



# Summer Outlook

AEMO

Felix Levesque | November 2025

Interim Communications Meteorologist



# Agenda

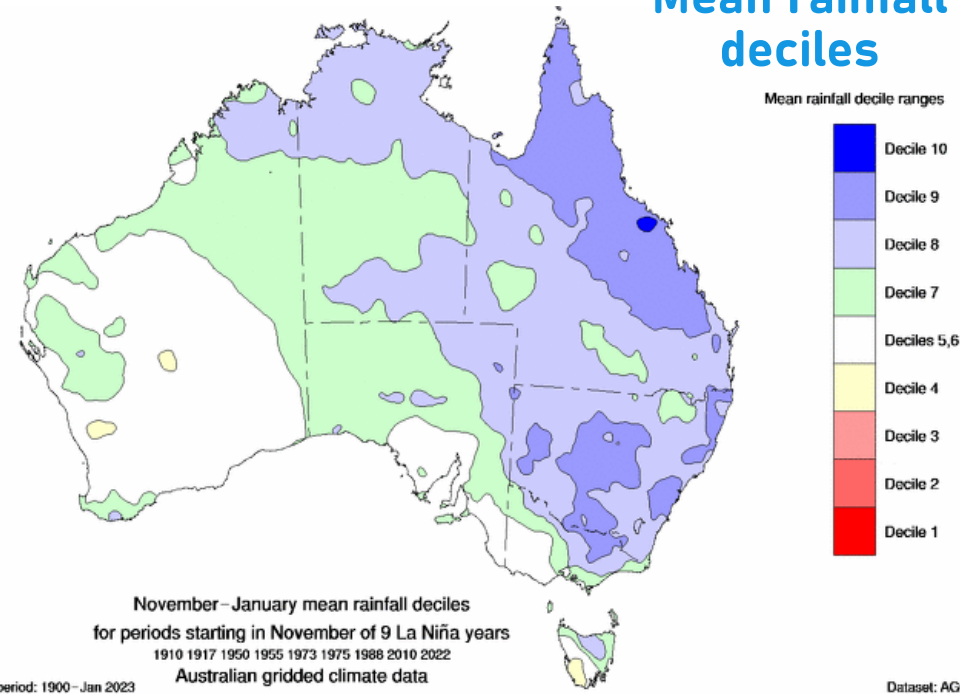
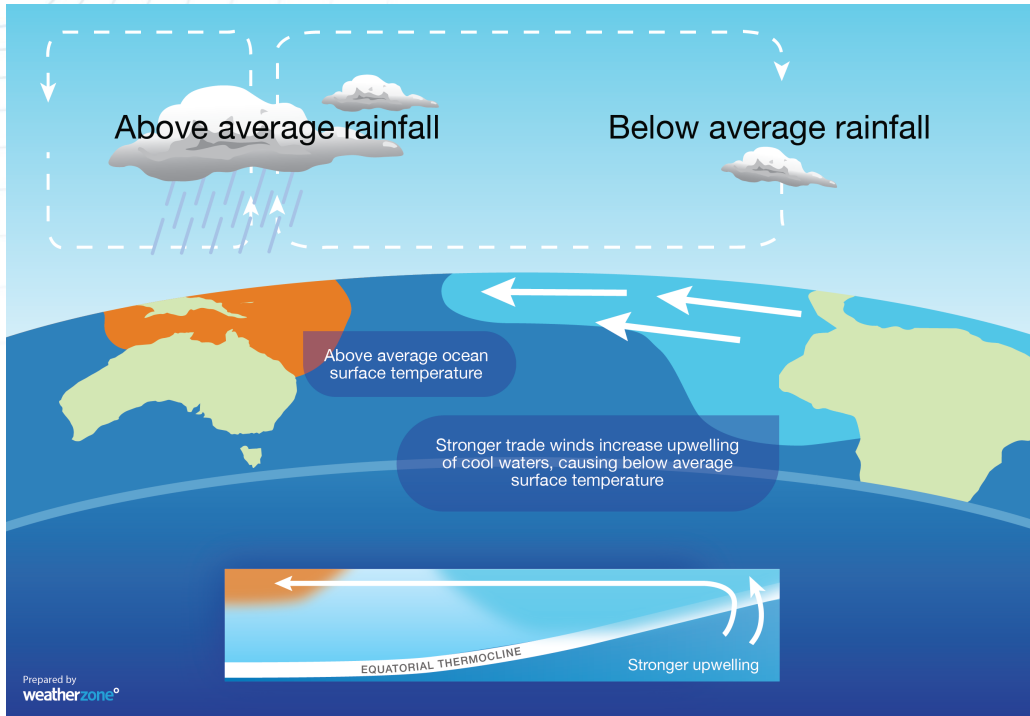
- State of the climate
  - Pacific Ocean
  - Indian Ocean
  - Southern Ocean
  - Sea Surface Temperatures
- Outlook
  - Temperature (national and capital cities)
  - Rainfall
  - Wind
  - Weather Impacts

# Climate Drivers Update and Outlook

Summer 2025-26



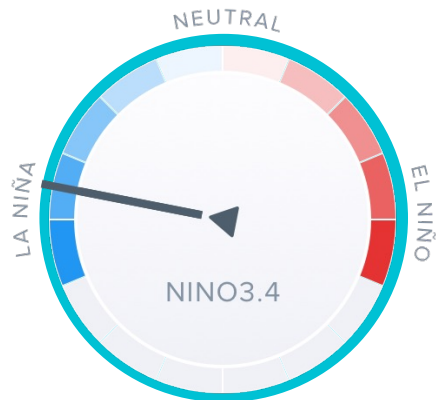
# El Niño Southern Oscillation (ENSO)- Weak La Niña



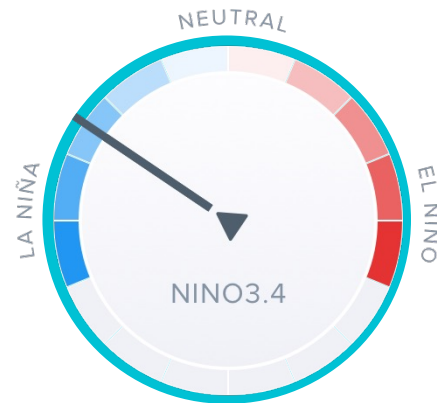
Base period: 1900 - Jan 2023  
© Commonwealth of Australia 2024, Bureau of Meteorology

Dataset: AGCD V2  
Issued: 19/11/2024

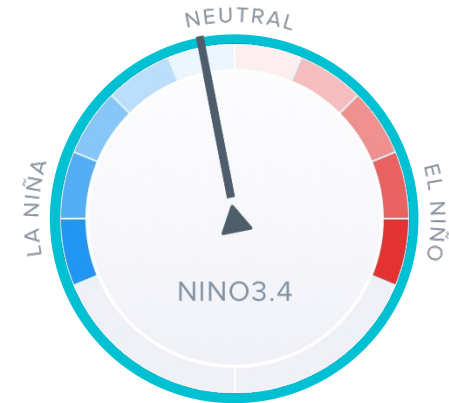
Current



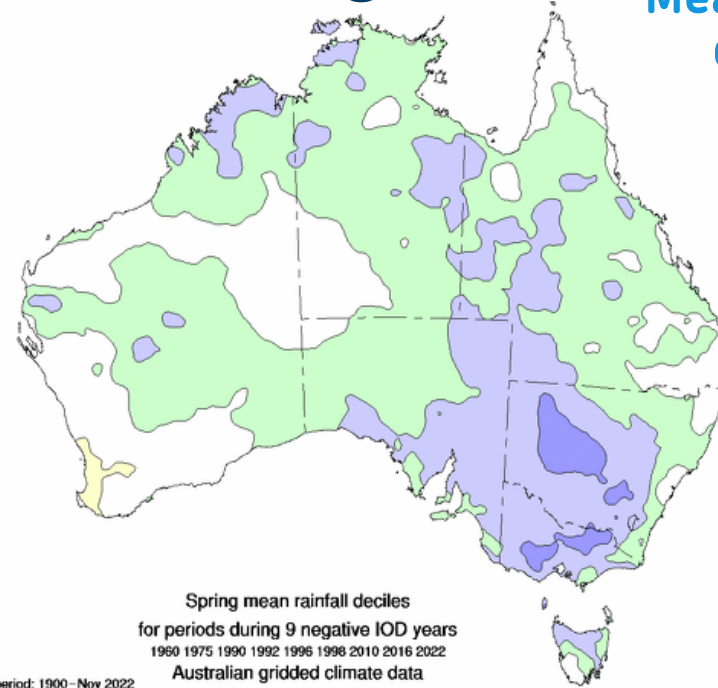
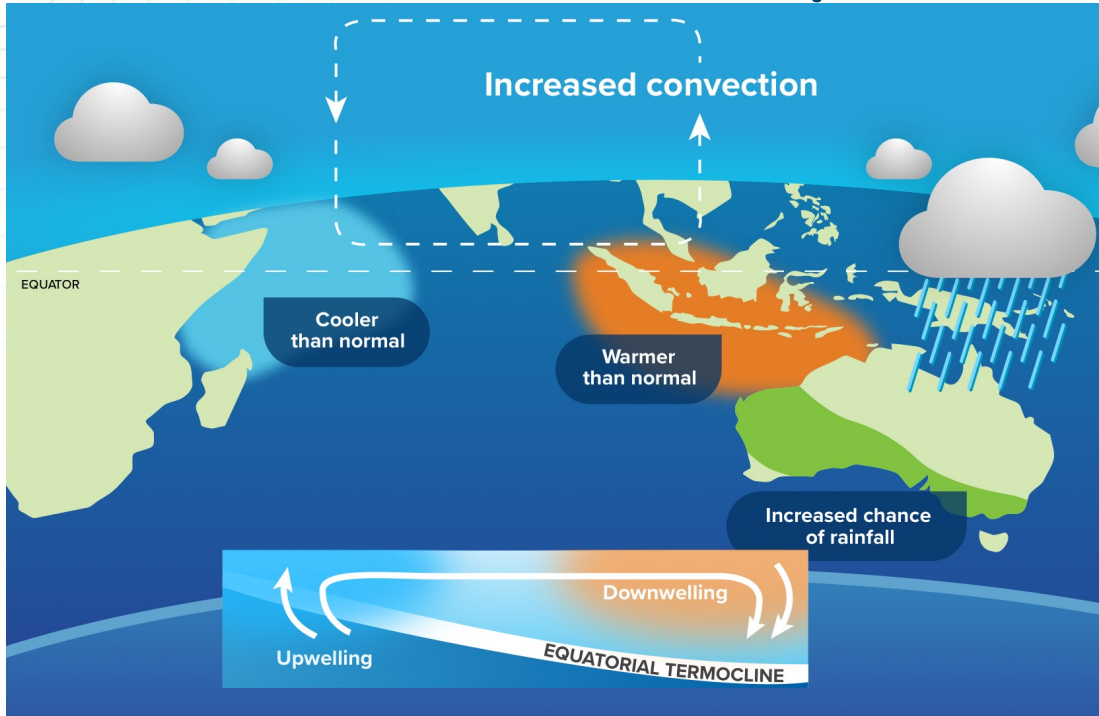
January



March

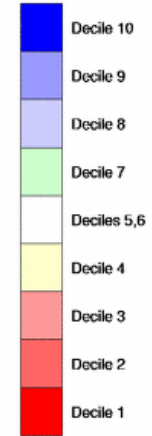


# Indian Ocean Dipole (IOD) - Negative



Mean rainfall deciles

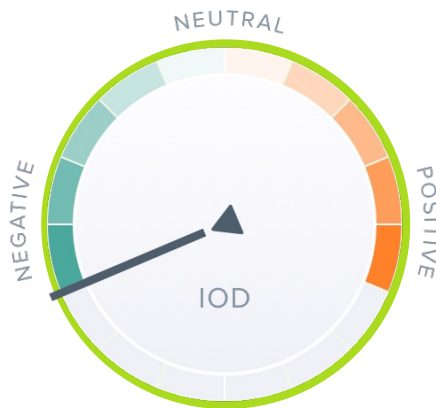
Mean rainfall decile ranges



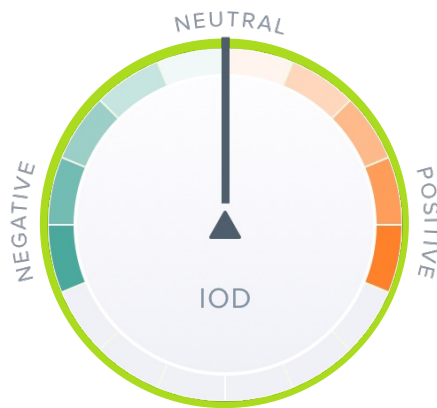
Base period: 1900 - Nov 2022  
© Commonwealth of Australia 2023, Bureau of Meteorology

