fish the CSF as a secondary fishery, meaning effort is largely dependent on how many operators' fish in other primary fisheries.

Table 1: Catch and effort for the Line Sector over the past three seasons.

Catch (tonnes)			Effort (# hooks set)		
2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
5.7	0	10.3	73,000	0	14,881

Table 2: The top ten species caught by weight (tonnes) in the Line Sector of the CSF for 2022-23, 2023-24, and 2024-25.

2022-23		2023-24		2024-25	
Species	**Weight (t)**	**Species**	**Weight (t)**	**Species**	**Weight (t)**
Flame snapper	3.189	No fishing activity		Bar rockcod	2.179
Ruby snapper	0.724			Flame snapper	1.201
Blue-eye trevalla	0.666			Ruby snapper	1.100
Amberjack	0.366			Rockcod [1]	0.863
Bar rockcod	0.192			Rosy snapper	0.826
Ornate jobfish	0.173			Long tail rubies/snapper	0.756
Imperador	0.119			Bronze whaler	0.642
Whitetip reef shark	0.071			Sweetlips	0.515
Alfonsino	0.064			Sharks (mixed)	0.495
Conger eels	0.044			Robinson's seabream	0.354

2.1.1 Sensitivity of Current Harvest Strategy Triggers

The current Harvest Strategy for the Line Sector was developed in 2007 and included the trawl and trap sectors. The triggers were intended to include the total catch and effort from the trawl, trap and line sectors, and were developed based on historical catch and effort from all three sectors.

As part of the introduction of the Coral Sea Marine Park (CSMP), the trap and trawl sectors were bought out by the Commonwealth in 2019 and these permits surrendered to AFMA. The removal of these sectors, combined with highly variable catch and effort in the fishery, results in the triggers being highly sensitive and no longer 'fit for purpose'.

The ongoing effectiveness of CPUE-based triggers and subsequent management controls is an issue for the CSF Line Sector, especially in the context of high degrees of effort latency. Therefore, a review of the CSF Line Sector Harvest Strategy is scheduled for 2026.

[1] *Epinephelus* & *Cephalopholis* species.

2.2 Catch Triggers

Catch triggers and the associated management response for the Line Sector are outlined in the *Coral Sea Fishery Line, Trawl and Trap Sector Harvest Strategy*.[2]

2.2.1 Overarching catch triggers

i. *Must be less than the total highest catches across the main species caught to date.*[3]
ii. *Overarching Level 1 trigger for total fishery catch: 450t*
iii. *Overarching Level 2 trigger for total fishery catch: 1000t*

In 2024-25, one species (flame snapper) fell into a category of a 'main species.' The catch in 2024-25 did not exceed the trigger as the maximum historical catch of flame snapper is 41.2 tonnes. The total catch in the CSF Line Sector was 10.3 tonnes, which is less than the overarching Level 1 trigger.

2.2.2 Species specific triggers (high risk/vulnerable AND key species)

2.2.2.1 Endangered, Threatened, and Protected Species

There were no reported interactions with Endangered, Threatened, and Protected (ETP) species in the 2024-25 fishing season. Quarterly ETP reports can be found on the AFMA website:

https://www.afma.gov.au/protected-species/endangered-and-threatened-species-reporting.

2.2.2.2 Whitetip reef shark

i. *Level 1: 2.5 tonnes (1/6 historical high catch)*
ii. *Level 2: 5 tonnes (1/3 historical high catch)*

The species-specific triggers for whitetip reef shark were not exceeded. The 2024-25 catch of whitetip reef shark was 0.24 tonnes.

2.2.2.3 Grey reef shark

i. *Level 1: 13 tonnes (1/2 historical high catch)*
ii. *Level 2: 26 tonnes (historical high catch)*

The species-specific triggers for grey reef shark were not exceeded. The 2024-25 catch of grey reef shark was 0.027 tonnes.

2.2.3 Catch proportion triggers

i. *If the relative catch proportion of any species changes by >30% from its historical average AND the catch of this species is greater than 1 tonne, invoke a level 1 response for the relevant species. If this is accompanied by a ≥50% overall decline in the CPUE over the last three years, invoke a Level 2 response.*

[2] The CSF no longer includes the Trap and Trawl Sectors.

[3] A 'main species' is a species that has an average catch over 1 tonne over a five-year period.

ii. *If the relative proportion of any species in the catch declines interannually by 10% or greater over 3 consecutive years, invoke a Level 1 response. If this is accompanied by a ≥50% overall decline in CPUE over the last 3 years, invoke a Level 2 response.*

In the 2024-25 fishing season, there were three species with catches greater than 1 tonne accompanied with changes of greater than 30% of its historical average. These were:

- Flame snapper (1.2t caught)
- Ruby snapper (1.1t caught)
- Bar rockcod (2.2t caught)

As noted in section 2.1.1 above, the breach of this trigger is driven by the recent variability of CSF Line Sector effort, with the different fishing strategies and operators the major contribution to shorter-term changes to catch compositions. Catches still broadly remain within sustainable limits.

