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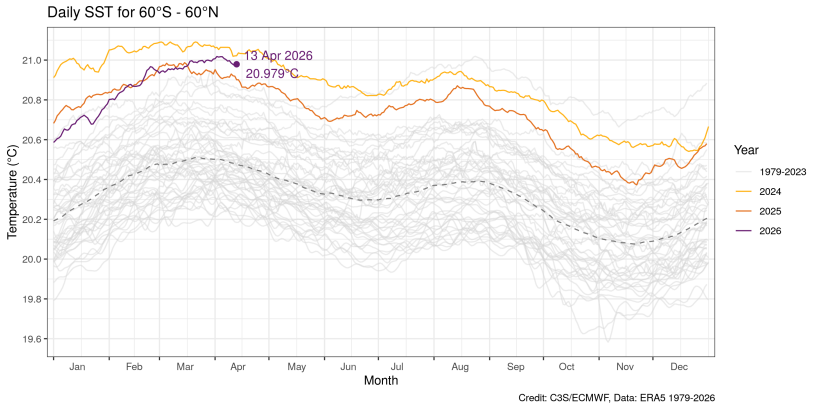
Northern Prawn Fishery

April 16, 2026

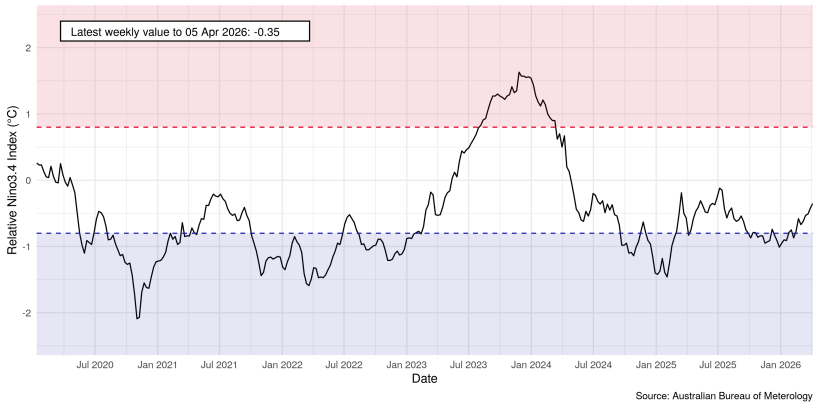
Historical Period

Climate Drivers: Sea Surface Temperature (SST)



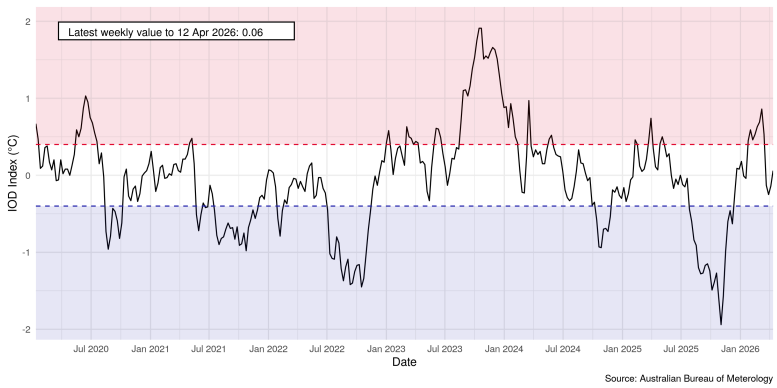
Global Sea Surface Temperatures (SST) from 2024-2026 have been at record highs (*Copernicus*)[1].

Climate Drivers: Nino3.4



ENSO is currently neutral. La Nina conditions occurred over the 2025/26 summer (*BOM*)[2].

Climate Drivers: Indian Ocean Dipole (IOD)



IOD is currently neutral. IOD events typically begin around May, peak during Aug-Oct, and decay during the onset of the monsoon season (*BOM*)[2].