Dataset: AGCD V2  
Issued: 22/06/2023

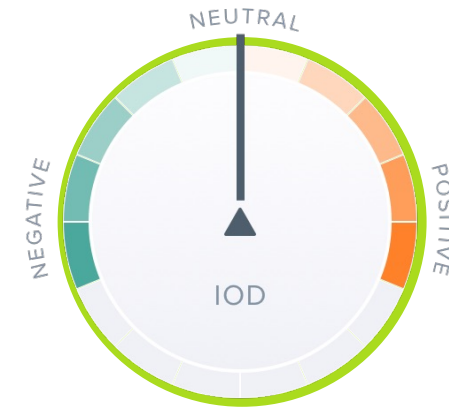
Current



January

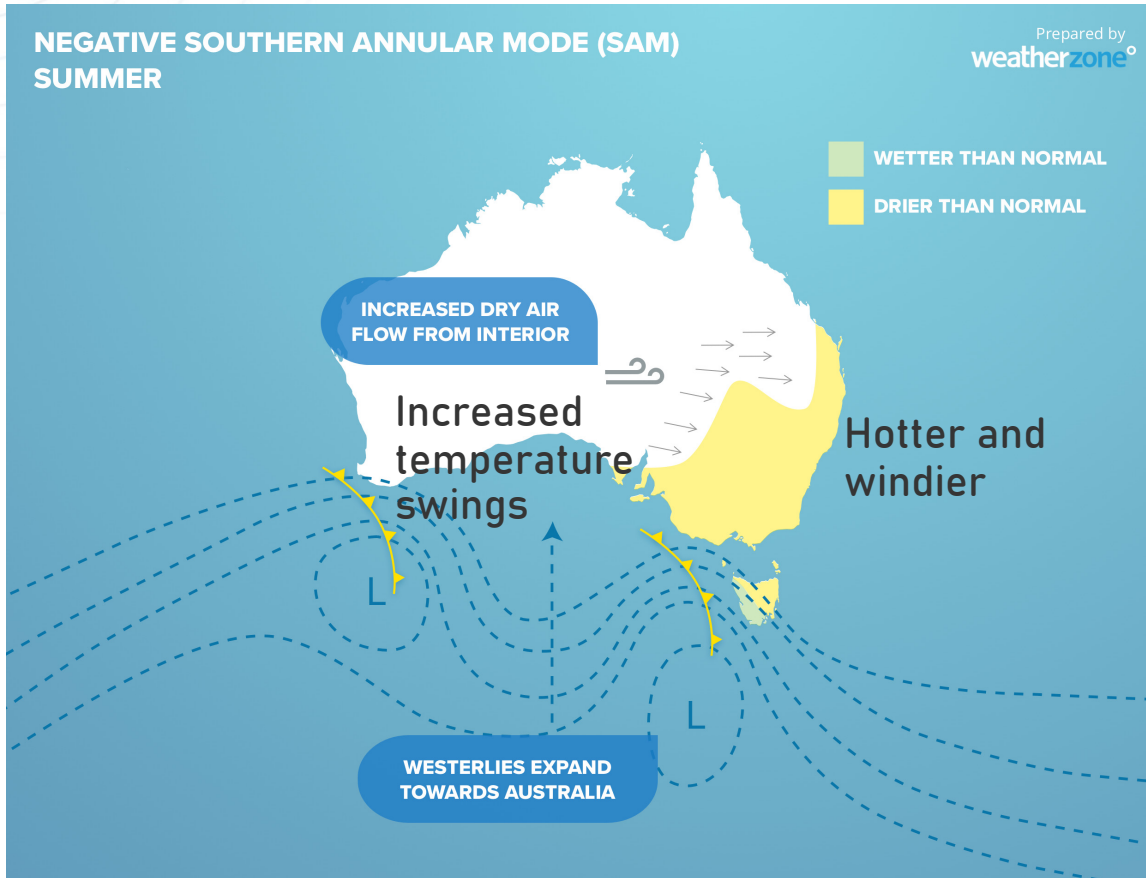


March

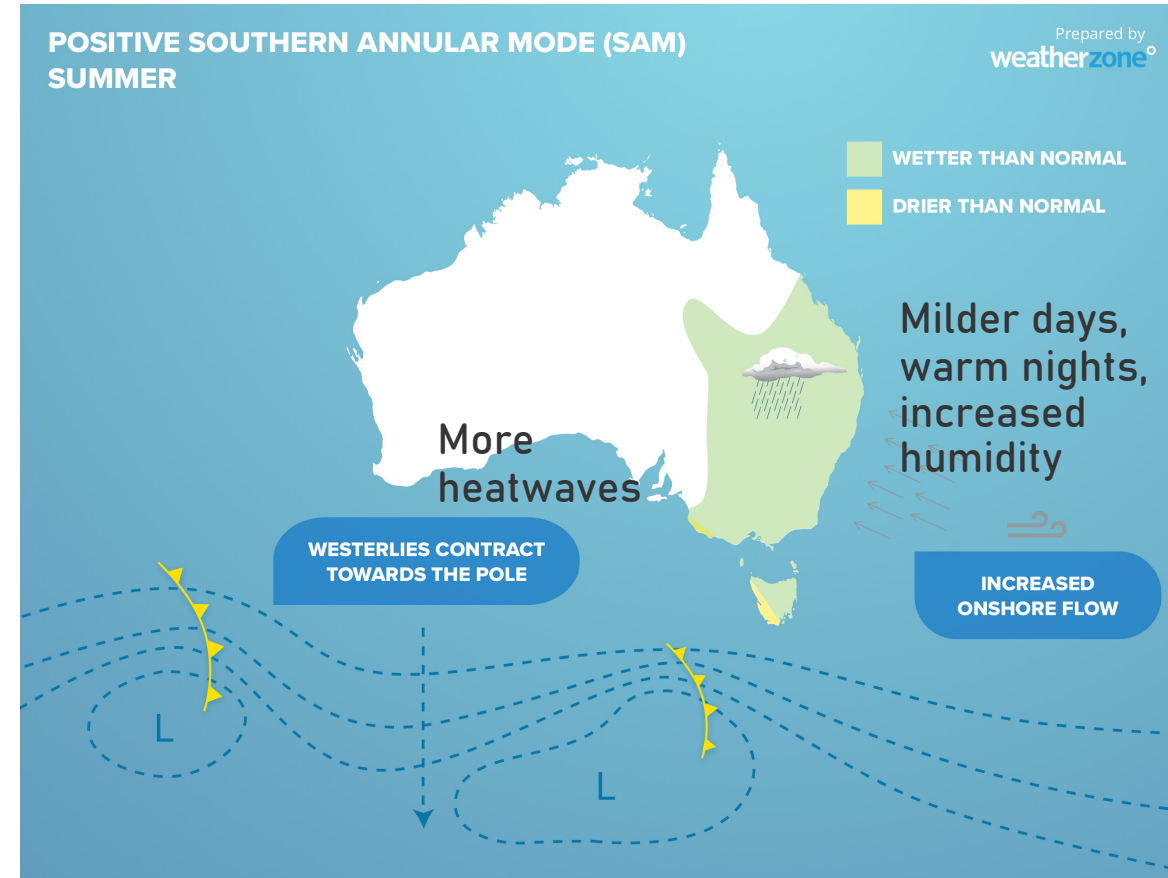


# Summer SAM impacts

## Negative SAM impacts



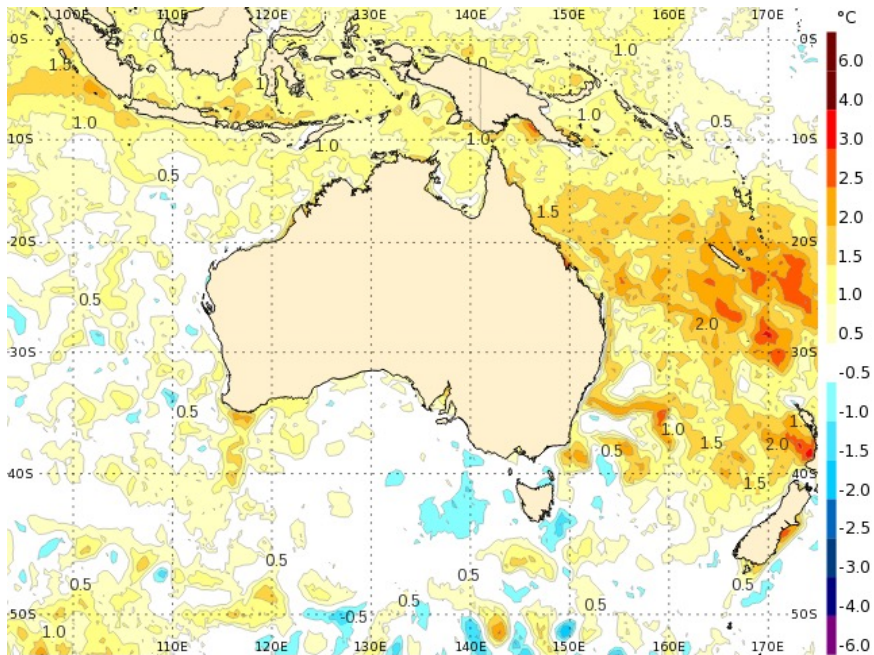
## Positive SAM impacts



Currently negative, stronger swings expected in spring and early summer, before tending more positive in summer.

# Sea Surface Temperatures

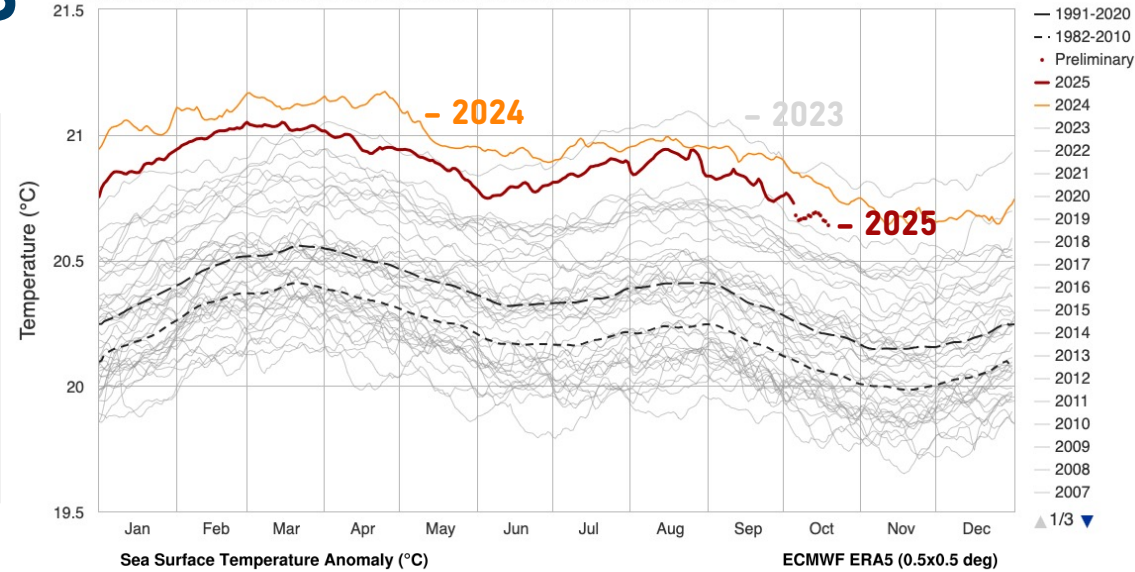
- Australia's oceans were the warmest or second warmest on record each month since July 2024
- Waters are very warm around much of Australia
- Warm waters add extra moisture to the atmosphere which can fuel rain and storms.



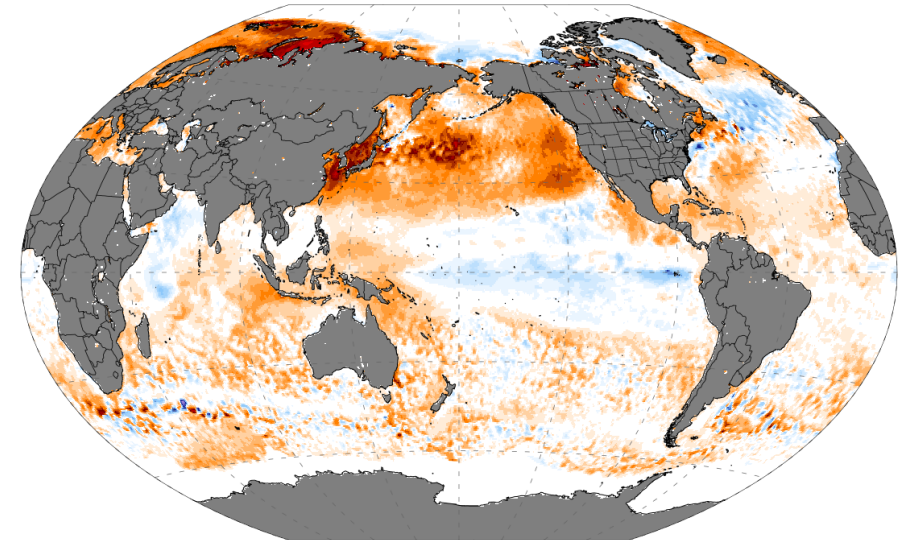
Sea surface temperature anomaly (deg C): Daily analysis for **Fri 7 Nov 2025**  
 (c) Copyright Australian Bureau of Meteorology | RAMSSA | Climatology 1961-1990

## Daily Sea Surface Temperature, World (60°S–60°N, 0–360°E)

Dataset: NOAA OISST V2.1 | Image Credit: ClimateReanalyzer.org, Climate Change Institute, University of Maine



Sea Surface Temperature Anomaly (°C)  
 September 2025 - 1991-2020  
 ECMWF ERA5 (0.5x0.5 deg)



ClimateReanalyzer.org | Climate Change Institute | University of Maine  
 Mon Oct 20 21:39:45 UTC 2025



# Climate Summary

- **ENSO:** Weak La Niña extending into summer, similar or weaker than last year
- **IOD:** Negative IOD declared mid-September, likely continuing until December
- **SAM:** Neutral currently, more positive during late summer. Stratospheric warming may make it more negative in late November and December
- **SSTs:** Higher than average across most of Australia's waters.