In line with Wildlife Trade Operation (WTO) conditions, AFMA is undertaking an Ecological Risk Assessment for the CSF Line Sector. This assessment will consider the impacts of fishing on target, byproduct, and bycatch species including those that have met the catch proportion trigger.

There were no species which had a relative proportion catch decline interannually by 10% or more. No species exceeded these combined triggers.

2.2.4 Spatial triggers

For the purposes of this report, 'hillgrids' are used to represent areas fished. Each hillgrid is a square approximately 15 nautical miles wide. The analysis is relatively coarse, as fishing effort typically occurs in only a proportion of each hillgrid.

If the following changes occur:

i. *The percentage of areas fished increases by ≥40% (fishery expansion) OR*
ii. *The percentage of areas fished decreases by ≥40% (fishery contraction)*
iii. *If ≥40% of the total catch is taken from a single area (fishery contraction/undue fishing pressure on one area) OR*
iv. *If ≥40% of once-exploited areas are no longer fished*

Invoke a Level 1 response to determine why, with the added option of imposing spatial management measures, such as closures or move-on provisions. If any of the above triggers are accompanied by a ≥50% overall decline in CPUE over the last three years, invoke a Level 2 response.

Table 3: Summary of hillgrid areas fished in the CSF Line Sector from 2022-23 to 2024-25.

2022-23		2023-24			2024-25		
Areas fished (hillgrids)	Areas fished (km^2)	Areas fished (hillgrids)	Areas fished (km^2)	Change in area fished	Areas fished (hillgrids)	Areas fished (km^2)	Change in area fished
3	2,313	0	0	↓100%	16	12,336	N/A

A Level 1 response was triggered in relation to i. and iv. in 2024-25. Through logbook analysis, the following was determined:

- With respect to i., there was a large increase in the area fished that exceeded the trigger. However, a percentage change could not be calculated because no fishing effort took place in the prior fishing season. There was a 433% increase in the areas fished in 2024-25 (16 hillgrids) compared to the last fishing season where effort occurred (3 hillgrids).
- With respect to iv., '*once exploited areas*' are defined as the '*total number of individual areas fished over the past three years for the purpose of assessing this trigger*', 75% of once-exploited areas were no longer fished, therefore exceeding the trigger.

The breach of this trigger is driven by the variability of effort in the CSF Line Sector, in particular the lack of fishing effort in the 2023-24 season. The spatial change in fishing effort may also be due to changes in fishing gear/methods. Longlines were used in the 2022-23 fishing season, whereas droplines were used in the 2024-25 season.

A Level 2 response was not required as overall CPUE did not decline by ≥50%. A summary of logbook catches, effort, and CPUE (kg per hook set) for each gear type in the CSF Line Sector is provided in Table 4.

Table 4: Logbook catch, effort and CPUE (kg/hook set) for the CSF Line Sector from 2022-23 to 2024-25 fishing seasons.

Fishing year	Dropline hooks	Catch (t, whole weight)	CPUE (kg/hook set)
2022-23	0	0	N/A
2023-24	0	0	N/A
2024-25	14,881	10.3	0.689
Fishing year	**Longline hooks**	**Catch (t, whole weight)**	**CPUE (kg/hook set)**
2022-23	73,000	5.7	0.078
2023-24	0	0	N/A
2024-25	0	0	N/A

2.2.5 CPUE triggers

If CPUE for any species shows a decline over the last three years, but without any of the above indicators being triggered, a Level 1 response shall be invoked if the decline is less than or equal to 50%, and a Level 2 response shall be invoked if the decline is greater than 50%.

For the assessment of this trigger, the CPUE is calculated using the aggregate number of hooks set. The CPUE of the species that triggered a Level 1 or a Level 2 response are included in Table 5.

Table 5: Species, catch (kg), ten-year historical average catch (kg), highest historical catch (kg), CPUE (kg/hooks set) by fishing season from 2022-23 to 2024-25, and whether the Level 1 or Level 2 trigger was reached in 2024-25. Only species that met the threshold of a trigger are included.

