

NSW TOTAL ALLOWABLE FISHING COMMITTEE

SEA URCHIN AND TURBAN SHELL RESTRICTED FISHERY: RED URCHIN

DETERMINATION FOR THE 2026 FISHING PERIOD

5 November 2025

Executive Summary

Preamble

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

The TAFC is an independent statutory body established under Schedule 2 of the Act. In making a determination on catch or effort in a commercial fishery, the TAFC must consider the ecological, economic and social issues associated with each fishery and make determinations that 'on balance' pursue the objectives of the Act.

The TAFC is not subject to the control or direction of the Minister as to any determination made. However, the Minister may instruct the TAFC on procedures and considerations for fishing determinations.

This Determination is for the Sea Urchin and Turban Shell (SUTS) Restricted Fishery for the period 1 January to 31 December 2026. The Red Urchin fishery is part of the SUTS multi-species restricted fishery that is managed by a combination of input controls (e.g., minimum size limits) and a TACC allocated equally amongst endorsement holders as individual transferable quota.

To provide some protection against overfishing and serial and/or localised depletion, the TAFC supported the setting of Regional Catch Limits (RCLs) across five (5) regions in 2000 (Appendix 1). The Red Urchin (RU) fishery has been subject to substantially lower fishing effort in the past four fishing periods, due to COVID-19 restrictions, floods, bad weather for diving activities and low catch rates. Total catch is at historically low levels.

Given the currently low CPUE in open areas, the protection of spawning adults in closed areas and the minimum size limit (MSL) become important management settings to assist stock rebuilding. As some closed areas were reopened for Purple Urchin fishing in 2023, knowing the status of Red Urchin in closed areas is a top research priority for fisheries management.

A TAFC on-line meeting was held with interested SUTS shareholders on 8 October 2025 and representatives from the NSW Department of Primary Industries and Regional Development (DPIRD). Various management issues were discussed, including low total catch, market conditions, shallow water diving opportunities and

stock status uncertainty. NSW DPIRD (Chick 2025) provided an updated fisheries Statistics Summary¹.

Management recommendations & supporting actions

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

1. An assessment of the RU stock in Region 5 would provide greater assurance on the broader stock status.
2. Catch rates (CR) by region would greatly help determine whether the RU stocks are being serially depleted and the appropriateness of the individual RCLs.
3. That future compliance data collection clearly differentiates between the two urchin species to understand the impact of illegal fishing on RU.

Determination

The Total Allowable Fishing Committee, pursuant to Part 2A of the *Fisheries Management Act 1994*, determines that the commercial catch of Red Urchin in the NSW Sea Urchin and Turban Shell restricted fishery should be controlled and allocated through two separate, but dependent measures:

1. A TACC for Red Urchin during the period 1 January to 31 December 2026 of **9.5 tonnes**; and
2. Regional Catch Limits (RCLs) across the specified five (5) regional zones that collectively should not exceed **9.5 tonnes** as follows:

Region	Catch Limit 2026 (tonnes)
1	1.18
2	2.45
3	3.06
4	2.81
5	0.0
Total	9.50

¹ Chick, R.C. (2025) Fishery statistics update 2025 – Sea Urchin and Turban Shell Fishery – Red Sea Urchin (*Heliocidaris tuberculata*). NSW Department of Primary Industries and Regional Development - Fisheries. 18 pp

Introduction

The commercial harvest of Red Urchin in NSW is managed as part of the Sea Urchin and Turban Shell (SUTS) Restricted Fishery. The SUTS fishery is a declared restricted fishery under Division 1 of Part 9 of the *Fisheries Management (General) Regulations 2019*, pursuant to Section 111 of the *Fisheries Management Act (NSW) 1994*. The commercial fishery for Red Urchin is managed through a combination of input (minimum size limit; spatial closures) and output controls (quota; regional and state-wide catch limits).

The commercial Red Urchin (RU) fishery commenced in 1999 with a peak harvest of 85.5 tonnes in 2000. Early concerns about overfishing resulted in a total allowable commercial catch (TACC) being established in 2002 at 60 tonnes (t). Commercial harvest has remained well below the 60 t TACC since 2002. The TACC is allocated equally amongst 37 endorsement holders, but only a small number of fishers target RU.

To further restrict high levels of fishing effort and serial depletion, Regional Catch Limits (RCLs) were introduced into the fishery in 2002. The commercial catch has never reached the combined RCLs, or the TACC and this is of ongoing concern for the fishery management, based on evidence of declining catch rates and a historically low total catch.