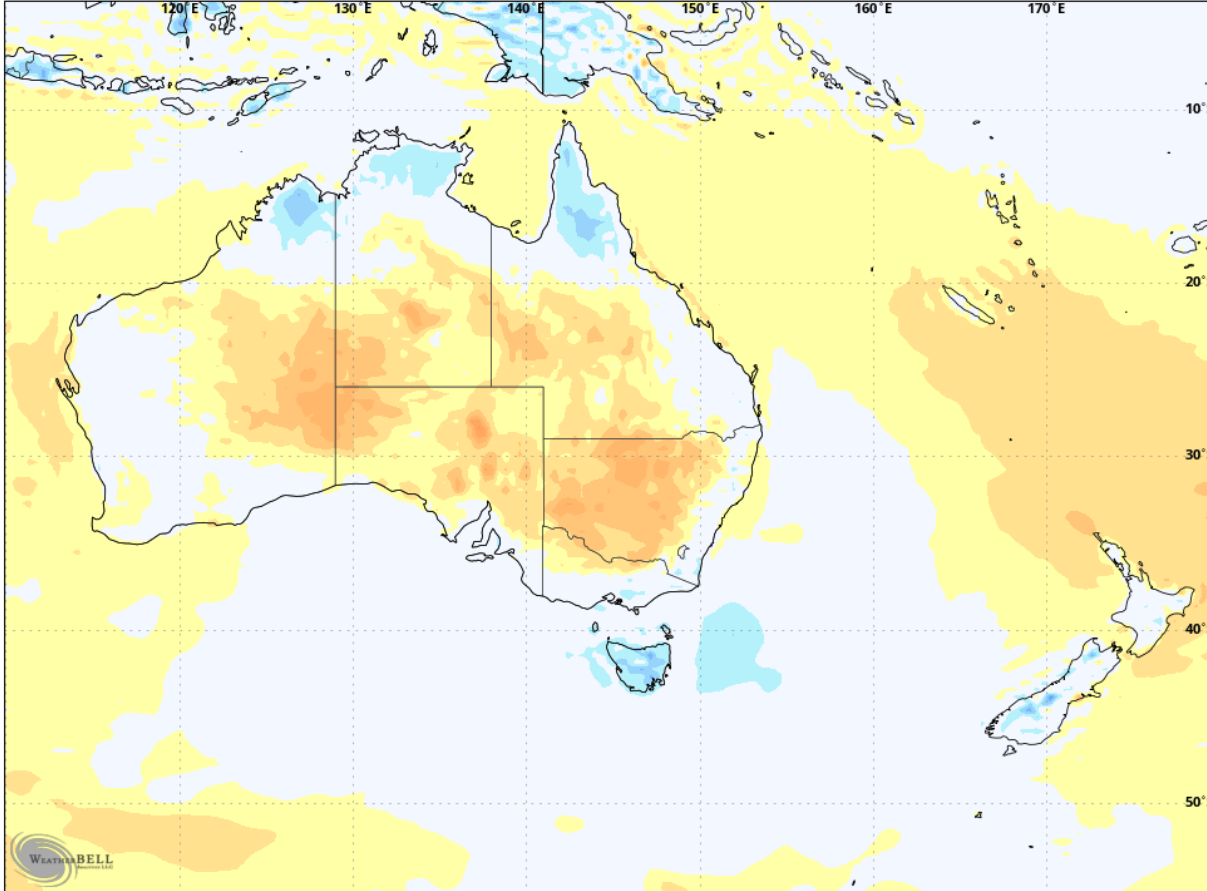
# Weather Outlook

Summer 2025-26

# Forecast temperature anomalies

## December

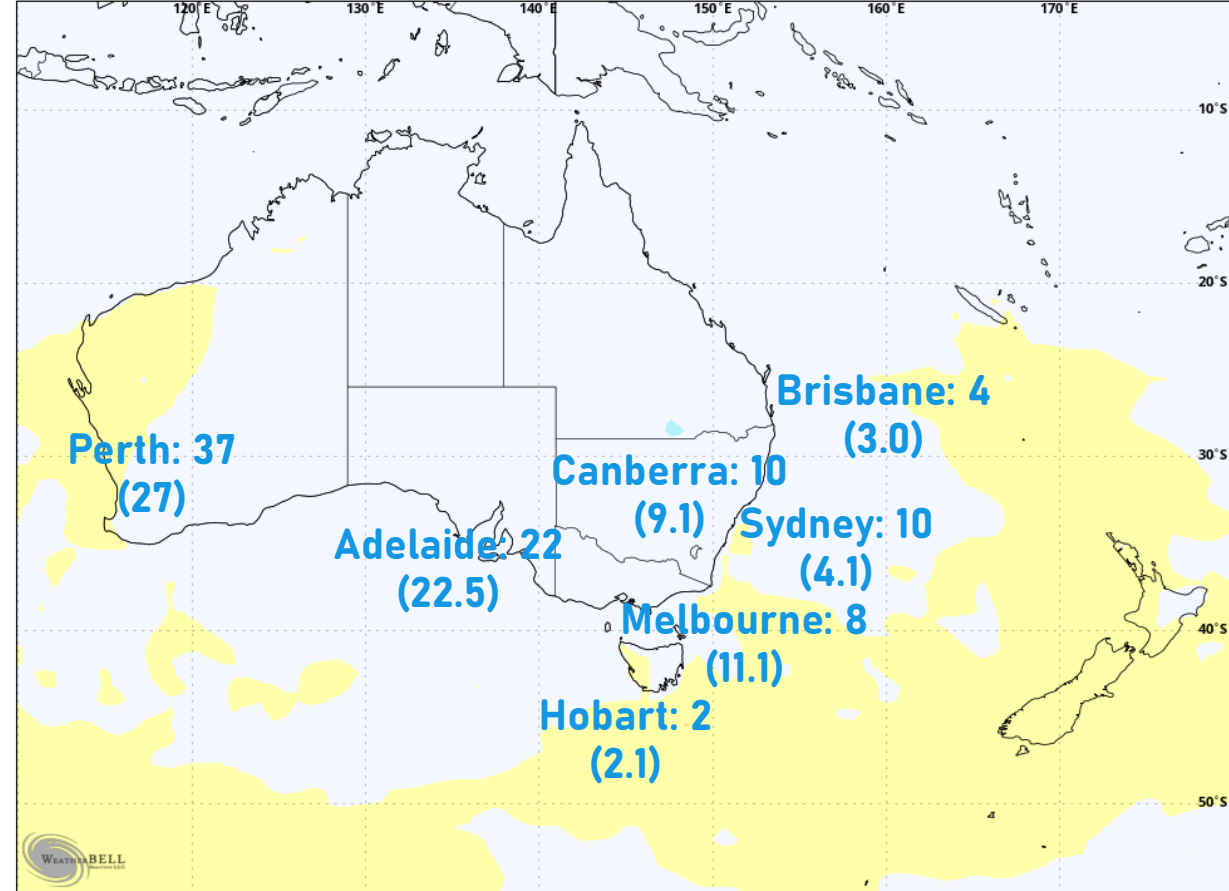
ECMWF Ext. Ens [M] 0.4° Init 00z 11 Nov 2025 • 2m Temperature Anomaly (°C) Days 16–46 • 00z Thu 27 Nov 2025–00z Sat 27 Dec 2025



Climo: ECMWF ERA-5 1991-2020 © 2025 European Centre for Medium-Range Weather Forecasts (ECMWF). This service is based on data and products of the ECMWF. -16 -15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 Max: 3.1 • Min: -2.4

## January to March

ECMWF Seasonal [M] 0.75° Init 00z 1 Nov 2025 • 2m Temperature Anomaly (°C) Valid: Jan/Feb/Mar 2026

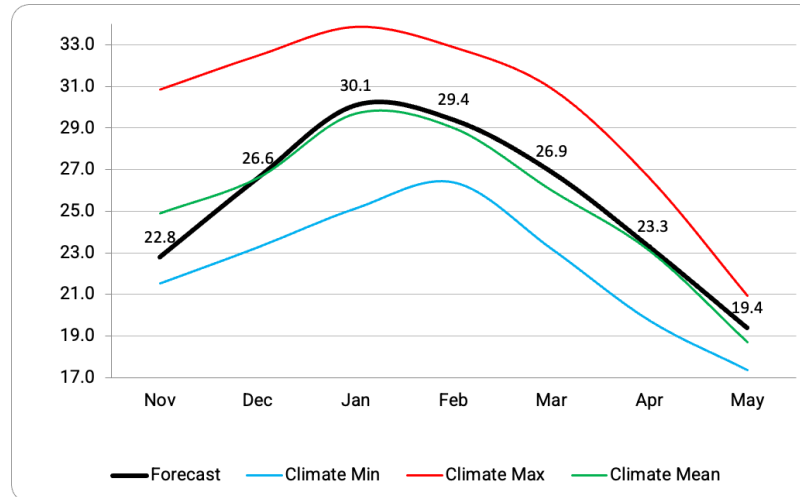


Climo: ECMWF M-climate pre-computed anomaly © 2025 European Centre for Medium-Range Weather Forecasts (ECMWF). This service is based on data and products of the ECMWF. -19 -17 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 16 18 Max: 1.0 • Min: -0.6

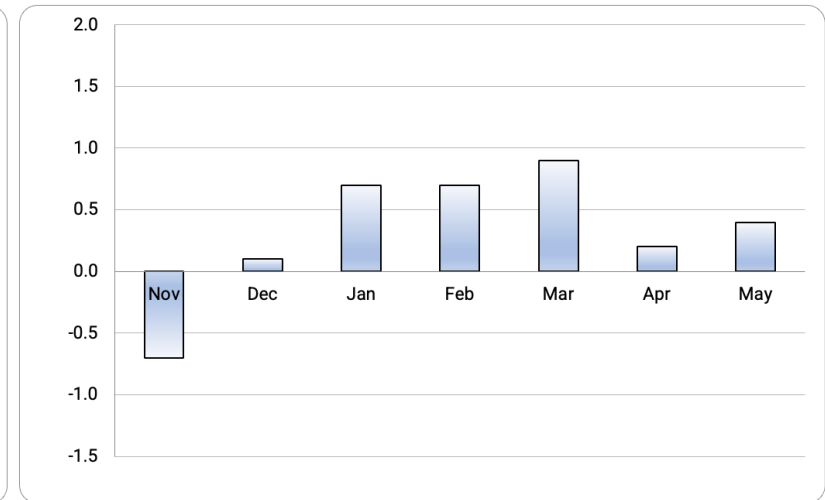
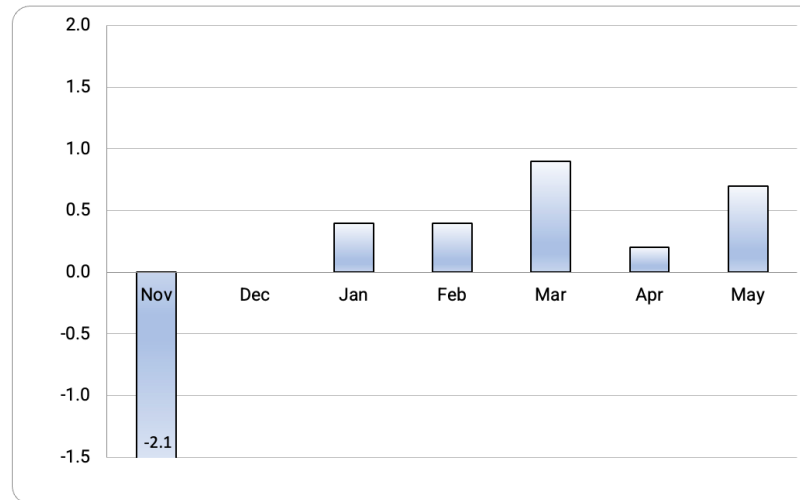
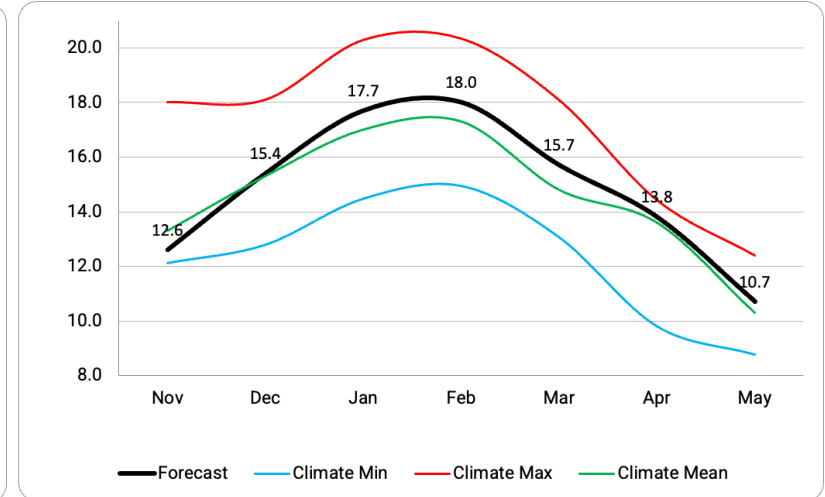
Capital city forecast: Number of days  $\geq 35^{\circ}\text{C}$  forecast (average)

# Adelaide

## Maximums



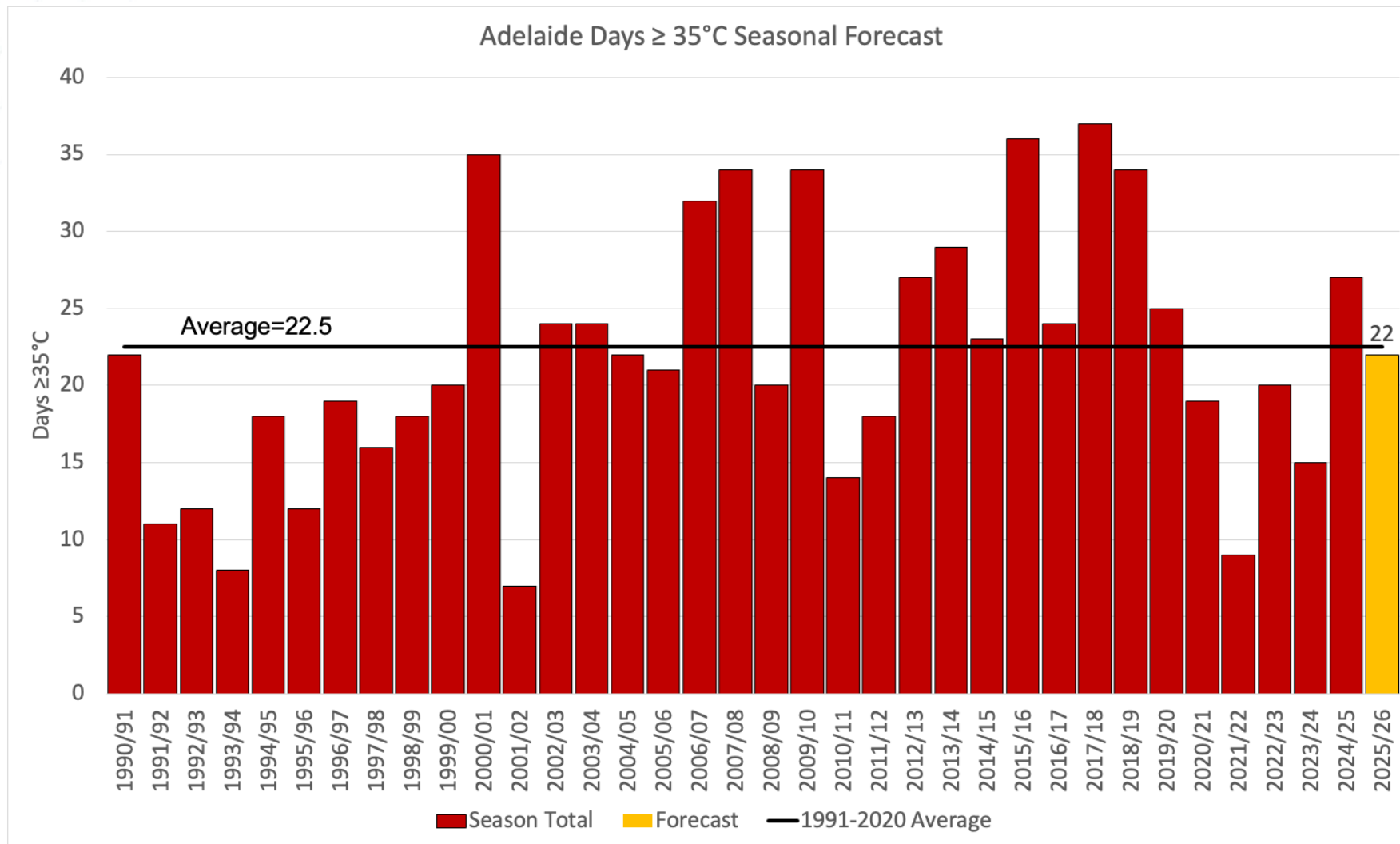
## Minimums



Forecast Anomaly  
(1991-2020 mean)