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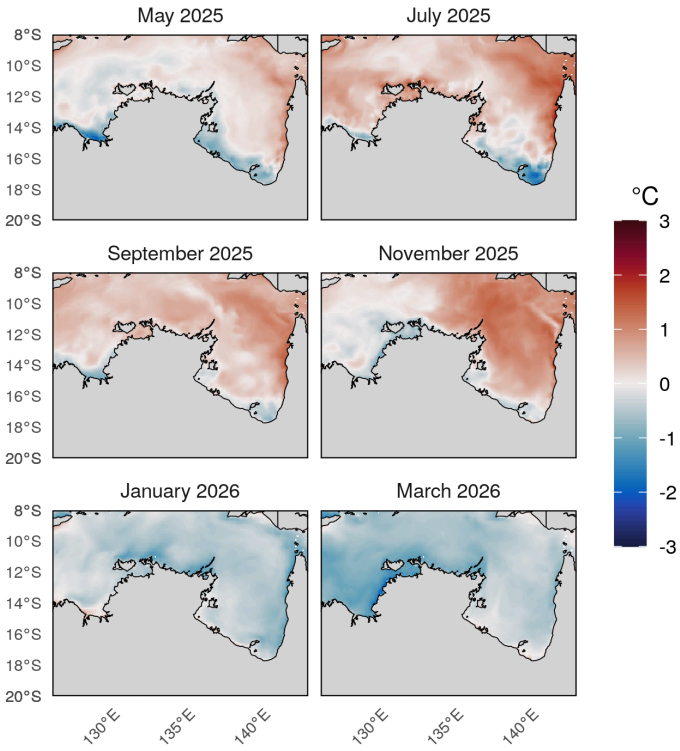
Regional Dynamics: SST Anomaly

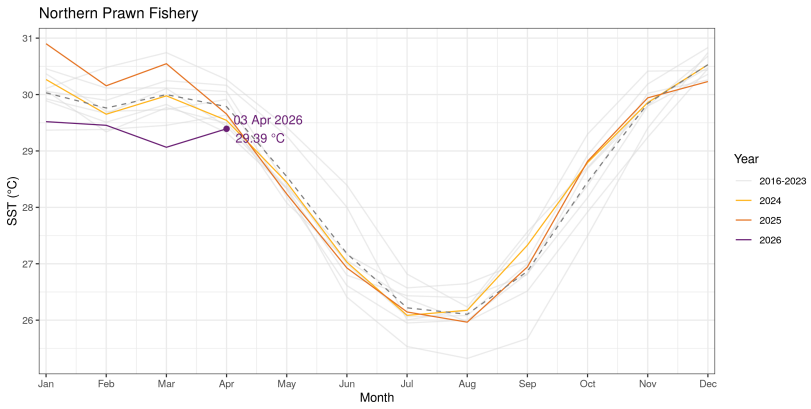


Source: CMEMS

Bi-monthly maps of SST anomalies, relative to 1993-2016[3].

- Cool coastal waters occurred during May-Nov, while offshore waters remained warmer than average.
- Anomalously cold and dry air over the north, particularly during Jun-Aug, contributed to the cooling of shallow and well-mixed gulf waters.
- Most of the domain was cooler than average during Jan-March.

Regional Dynamics: SST monthly timeseries



Timeseries of monthly averaged SST for example years 2016-2026[3].

- SST in 2026 has been the coldest in 10 years.