Biological considerations

Red Urchin (*Heliocidaris tuberculata*) are relatively slow growing, with low productivity compared to the sympatric Purple Urchin (*Centrostephanus rodgersii*). Areas closed to fishing and a minimum size limit, are used to prevent overfishing of the NSW stock. The most recent status of the NSW stock is 'Sustainable' and strongly reliant on the amount of area closed to fishing. Areas closed to fishing include:

1. A fishing closure in Region 5 (Montague Island to Cape Howe);
2. A number of sub-zones closed since 1994 as stock assessment reference points and refugia; and
3. Marine parks and aquatic reserves.

The populations in the closed areas have not been surveyed since 2000. Areas open to fishing were considered depleting in 2020, as both catch rates (CR) and catches had either declined, or been at historically low levels.

The most recent assessment based on updated fishery data showed that catches of the RU stock was at 1.9 t (about 20% of the TACC) so far this year as of September (70% of the fishing year complete). Total catch in 2023 was 2.1 t (7% of the TACC) which increased in 2024 to 4.2t (45% of TACC). The increased catch last year was the result of increased Targeted (RU only) and Incidental effort (across the whole fishery; in both Fisher Days and Hourly Catch Rates). This appears to have declined this year. There have been no catches this year from Region 1.

Catch rate (CR) data were aggregated across all zones and thus do not reflect the status in Region 1. Catch rates of RU (only) since 2000 have varied from an initial high of 250kg per day (90 kg per hour) to below 50 kg per day (40 kg per hour) in 2023. Peaks in CR have been experienced in 2007 (150 kg/hr) and 2016 (120 kg/hr), coming from predominantly different regions, indicating the possibility that the stock has been serially depleted.

In 2019, the minimum size limit (MSL) changed from 115mm to 95mm and so CRs since then are likely biased downward. Between 2020 and 2022, the hourly CR has been relatively constant, but in 2023 increased from 21.2 to 42.1kg/h. Over the long term, daily catch rates have declined more consistently, however in the past two years (2024, 2025) they have roughly doubled. This increase was not reflected in the hourly CR. It is not clear why the daily rate may have increased more than the hourly rate.

There is no clear or compelling indication that the stock has declined from the last assessment. Hourly catch rates on RU have been relatively stable (albeit very low) since the new size limits were implemented. Catch rates (kg/day) on RU only days have increased above the previous 5-year average and double that of 2022. Alternatively, the kg/day catch rates for RU+SUTS days since 2023 are mixed. These are potentially confounded by increased targeting of Purple Urchin. There is no compelling evidence to change the TACC at 9.5 t.

Recommendations

- An assessment of the stock in Region 5 would provide greater assurance on the broader stock status.
- Catch rates (CR) by region would greatly help determine whether the stocks are being serially depleted, and the appropriateness of the individual RCLs.

Economic considerations

Overall, the scale of the fishery and the resolution of the limited available data make drawing any robust conclusions regarding the economic performance of this fishery difficult. The economic performance and contribution of the fishery is best assessed by considering fishing activity at the business level, where businesses also harvest purple urchins, turban shells, abalone and other species.

Within the SUTS fishery, the catch of RU by volume remains small relative to the catch of Purple Urchin. Commercial fishers report that targeting RU is usually opportunistic, based on weather windows and sometimes driven by specific market requests. The market for RU roe is domestic, primarily sold in NSW. Between 2013 and 2022, average real beach price (per kg) of RU was increasing. However, following a high of \$16.50 in 2022, real average beach prices in 2025 (as of September) have fallen to \$12.25. In the 2024 fishing season, the real average beach price was \$15.28. The drivers of this price decline are unclear, but may be influenced

by a lack of continuity of supply and reduced demand, including competition at the point of sale with other urchin species.

In 2025 (as of 23 September), GVP is estimated at just under \$26,000 for the entire fishery. Only 8 of the 37 endorsed commercial fishing businesses have reported taking RU in the current fishing year. Red urchin quota may be traded within each fishing period. The price at which quota is traded can be a good indicator of the economic performance of the Fishery. However, no price information is available for the current fishing period, although this information has been requested from fishing businesses since the 2003/04 season on a voluntary basis.

In the 2024 fishing season, there were eight quota transfers totalling 1.9 t with the largest individual transfer being 256 kg. To date in the 2025 fishing season, there have been 13 quota transfers totalling 2.9 t, with the largest individual transfer again being 256 kg. Supply is likely to greatly exceed demand based on fishing activity in recent years. In the absence of any information on quota transfer prices, it would be expected that transfer prices will be relatively low should active fishers require additional quota, and the use of Fisher-Direct-Fish Online will minimise any transaction costs.

