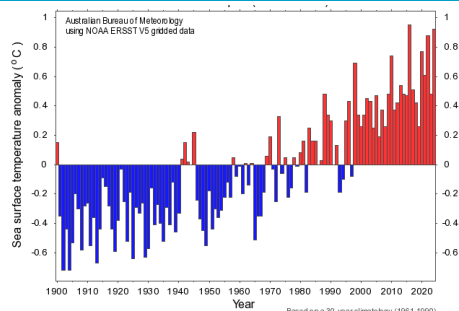


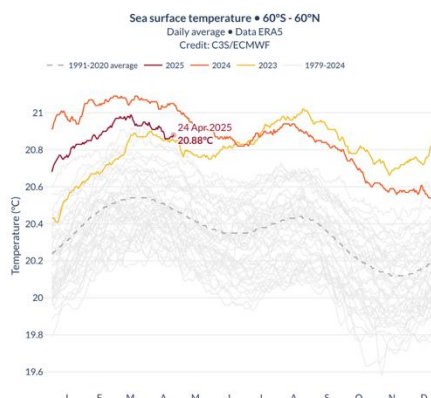


Historical Period

Climate Drivers



Northern sea surface temperatures have warmed by $\sim 0.6^{\circ}\text{C}$ over the last decade compared to the 1961-1990 mean ([link](#))¹.

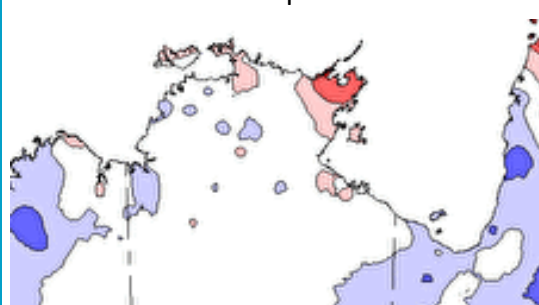


Global SST remains at record highs in 2025 ([link](#))².

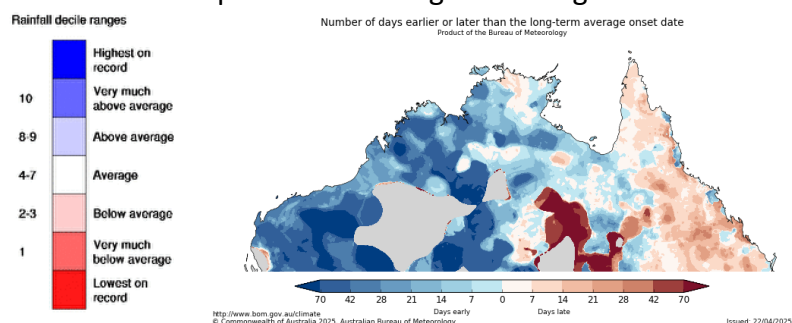
Regional Dynamics: Rainfall



High wet season rainfall can indicate good banana prawn recruitment, but timing of rainfall is important. Rainfall onset can influence prawn size during the fishing season.



Wet season rainfall was spatially variable: average in the JBG, below average in the west Gulf, and above average in the east Gulf ([link](#))¹.



Rainfall onset: number of days earlier (blue) or later (red) than the average onset date ([link](#))¹.

Ecosystem dynamics

In the north, ENSO, IOD, and the MJO can influence prawn CPUE via changes to rainfall, tropical cyclone frequency, trade winds, sea surface height, and air and water temperature ([link](#))¹.

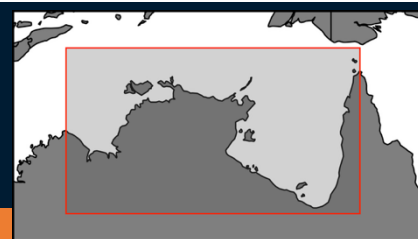
2024-25: ENSO was neutral, high SSTs and marine heatwaves occurred across the north ([link](#)), monsoon arrival was the latest on record, and 12 cyclones formed in Australia (highest since 2005-06). First time since 2020-21 that NT was not impacted by cyclones.¹



Cyclone tracks of 2024-25 ([link](#))

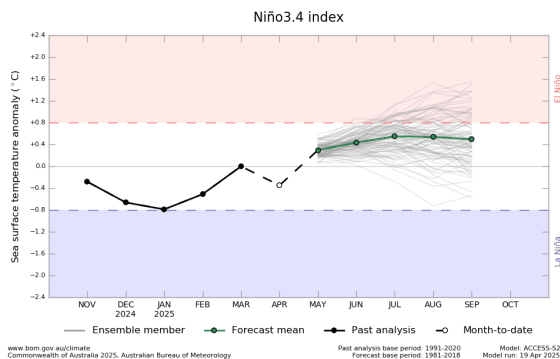
Observations

- Late rainfall resulted in low banana prawn catches
- A layer of freshwater was found in deeper water than usual with minimal mixing due to calm conditions.
- Norman river flows were late, and black and warm.
- Barramundi and gold-band snapper fishing was very good. Snapper season has been longer than expected due to warm water.
- Observations of high predation of fish on small prawns.