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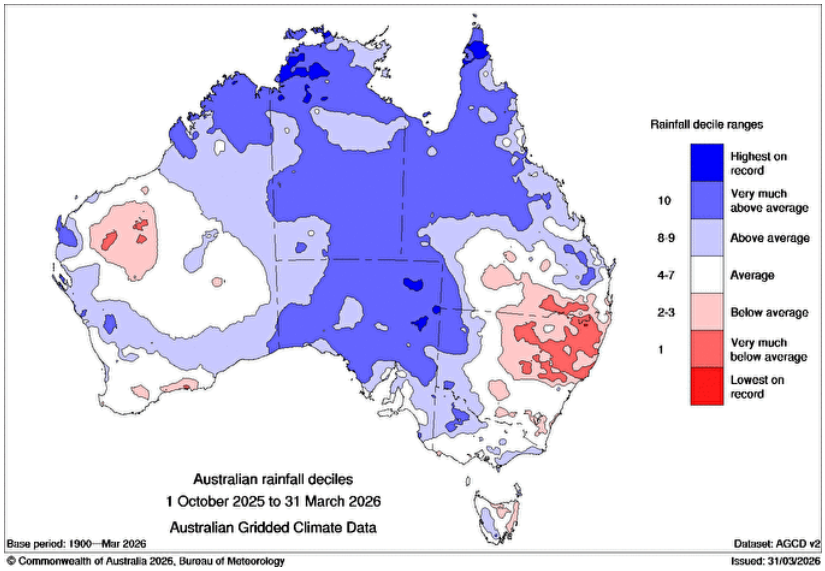
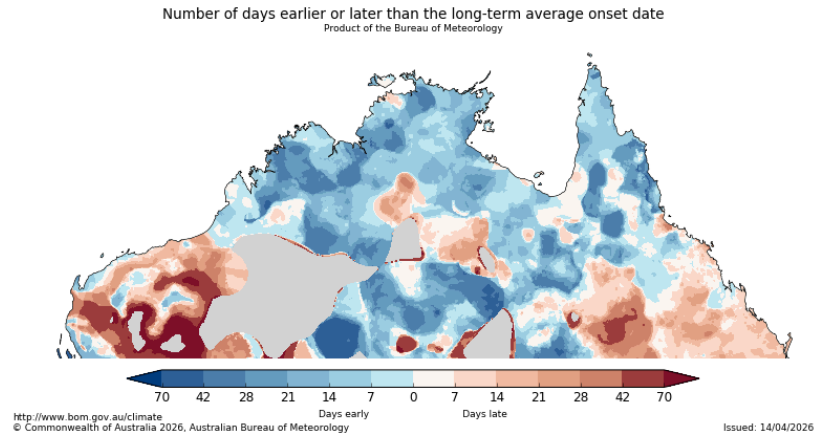
Regional Dynamics: Wet Season Rainfall



Wet season rainfall across the entire north was either the highest on record or very much above average (*BOM*)[4].

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.

Regional Dynamics: Rainfall Onset Anomaly



Rainfall onset was earlier than normal for most of the north. A notable exception was the south-east corner of the Gulf of Carpentaria, which had an average rainfall onset (*BOM*)[5].

Observations

Observations are drawn from fishery stakeholder discussions at AFMA's resource assessment group (RAG) and management advisory committee (MAC) meetings. Further details are provided in meeting minutes on AFMA's website.

2026 observations

- Strong wet season which led to very high catches.
- Late Dec rainfall was very high, with additional rainfall events in Jan and Feb.
- Prawns (spp. not confirmed) observed in rivers late into the season, indicating a potential continued emigration.
- No catches and no prawns spotted between Staten River and Christmas creek.

2025 observations

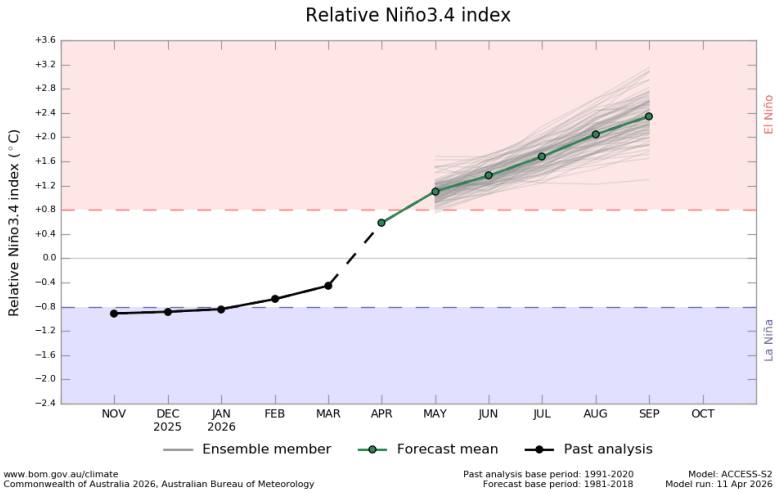
- Late rainfall resulted in low banana prawn catches.
- A layer of freshwater was found in deeper water than usual with minimal mixing due to calm conditions.
- Norman river flows were late, and black and warm.
- Barramundi and gold-band snapper fishing was very good. Snapper season has been longer than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

2024 observations

- Central-East Gulf banana prawn catches have been anomalously low-to-zero for 2 years.
- Reduced effort (shorter trawls) seen to have less bycatch.