Fishery Management considerations

Red Urchin (RU) continues to represent a small portion of the catch and value of the SUTS fishery, comprising less than 25% of the catch since 2002 and only 0.6-3.3% of the total SUTS catch in the past four years. An expanding market and increased processing capacity drove a significant increase in the catch of Purple (Long Spined) Urchin in 2023 and 2024, with catches remaining high in 2025 to date.

DPIRD categorises the RU stock in NSW as ‘Sustainable’, a classification that is heavily influenced by the assumption that the stock is buffered by the minimum size limit and the protection of biomass in closed areas (amounting to approximately 30% of the NSW coast). However, there have been no recent assessments of RU biomass in closed areas to verify this assumption. Areas open to the fishery are considered likely “depleting”.

Annual catches since 2021 have remained below 5 t, at historically low levels, aside from a slight bump in 2024. Catch rates for RU targeted effort showed positive signs in 2024 and 2025 (to date), however these should be interpreted with caution given the low catch and the potential for this indicator to be influenced by fisher behaviour, weather and/or hyperstability.

A TACC of 60 t was established in 2002, on the basis of a stock assessment at that time, however catches have been well below that level ever since. Regional Catch Limits across five regions amounting to 60 t were also established, with a 0 t limit for Region 5. In response to declining catch, effort and catch rates, and concerns about localised depletion, a minimum legal size was introduced into the fishery in 2019. The

TACC was reduced to 30 t in 2023 and 9.5 t in 2024. RCLs have been reduced three times since 2002 and have totalled 9.5 t across the fishery since 2023.

Submissions from industry provide anecdotal reports of 'good recruitment' in some areas of the fishery, including the closed areas, although limited recruitment is observed in other areas, with flood waters and high runoff impacting a number of reefs. Consultation indicates that industry continues to support the current TACC and minimum legal size.

Catch and effort data available to the TAFC does not provide any clear indication of decline or improvement in stocks in the last year. As such, there is no compelling indication that changes to the 9.5 t TACC can be justified. Given no indices of abundance are available for regions, there is also no data to support changing the balance of RCLs across the regions from the 2023 determination: 1.18 t (Region 1), 2.45 t (Region 2), 3.06 t (Region 3), 2.81 t (Region 4), & 0.00 tonnes (Region 5).

Other (non-commercial) sources of RU fishing mortality are from recreational fishing, aboriginal cultural fishing and illegal fishing. Given the low levels of commercial catch, it is possible that these non-commercial catches (particularly from recreational harvest) are now having a greater impact on the stock than commercial harvest. The implementation of uniform minimum size limits across all fishing sectors should be considered to better protect the resource.

Compliance rates in the commercial sector remain relatively high at 87.5% and 100% in 2023-24 and 2024-25 respectively. It was noted however that limited compliance effort is dedicated to this fishery and therefore certain risks, including potential harvesting of RU while fishing for purple urchins in closed areas, are difficult to detect. Compliance issues are more prevalent in the recreational fishery, where compliance rates in recent years have been around 60-65% and a number of offences have involved the seizure of urchins. An annual operation targeting the intertidal collection of invertebrates that is currently undertaken in the Metro area is soon to be expanded state-wide, which is likely to improve the understanding of urchin harvest and compliance in the recreational sector.

Recreational compliance data does not differentiate between purple and red urchins. In light of the high risk of non-compliance in the recreational sector, the higher market value of red urchins, and the depleted status of this stock in certain areas, the TAFC recommends that future compliance data collection clearly differentiate between the two species.

Recommendation

- That future compliance data collection clearly differentiates between the two urchin species to understand the impact of illegal fishing on RU.

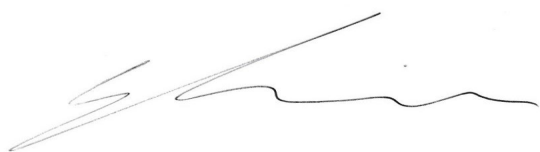
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Signed (for and on behalf of the TAFC)



William Zacharin
Chair, TAFC

5 November 2025

Dr Rich Little – Scientific member

Alice McDonald – Fisheries Management member

Daryl McPhee – Natural Resource Economist member

Appendix 1: Regions in the Red Urchin commercial fishery