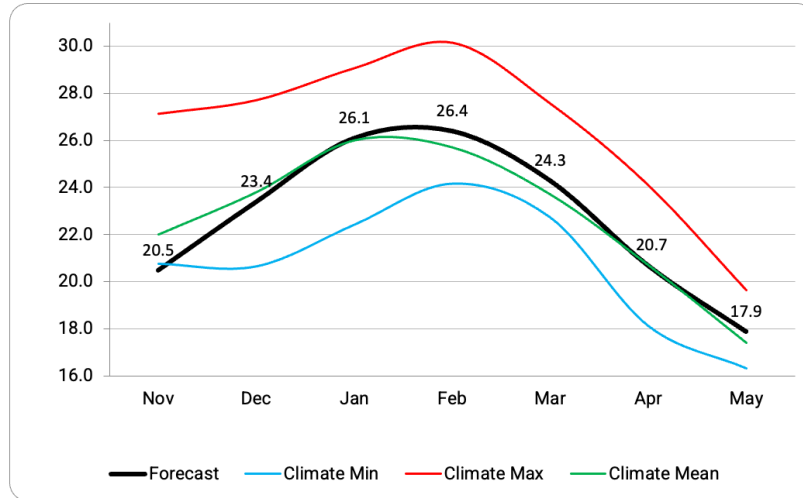


# Adelaide Extreme Hot Days Forecast

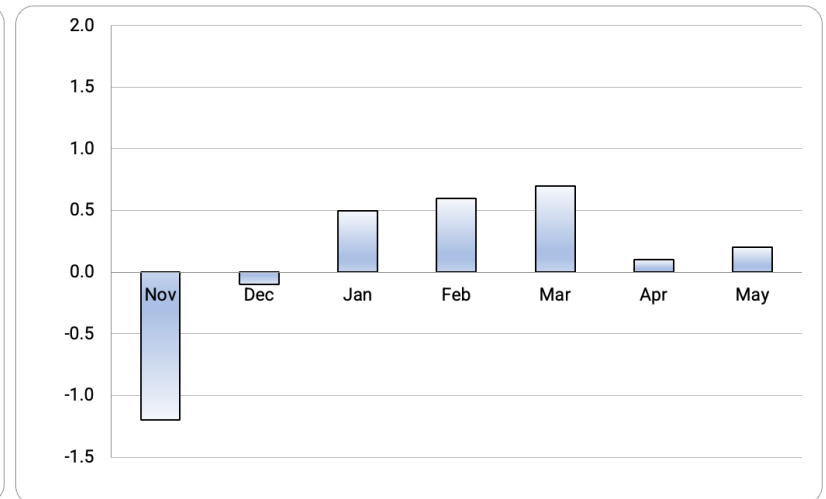
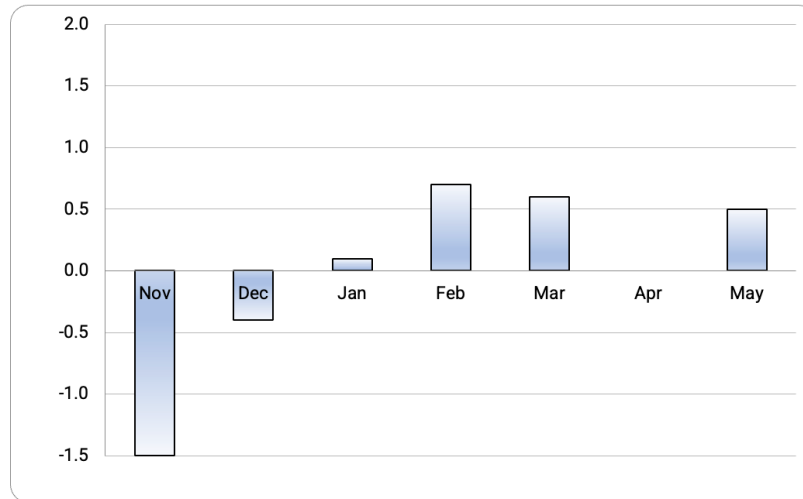
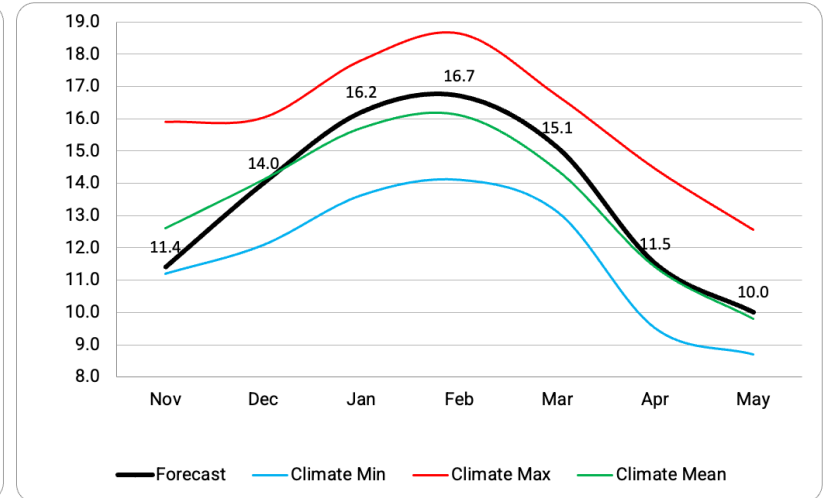


# Melbourne

## Maximums



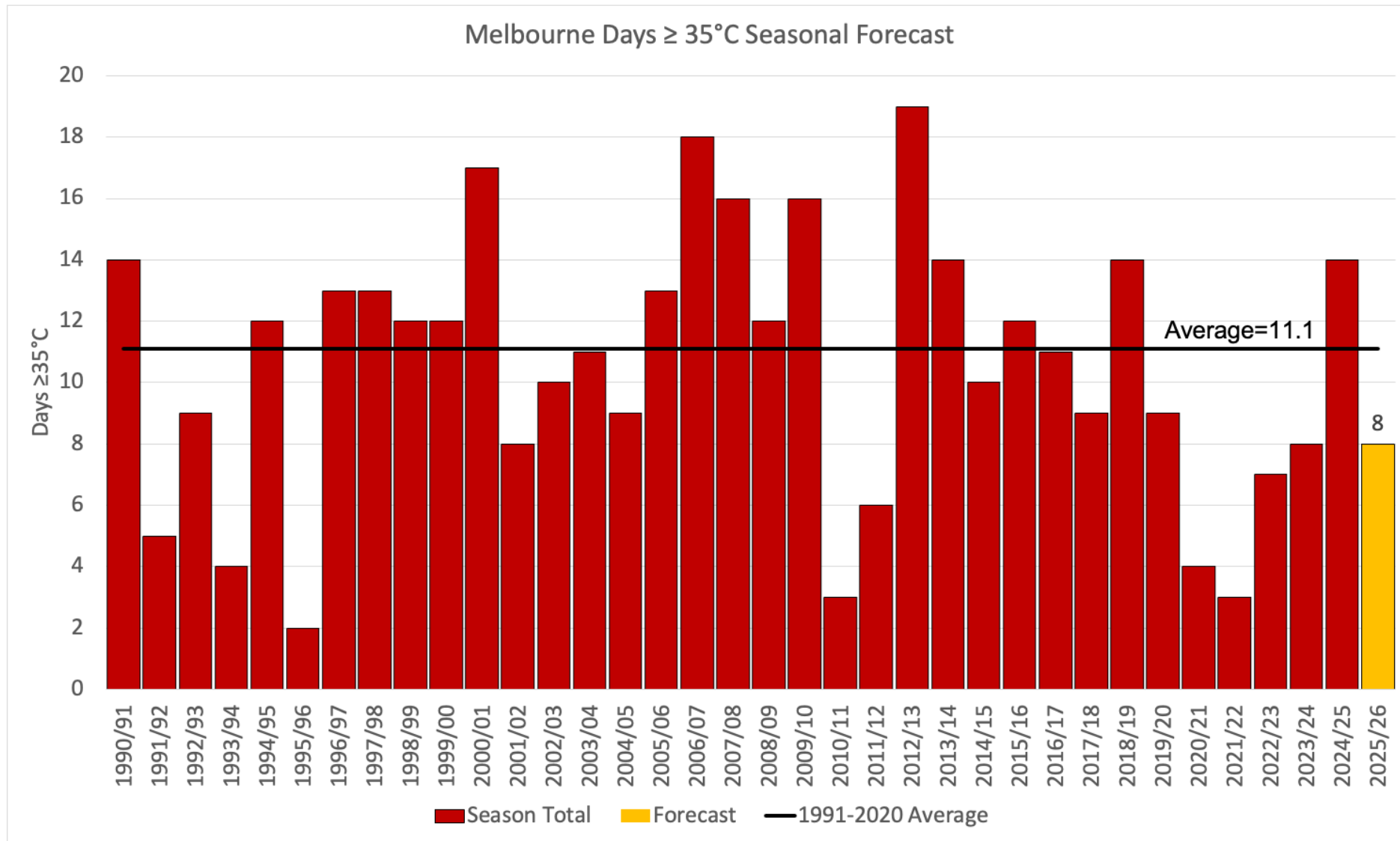
## Minimums



Forecast Anomaly  
(1991-2020 mean)

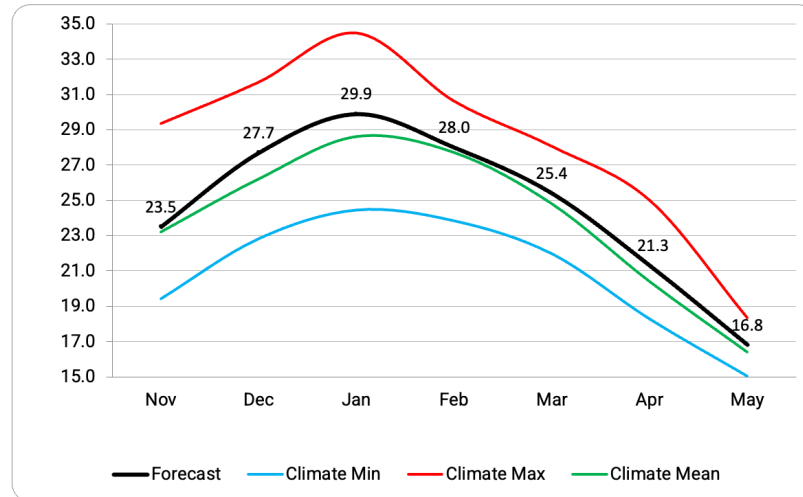


# Melbourne Extreme Hot Days Forecast

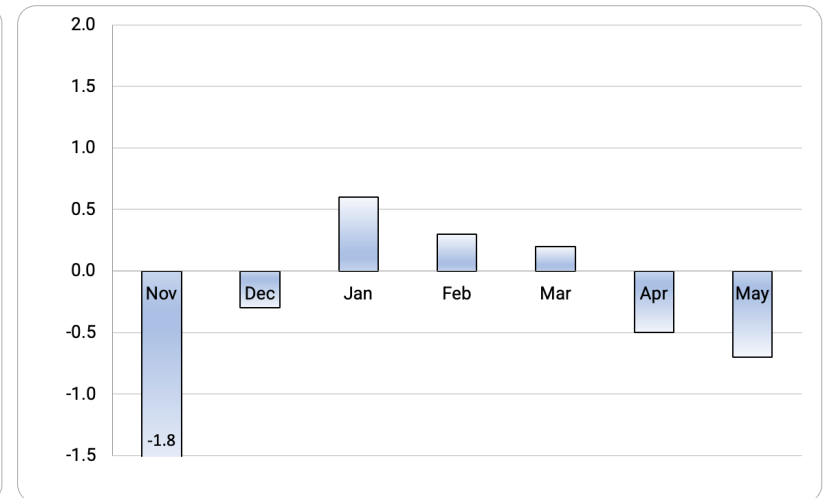
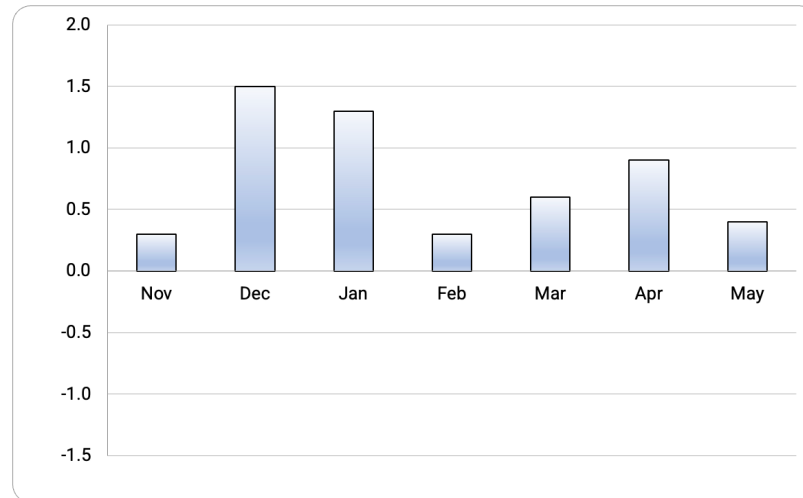
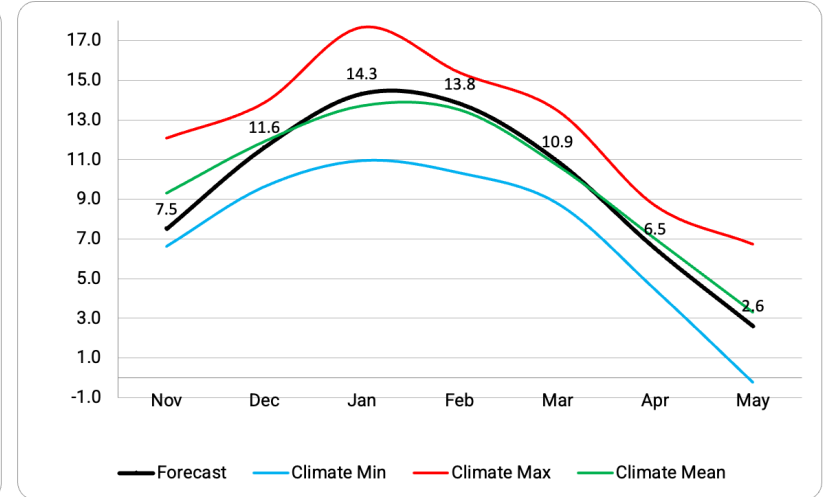