Future Outlook

Climate Drivers: Nino3.4

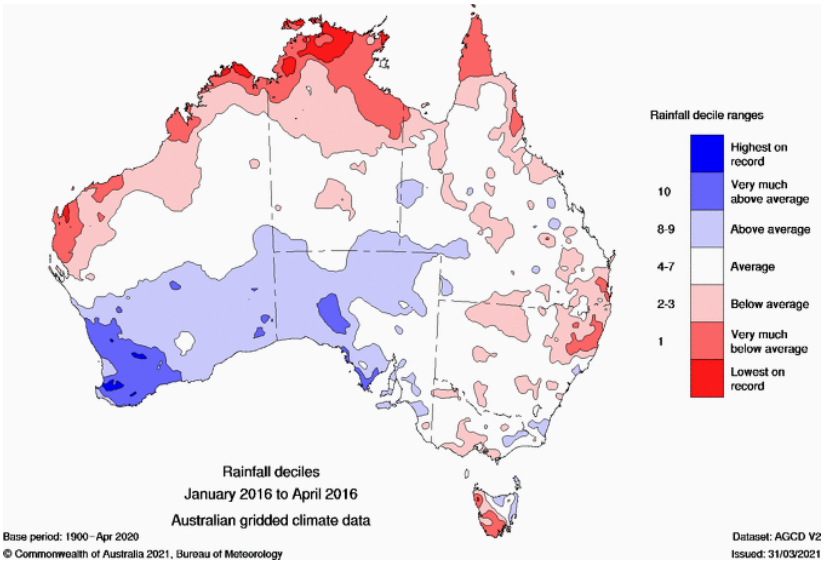


ENSO is currently neutral. All models forecast the tropical Pacific to continue warming in the coming months, with potential El Niño conditions by July (*BOM*)[6].

El Niño conditions are characterised by reduced rainfall, later monsoon onset, weakened trade winds, and increased solar radiation from reduced cloud cover.

Forecast values represent the oceanic component of ENSO events. Forecast values from May-Oct are higher than those seen during the development of the 2015/16 El Niño. Forecasts are updated regularly.

Climate Drivers: Rainfall deciles during 2015/2016 El Nino



This example of the 2015/2016 wet season illustrates the potential for El Niño to reduce rainfall in the north. This is not a forecast, but provides contextual information on severe El Niño events. Long-term forecasts of rainfall and rainfall onset will be provided by BOM closer to the wet season.

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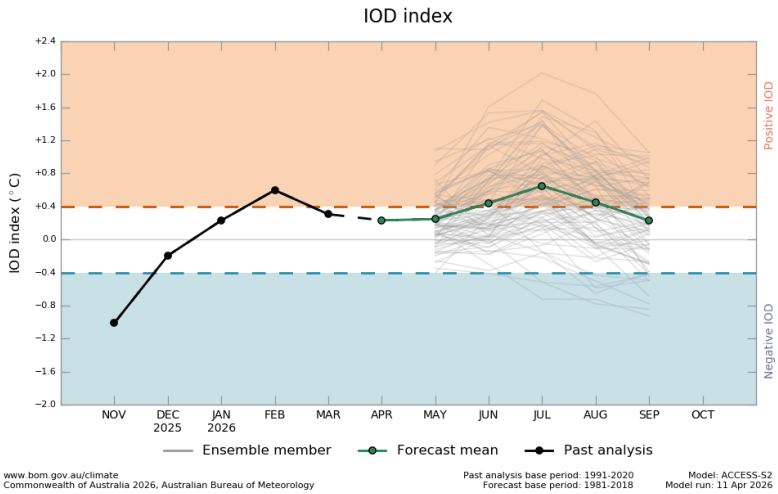
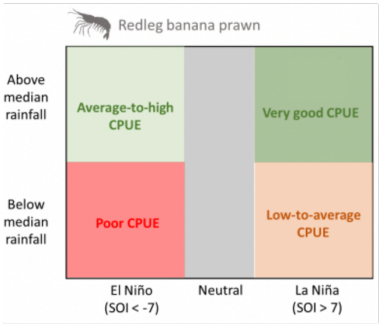
Climate Drivers: Indian Ocean Dipole



IOD is currently neutral and is most likely to remain neutral until the end of autumn. Some models indicate a possible positive IOD over winter–spring, but models show a large spread of possible outcomes (*BOM*)[7].