Species	2024-25 catch (kg)	10-year historical average catch (kg)	Highest historical catch (kg)	2022-23 CPUE	2023-24 CPUE	2024-25 CPUE	L1 decline CPUE (last 3 years)	L2 >50% decline in CPUE (last 3 years)
Blue-eye trevalla	25	213	6,000	0.009123	0	0.0016800	TRUE	TRUE
Amberjack	29	524	2,970	0.005014	0	0.0019488	TRUE	TRUE
Ornate Jobfish	0	274	1,102	0.002370	0	0	TRUE	TRUE
Imperador	0	80	600	0.001630	0	0	TRUE	TRUE
Alfonsino	5	167	69,672	0.000877	0	0.0003360	TRUE	TRUE
Conger eels	0	10	50	0.000603	0	0	TRUE	TRUE
Saddleback snapper	0	123	709	0.000205	0	0	TRUE	TRUE
Boarfishes	0	1	26	0.000151	0	0	TRUE	TRUE
Gemfish	1	4	13,391	0.000096	0	0.0000672	TRUE	FALSE
Red squirrelfish	0	3	256	0.000055	0	0	TRUE	TRUE

These triggers are only considered for species that have not met any other triggers in the harvest strategy. Catches of the species identified in Table 5 are relatively consistent with the 10-year historical catch average and well below the highest historical catch recorded for these species.

Due to the low effort nature of the fishery and highly variable catch, there are no formal, single-species stock assessments for any species (Keller, Davis and Curtotti 2025). The most conservative estimate of maximum sustainable yield (MSY) for all species in the CSF Line Sector is 31.5 tonnes (Patterson et al. 2022). Total catch for the Line Sector in 2024-25 was 10.3 tonnes, which is well below the most conservative MSY limit.

While AFMA will continue to monitor the catch of the species above, due to the 2026 upcoming Harvest Strategy review, no further management action is currently warranted.

3 Aquarium Sector

3.1 Key family groups

During the 2024-25 fishing season, a total of 31,283 individual fish were harvested in the CSF Aquarium Sector. None of the triggers for the main commercial family groups were reached in 2024-25 (**Table 6**).

Table 6: Standing stock size estimates, catch triggers and 2022-23 to 2024-25 catch (number of individuals) for the six key commercial family groups in the CSF Aquarium Sector.

Family Name	Min stock estimate	Max stock estimate	Level 1 trigger (0.02%)	Level 2 trigger (0.04%)	2022-23 catch	2023-24 catch	2024-25 catch
Acanthuridae	168,352,987	487,917,566	20,000	40,000	4,023	1,805	3,670
Blenniidae & Gobiidae	61,219,268	18,365,780,400	20,000	40,000	868	703	1,157
Labridae	91,828,902	459,144,510	18,000	36,000	6,082	3,846	6,375
Pomacanthidae	61,525,364	N/A	12,000	24,000	1,976	1,195	2,192
Pomacentridae	1,346,823,896	15,304,817,000	20,000	40,000	4,085	2,045	3,396
Serranidae	56,627,823	459,144,510	11,000	22,000	5,823	5,625	8,466

Note: *The Level 1 and Level 2 triggers are 0.02% and 0.04% of the minimum estimated stock size respectively.*

3.2 Other species

Level 1 catch trigger: Equal to the highest historical catch for all 'other' species.

Level 2 catch trigger: Equal to twice the highest historical catch for all 'other' species.

In the 2024-25 fishing season, the total catch for 'other' species was 6,027, which is less than the highest historical catch of 16,934 individuals in 2012-13, resulting in no triggers being breached.

3.2.1 Acroporidae

40 tonnes of the coral family *Acroporidae* is permitted to be harvested annually from the CSF. This limit is regulated and consistent with the conditions of the CSF WTO approval based on a Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITIES) Non-Detriment Finding (NDF).

Level 1 Catch Trigger: 20 tonnes

Level 2 Catch Trigger: 40 tonnes

In the 2024-25 fishing season, 314kg of stony coral was harvested in the CSF Aquarium Sector, well below the trigger limits.

3.2.2 Live rock

A 40-tonne harvest of live rock under the CSF WTO accreditation based on a CITIES NDF.

Level 1 Catch Trigger: 20t

Level 2 Catch Trigger: 40t

In the 2024-25 fishing season, 900kg of live rock was harvested in the CSF Aquarium Sector, well below the trigger limits .

3.2.3 Humphead maori wrasse

The harvest of 50 humphead maori wrasse individuals is permitted under the CSF WTO accreditation based on a CITES NDF.

Level 1 Catch Trigger: Each time 10 individuals are caught

Level 2 Catch Trigger: 50 individuals

In the 2024-25 fishing season, 1 humphead maori wrasse was harvested in the CSF Aquarium Sector, well below the trigger limits.

4 Sea Cucumber Sector

No fishing effort occurred in the CSF Sea Cucumber sector in the 2024-25 fishing season.

5 References

Keller, K, Davis, K and Curtotti, R 2025, 'Coral Sea Fishery', in I Butler, H Patterson, RS Cottrell, D Bromhead, D Galeano, T Timmiss, J Woodhams and R Curtotti (Eds) Fishery status reports 2025, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra, DOI: https://doi.org/10.25814/ewe9-4p7. CC BY 4.0.

Patterson, H, Bromhead, D, Galeano, D, Larcombe, J, Timmiss, T, Woodhams, J and Curtotti, R 2022, Fishery status reports 2022, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra. CC BY 4.

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