# Hobart

## Maximums



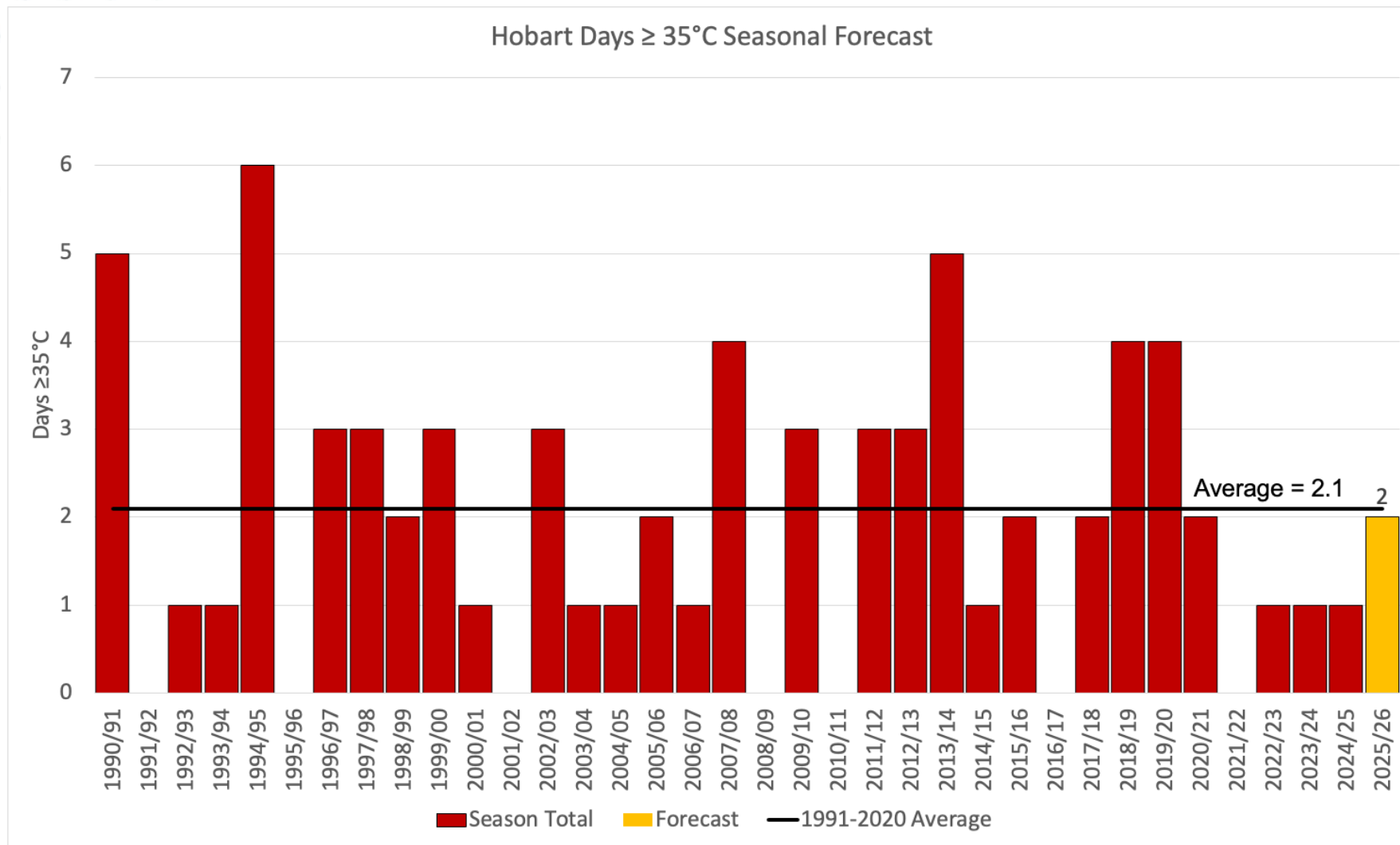
## Minimums



Forecast Anomaly  
(1991-2020 mean)

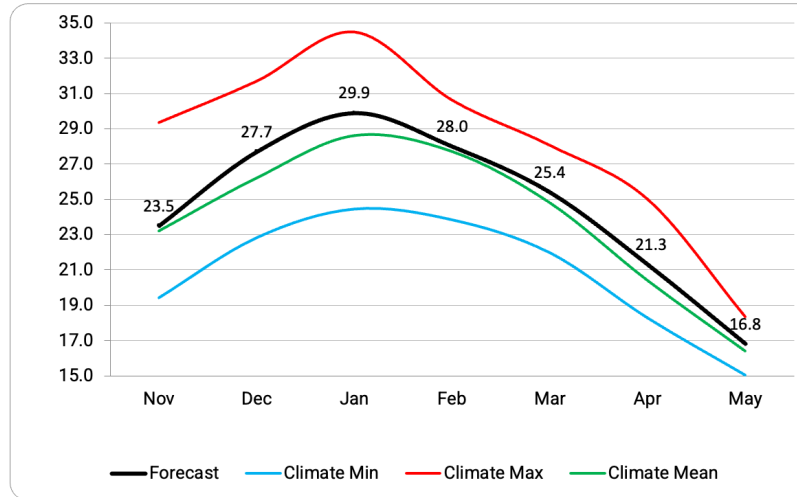


# Hobart Extreme Hot Days Forecast

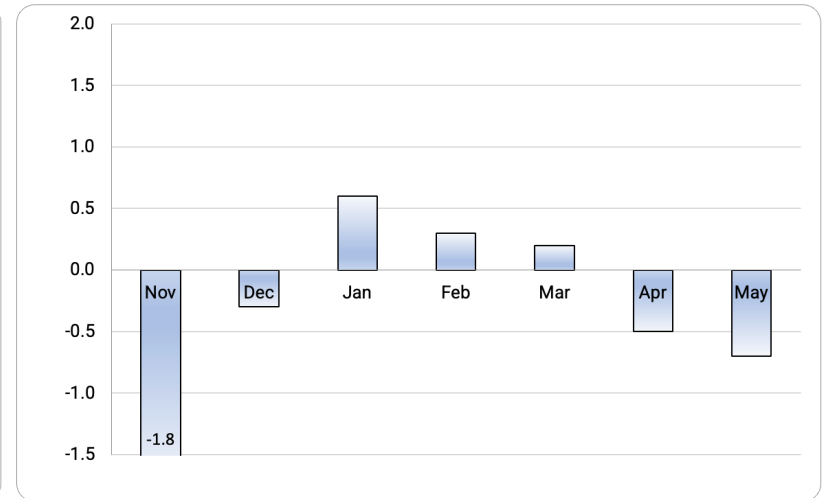
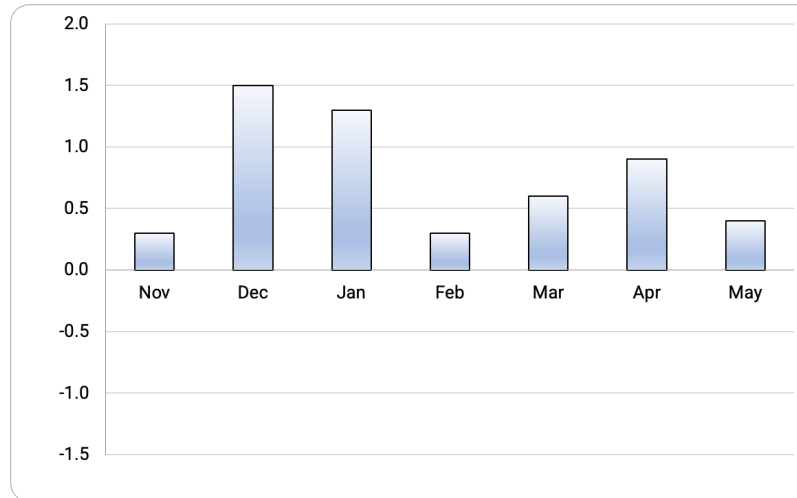
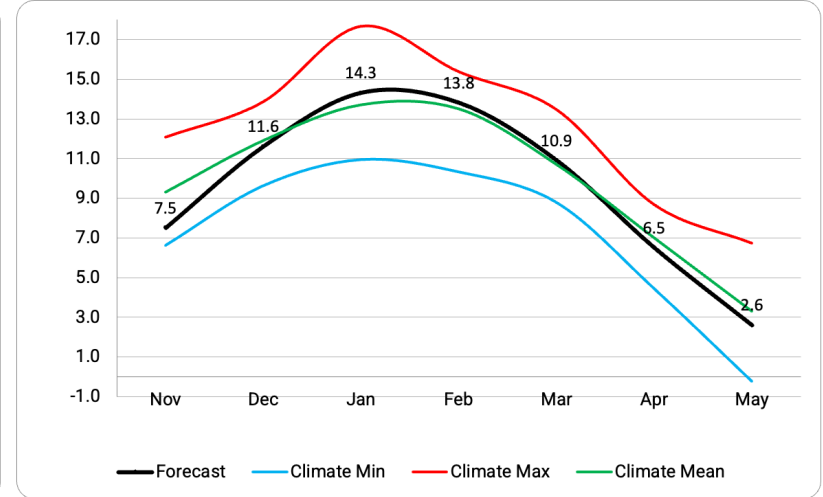


# Canberra

## Maximums



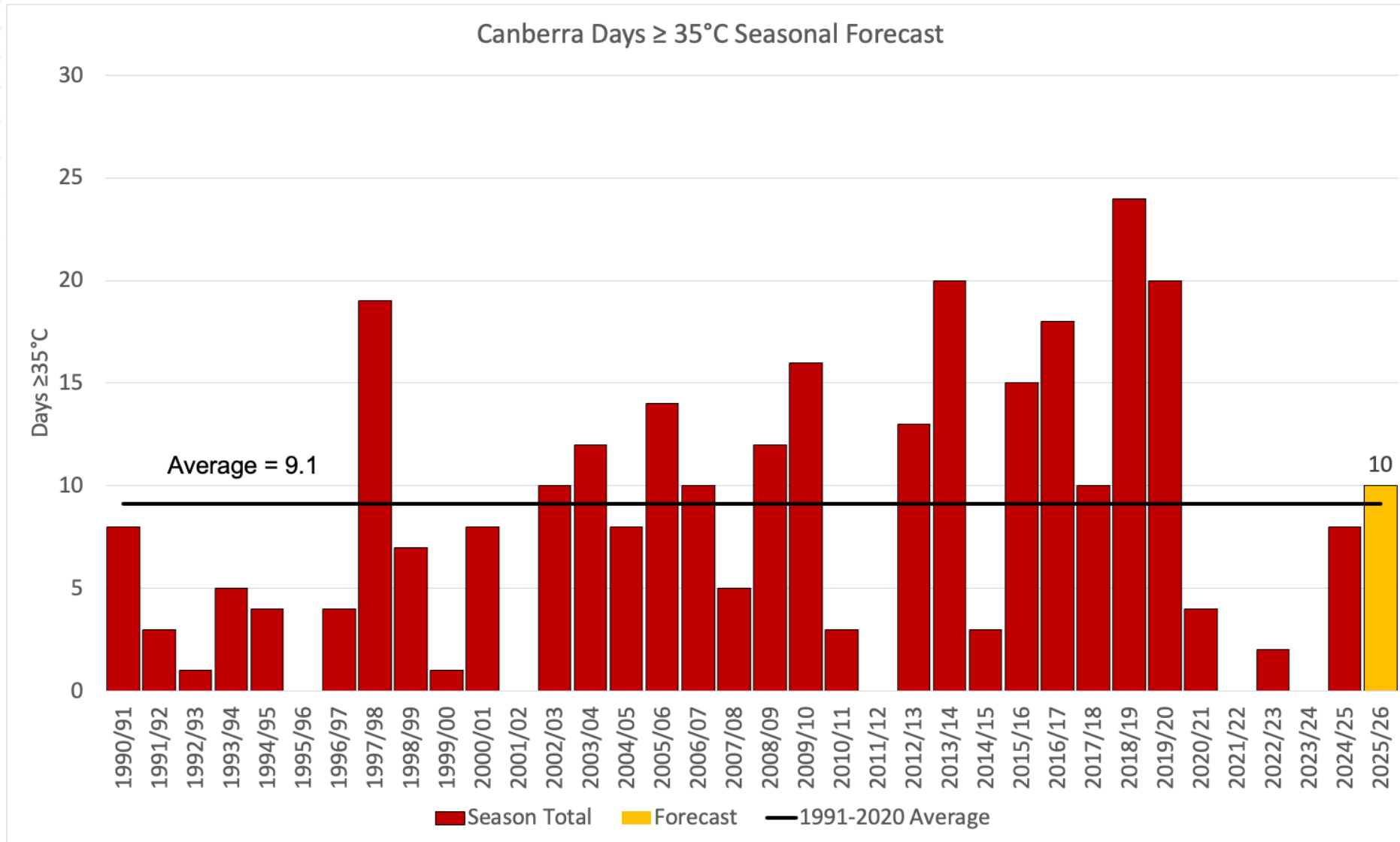
## Minimums



Forecast Anomaly  
(1991-2020 mean)