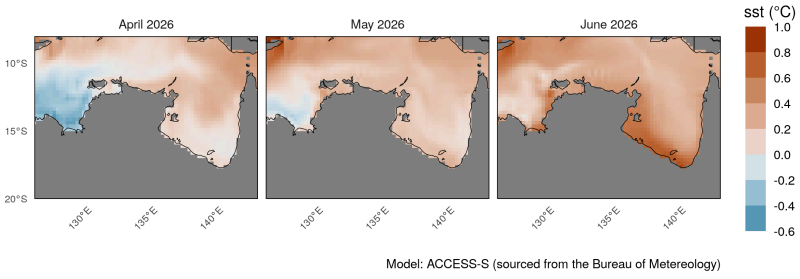
During positive IOD phases, we typically see cooler water & air temperatures, reduced rainfall, and later onset of the monsoon.

Ecosystem: Redleg CPUE environmental indicators



The 2026 Jan-Feb rainfall at Kununurra (531 mm) was above the long-term median, and the Jan SOI index was 9.4 (La Niña). Therefore, redleg banana prawn CPUE is predicted to be very good in 2026[8].

Regional Dynamics: SST Anomaly



Forecasts of SST anomalies for the next three months indicate warming of the region, with anomalously warm conditions present across the domain by June (*BOM OceanT*)[9]. Anomalies are relative to 1981-2018 base period. Forecasts are updated regularly.

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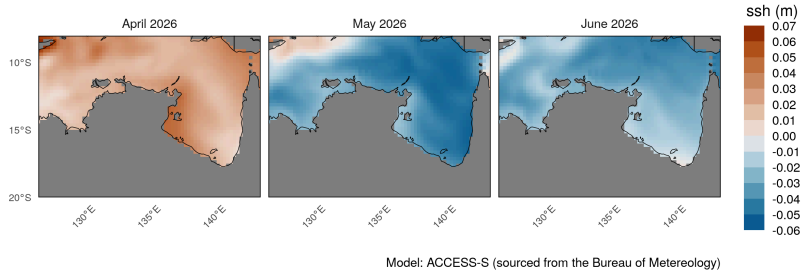
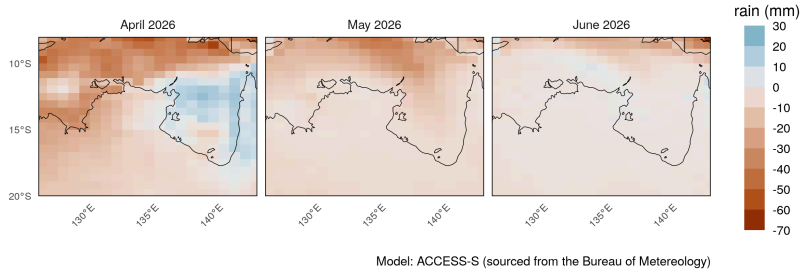
Regional Dynamics: SSH Anomaly



Forecasts of Sea Surface Height (SSH) anomalies are above average in April, and then decreasing to below average in May-Jun (*WMO*)[10]. Anomalies are relative to 1981-2018 base period. Forecasts are updated regularly.

Regional Dynamics: Rainfall Anomaly



Forecasts of rainfall anomalies indicate above average rain in April, and average to below-average rain in May-Jun (*WMO*)[10]. Anomalies are relative to 1981-2018 base period. Forecasts are updated regularly.

Sources:

(1) https://pulse.climate.copernicus.eu/.

(2) https://www.bom.gov.au/climate/enso/indices.shtml?bookmark=nino3.4

(3) Copernicus Marine Service.

(4) https://www.bom.gov.au/climate/maps/rainfall/?variable=rainfall&map=decile&period=cnws&region=nat&year=2026&month=04&day=15

(5) http://www.bom.gov.au/climate/rainfall-onset/#tabs=Observations

(6) http://www.bom.gov.au/climate/ocean/outlooks/?index=nino34

(7) https://www.bom.gov.au/climate/ocean/outlooks/?index=iod#tabs=Graphs

(8) Plaganyi et al., 2021. https://doi.org/10.1093/icesjms/fsaa092

(9) http://www.bom.gov.au/oceanography/oceantemp/sst-outlook-map.shtml.

(10) https://access-s.clide.cloud/