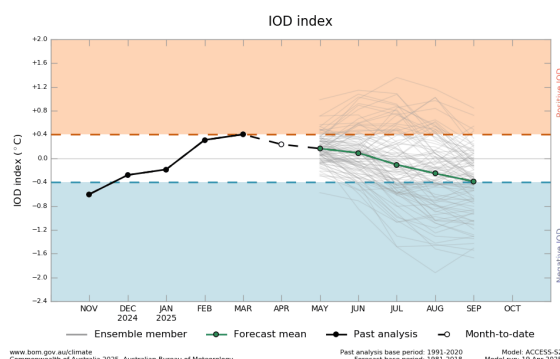


Future Outlook for 2025

Climate Drivers: ENSO & IOD

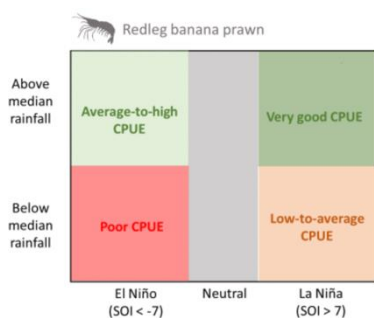


ENSO is neutral and expected to remain so until September [\(link\)](#)¹.



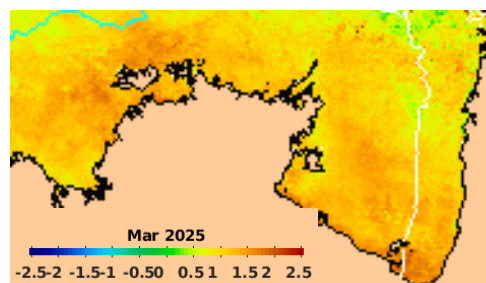
IOD is currently neutral and likely to remain neutral until September [\(link\)](#)¹. IOD is only active May-Dec.

Regional Dynamics



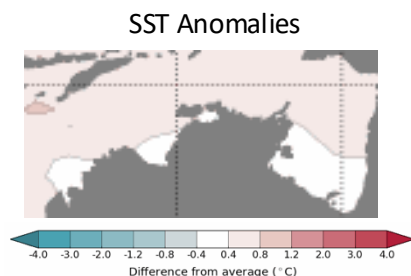
Jan-Feb rainfall in the region has been less than the long-term median, and the Jan SOI index was 3.7 (neutral).

Therefore, redleg banana prawn CPUE predictions are uncertain in 2025³.



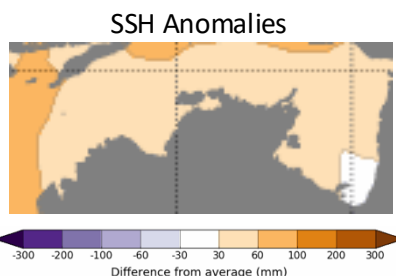
SST anomalies (°C) in March show warmer than average conditions (1992-2016) across most of northern Australia⁴ [\(link\)](#).

Ocean Forecasts¹: May 2025

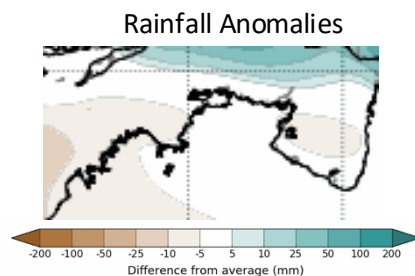


May 2025: SST is forecast to be warmer than average in northern waters, and average in the two Gulfs [\(link\)](#)¹.

Forecast uncertainty >1month is high for coastal areas in the north GoC. Forecasts are regularly updated online.



May 2025: SSH is forecast to be higher than average [\(link\)](#)¹.



May 2025: rainfall is forecast to be average or below average across most of the North [\(link\)](#)¹.