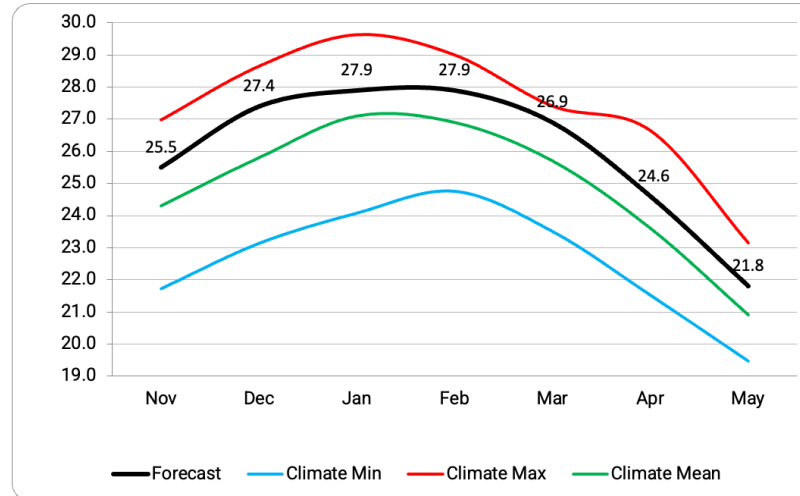


# Canberra Extreme Hot Days Forecast

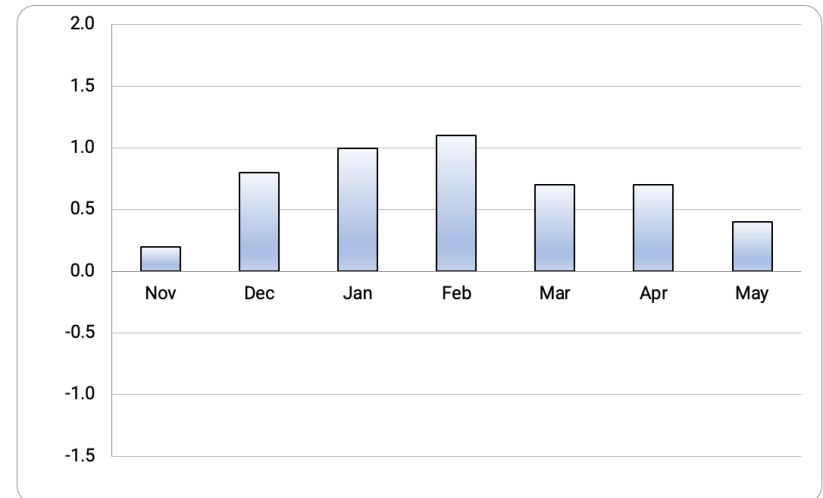
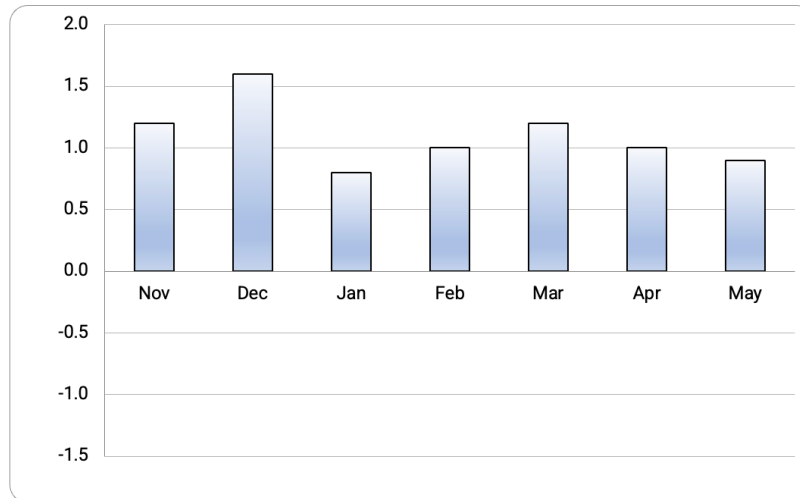
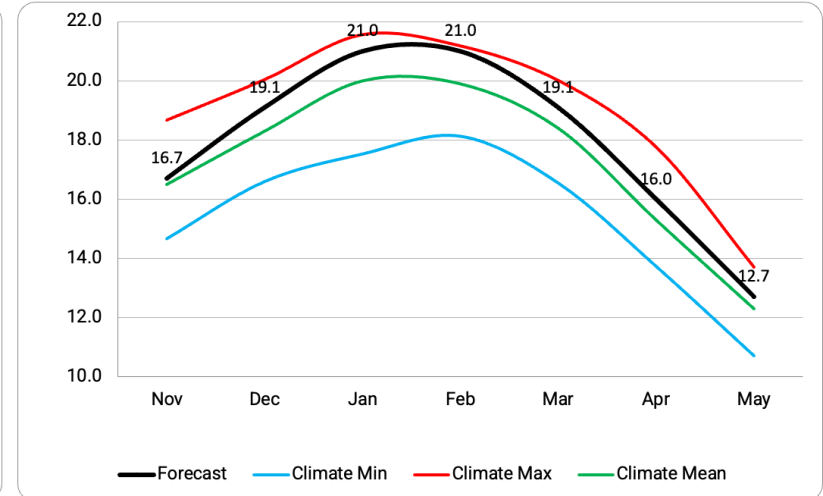


# Sydney

## Maximums



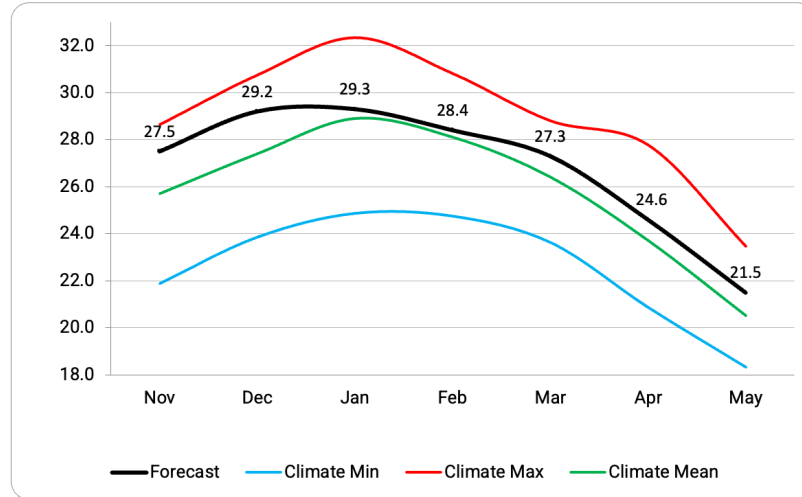
## Minimums



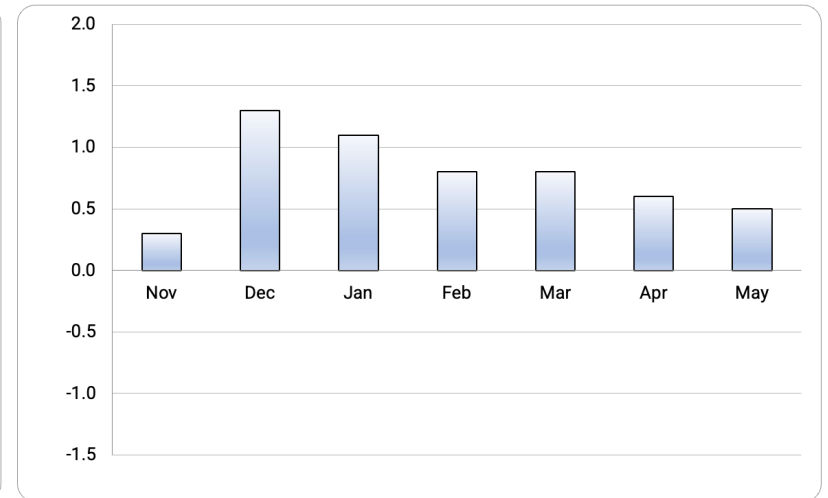
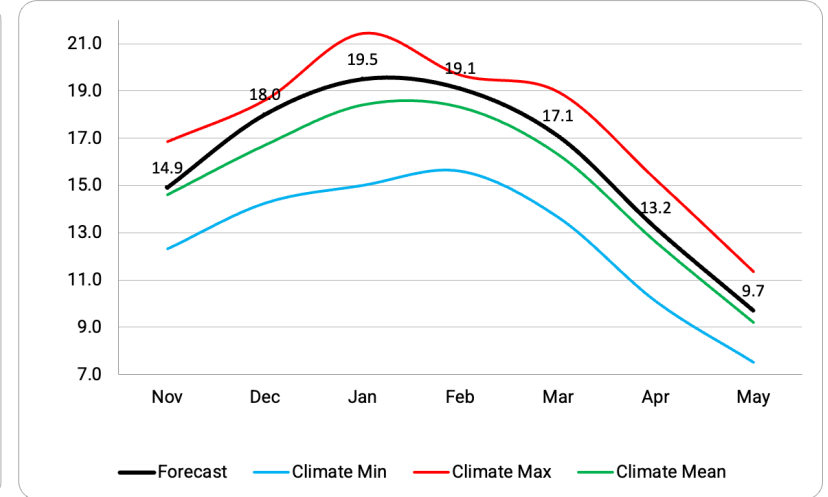
Forecast Anomaly  
(1991-2020 mean)

# Bankstown

## Maximums



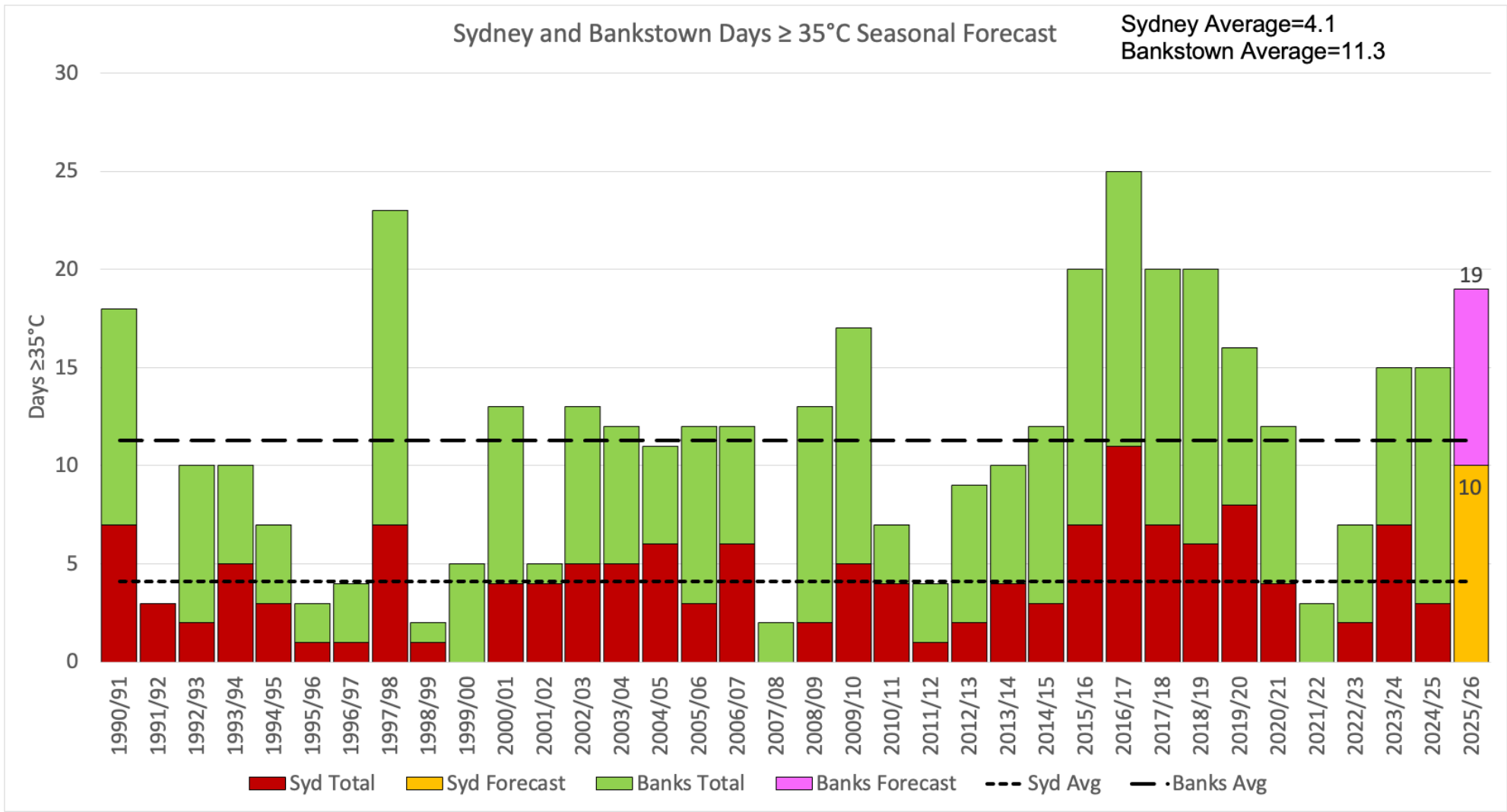
## Minimums



Forecast Anomaly  
(1991-2020 mean)



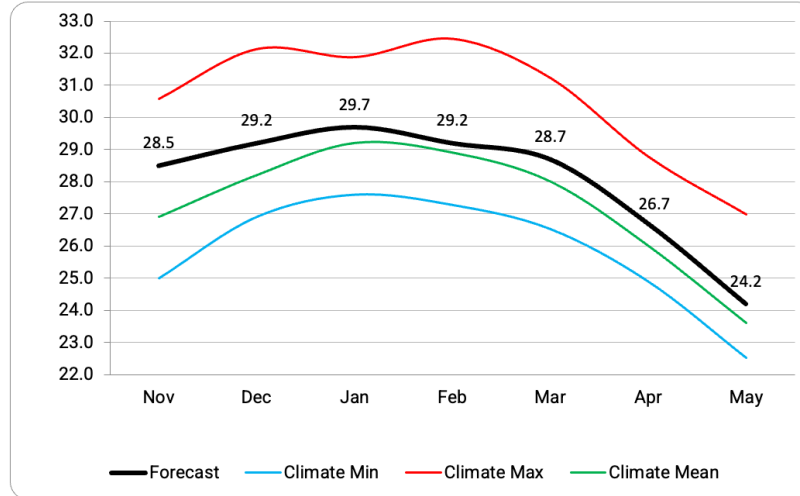
# Sydney/Bankstown Extreme Hot Days Forecast



