

ADVICE TO: PIRSA FISHERIES AND AQUACULTURE

FROM: SARDI AQUATIC AND LIVESTOCK SCIENCES

SUBJECT: GULF ST VINCENT PRAWN FISHERY: HARMFUL ALGAL BLOOM - FISHERY INDEPENDENT SURVEY RESULTS – NOVEMBER/DECEMBER 2025

DATE: 22 DECEMBER 2025

KEY ISSUES

- PIRSA Fisheries and Aquaculture have requested an Advice Note relating to the potential impact of the 2025 algal bloom on the Western King Prawn stock biomass in GSV.
- This Advice Note reports on nominal Fishery Independent Survey (FIS) Catch Per Unit Effort (CPUE), an indicator of relative stock biomass, from surveys undertaken in November and December in years prior to, and post, the algal bloom.
- Estimates of nominal CPUE (kg/trawl-shot) in November and December 2025 were low relative to historical survey estimates. The November 2025 estimate of 5.6 ± 0.6 (SE) kg/trawl-shot was the lowest November estimate on record and 71% below the November survey average from years prior to the algal bloom.
- The December 2025 estimate of 4.6 ± 0.4 (SE) kg/trawl-shot was the lowest December estimate on record and 81% below the December survey average from years prior to the algal bloom.
- The December 2025 FIS results are consistent with the November 2025 FIS and indicate a significant decline in Western King Prawn stock biomass in GSV following onset of the algal bloom in March 2025.

BACKGROUND

In mid-March 2025, a harmful algal bloom, dominated by *Karenia* spp., was identified in the waters around the Fleurieu Peninsula in South Australia (SA). The bloom subsequently spread, primarily into Gulf St Vincent (GSV), but also into the Spencer Gulf (SG), southern Yorke Peninsula (YP), Kangaroo Island (KI) and the Coorong. It is estimated the harmful algal bloom has affected over 500 species of fish, invertebrates and associated marine and coastal biodiversity (source: iNaturalist).

As part of the SARDI Algal Bloom Response, fisheries and fish stocks are being closely monitored to understand the impacts of the algal bloom. Previous advice to PIRSA on 28 November 2025 reported declines in Western King Prawn catches and relative biomass in GSV Fishery Independent Surveys (FIS) between August and November 2025. An additional FIS was undertaken in GSV on the nights of 16 and 17 December 2025 using the commercial

prawn fishing vessels, FV Anna Pearl, FV Miss Jenny and FV Josephine K. A total of 56 trawl 'shots' of 30 minutes duration were undertaken at pre-defined survey sites in GSV. Observers from SARDI Aquatic and Livestock Sciences were on each vessel to record data from each trawl shot. PIRSA Fisheries and Aquaculture have requested advice relating to this survey and the potential impact of the algal bloom on Western King Prawn stock biomass.

RESULTS/DISCUSSION

Data from FIS' undertaken in November (n = 41 shots) and December (n = 56 shots) 2025 were compared to historical FIS data since 2004 (n = 27–58 shots per survey) (Figure 1). Estimates of nominal CPUE (kg/trawl-shot) in November and December 2025 were low relative to historical estimates. The November 2025 estimate of 5.6 ± 0.6 (SE) kg/trawl-shot was the lowest November estimate on record and 71% below the average nominal CPUE estimated from five November surveys in years prior to the algal bloom (2004/05–2024/25: 19.4 ± 2.9 kg/trawl-shot).

Similarly, the December 2025 estimate of 4.6 ± 0.4 (SE) kg/trawl-shot was the lowest December estimate on record and 81% below the average nominal CPUE estimated from five December surveys in years prior to the algal bloom (2004/05–2010/11: 25.0 ± 3.6 kg/trawl-shot) (Figure 1).

The December 2025 FIS results are consistent with the November 2025 FIS and indicate a significant decline in Western King Prawn stock biomass in GSV following onset of the algal bloom in March 2025.

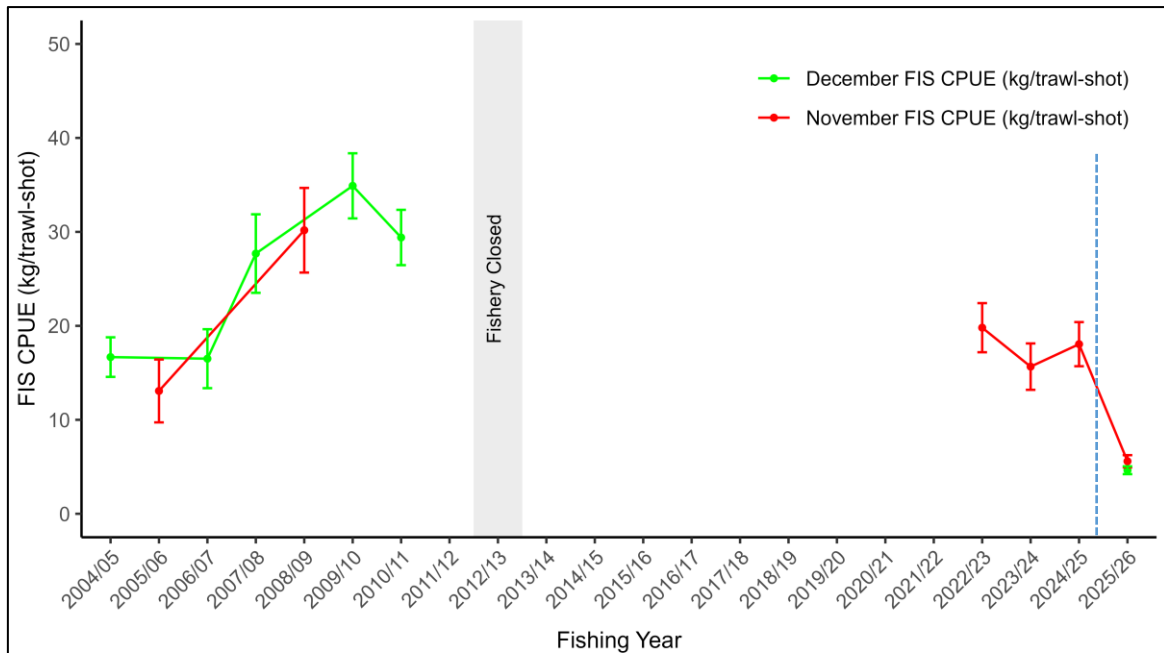


Figure 1. Nominal Fishery Independent Survey (FIS) CPUE from the November and December surveys between 2004/05 and 2025/26. Error bars are standard error (SE). Blue Dotted line indicates timing of the algal bloom onset in March 2025.

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