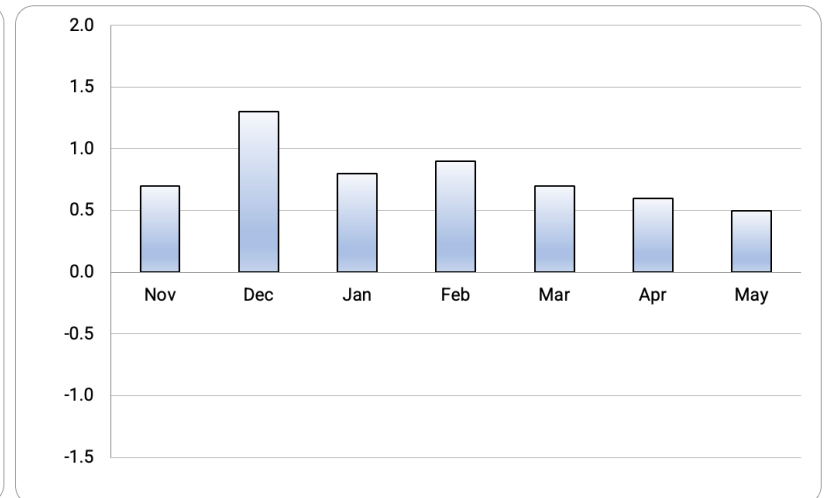
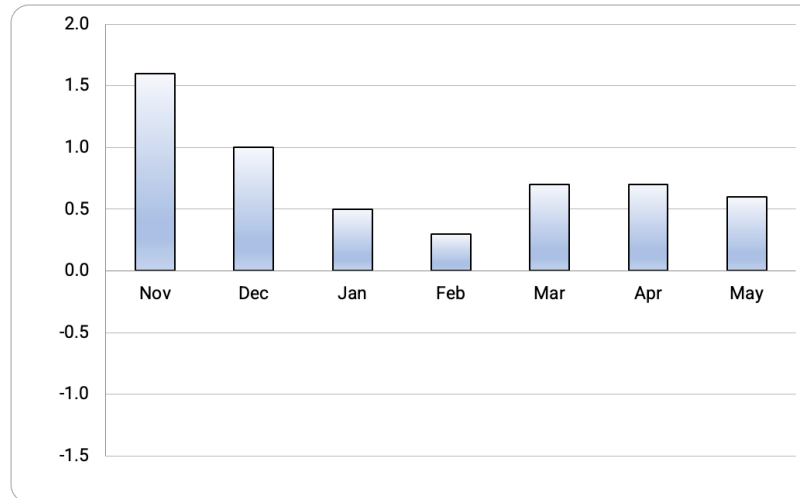
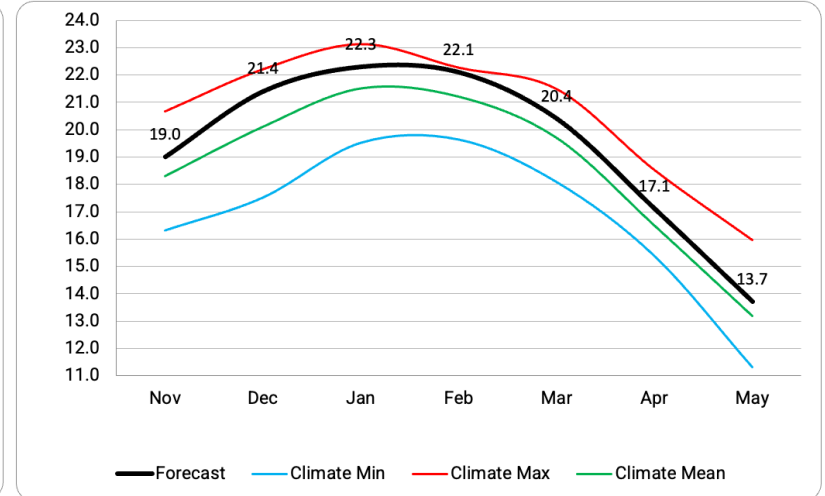
Oct 1 to Nov 12  
Observations  
Bankstown = 4  
Sydney = 2

# Brisbane

## Maximums



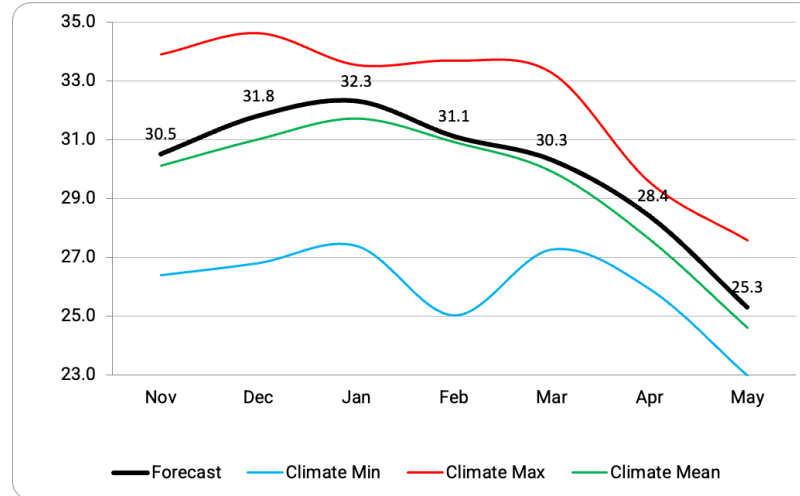
## Minimums



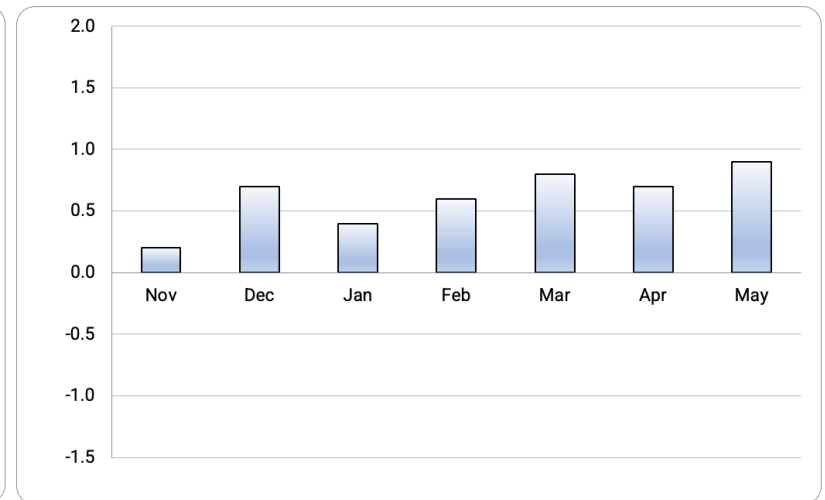
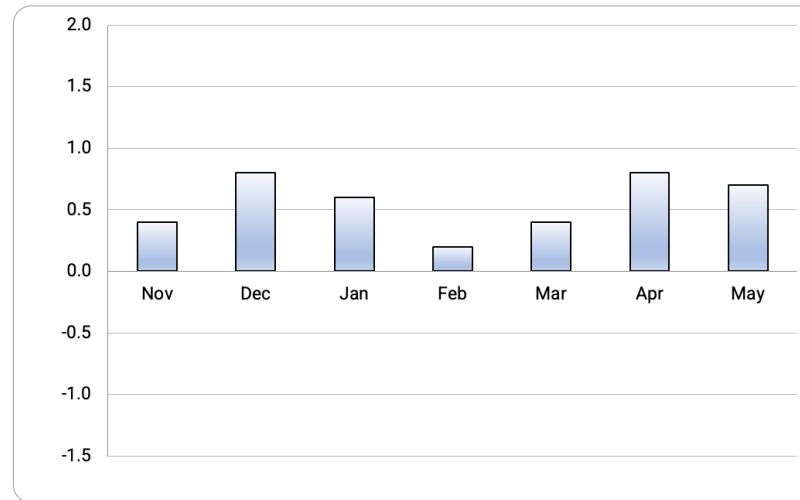
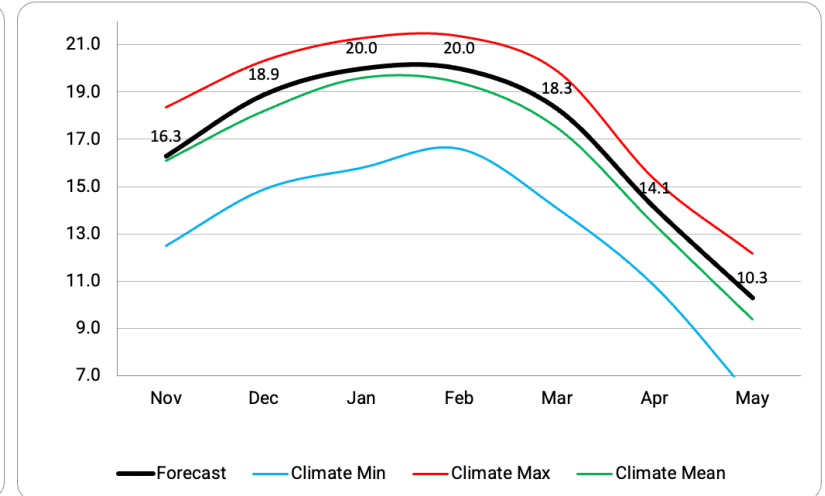
Forecast Anomaly  
(1991-2020 mean)

# Ipswich

## Maximums

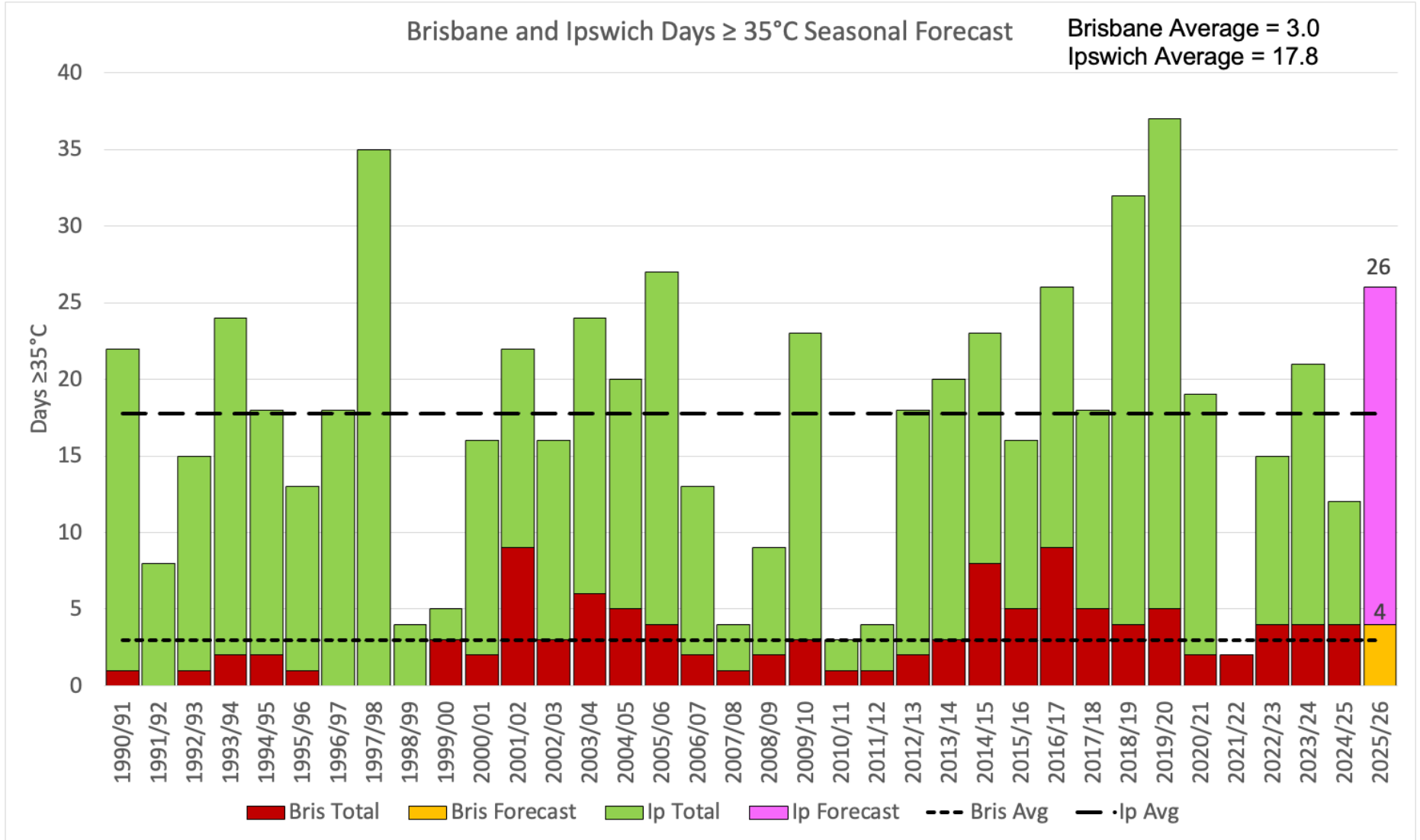


## Minimums



Forecast Anomaly  
(1991-2020 mean)

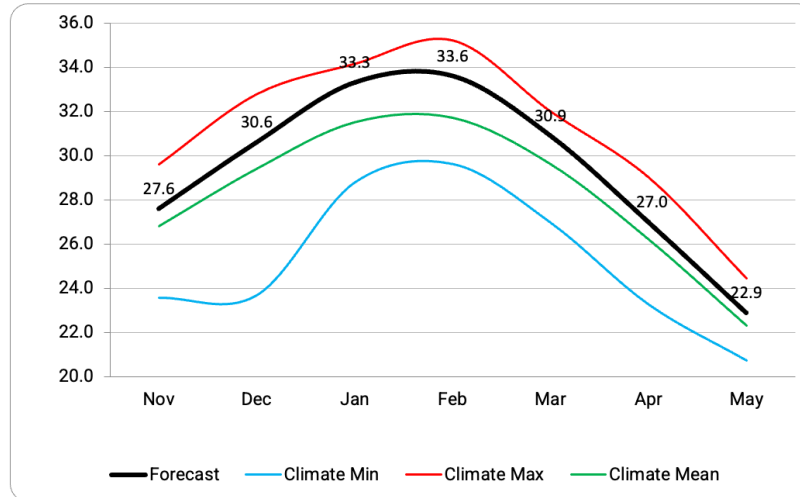
# Brisbane/Ipswich Extreme Hot Days Forecast



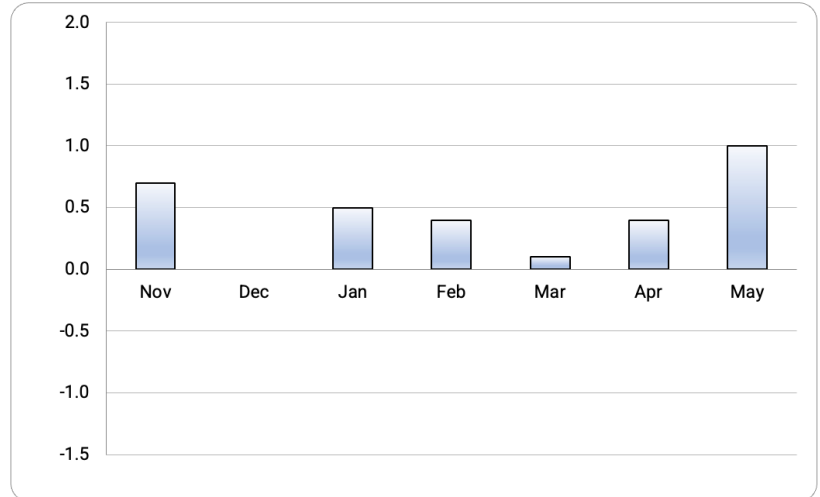
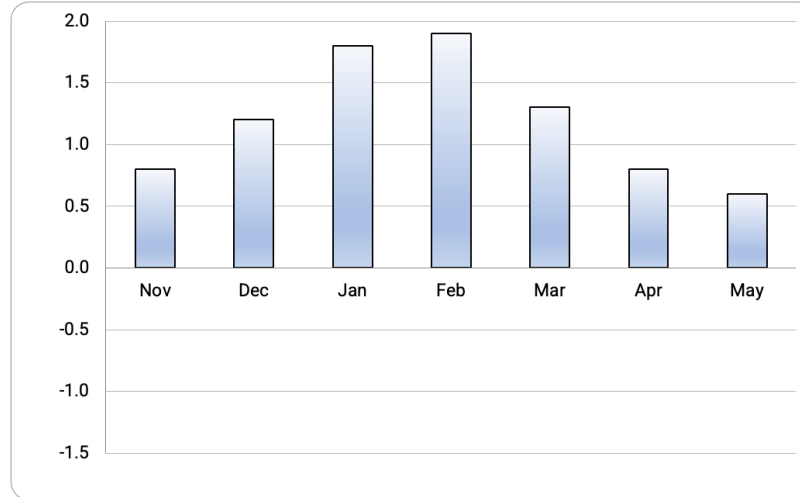
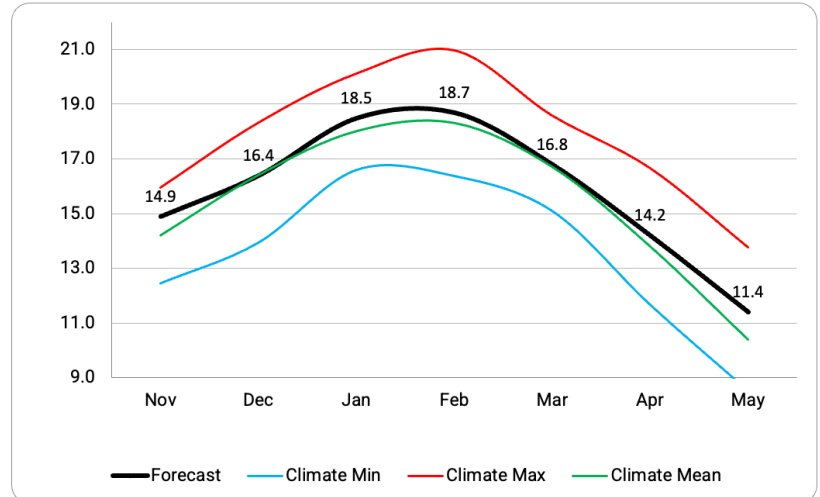
Oct 1 to Nov 12  
Observations  
Ipswich = 7  
Brisbane = 1

# Perth

## Maximums

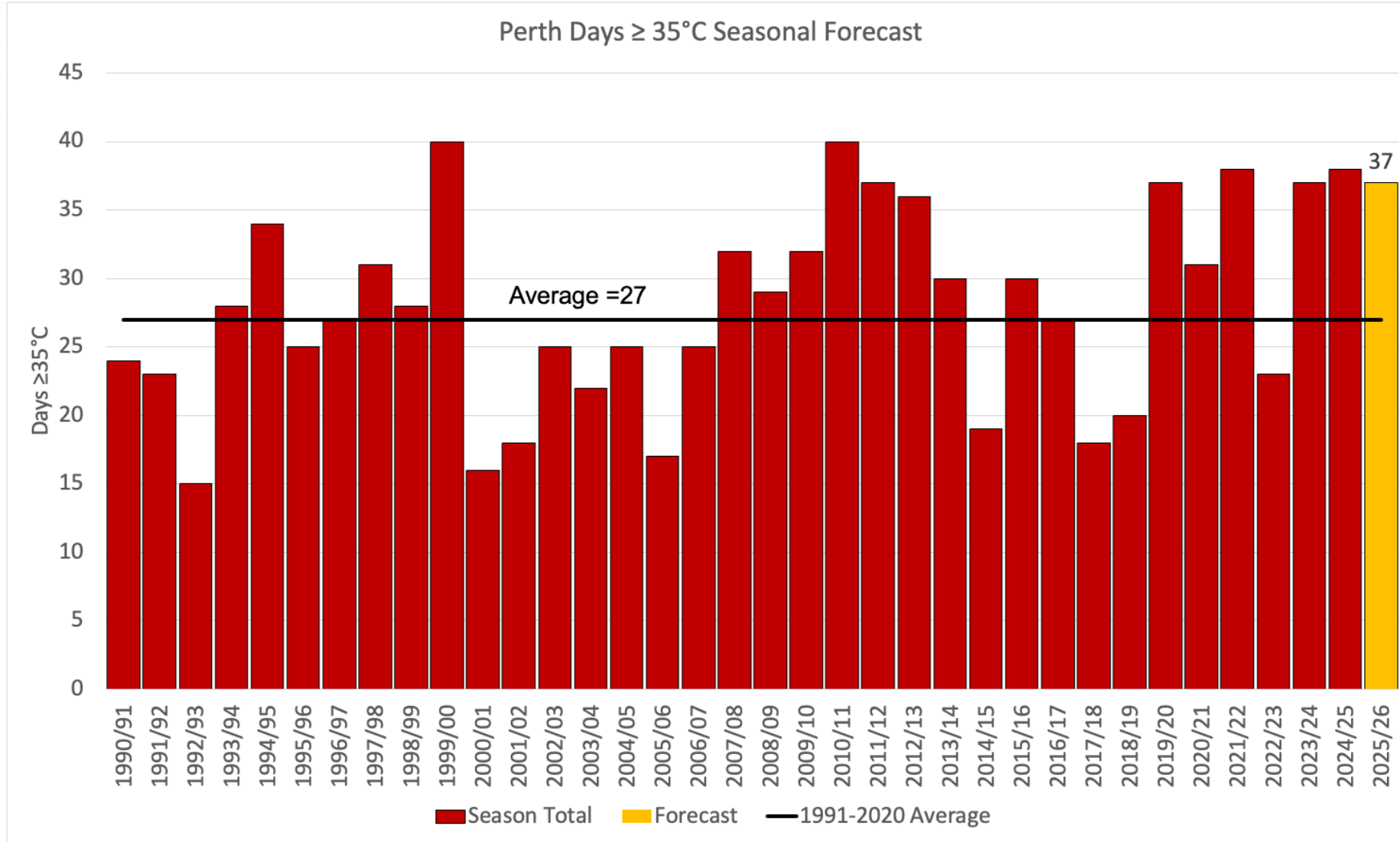


## Minimums



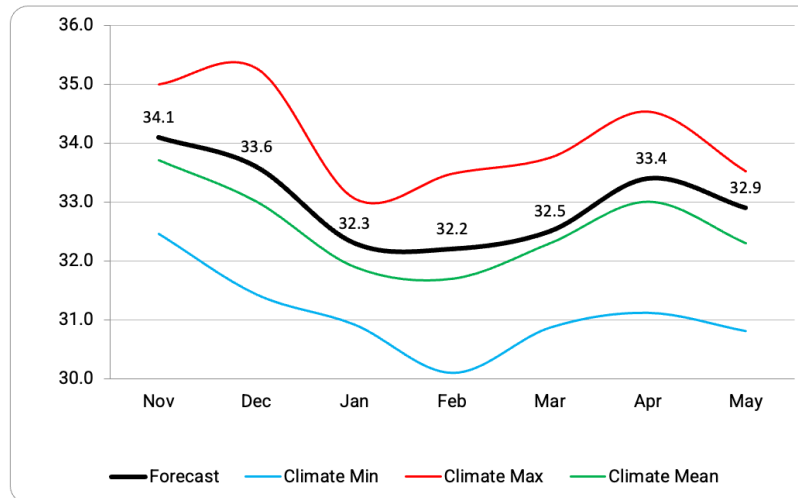
Forecast Anomaly  
(1991-2020 mean)

# Perth Extreme Hot Days Forecast

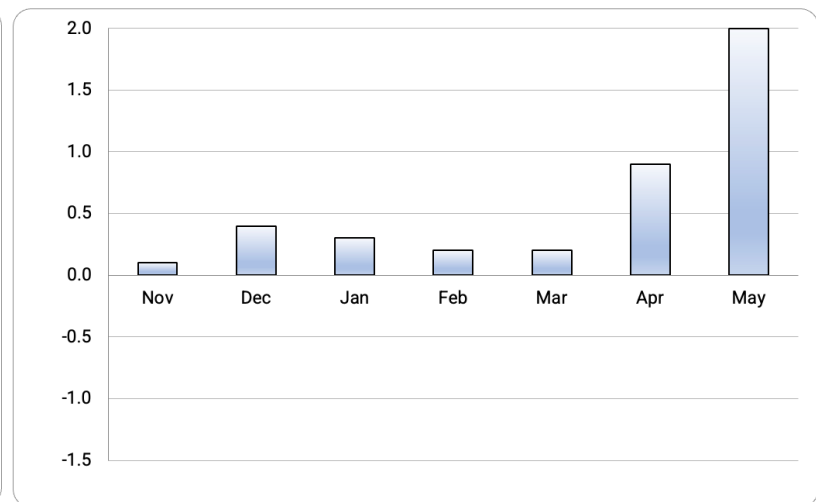
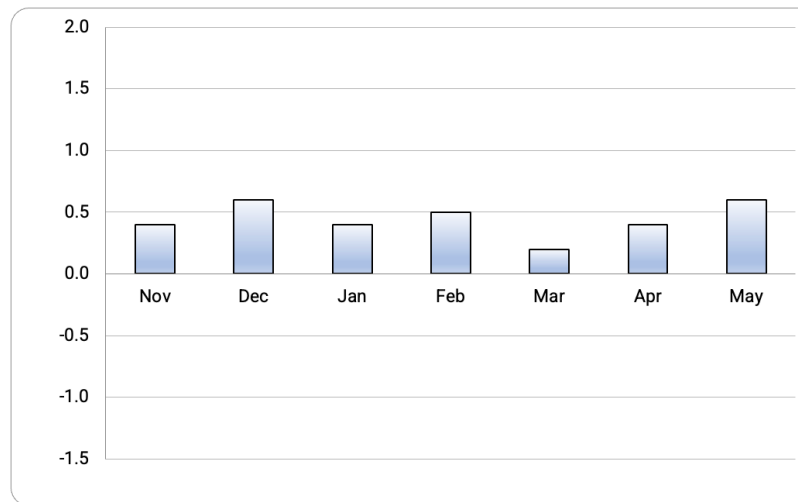
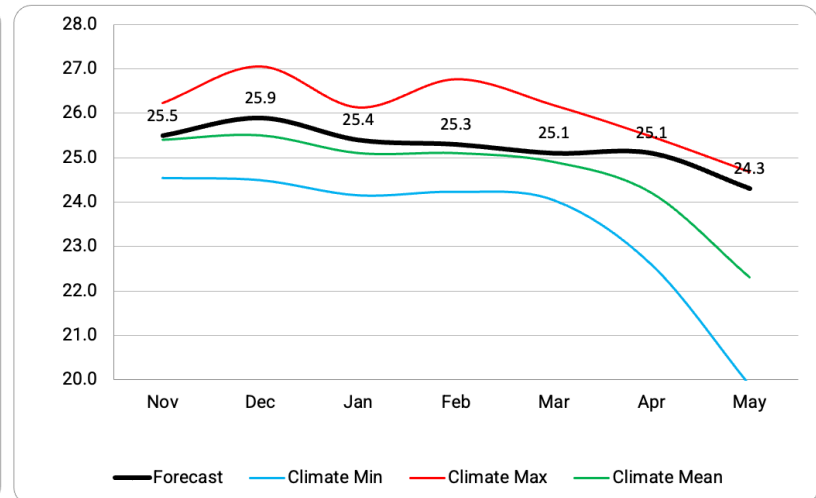


# Darwin

## Maximums



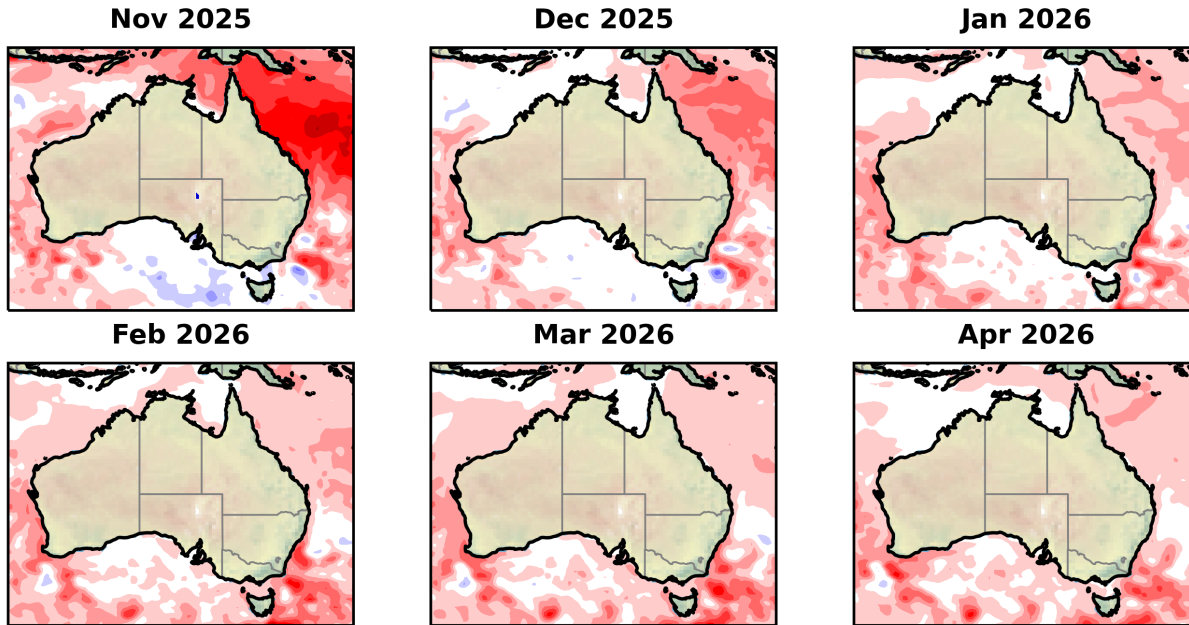
## Minimums



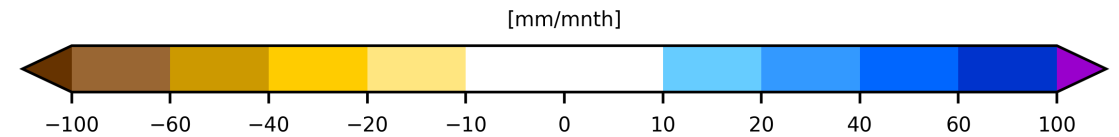
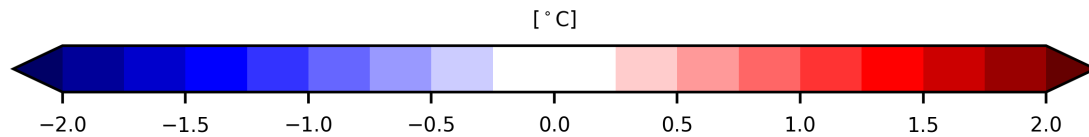
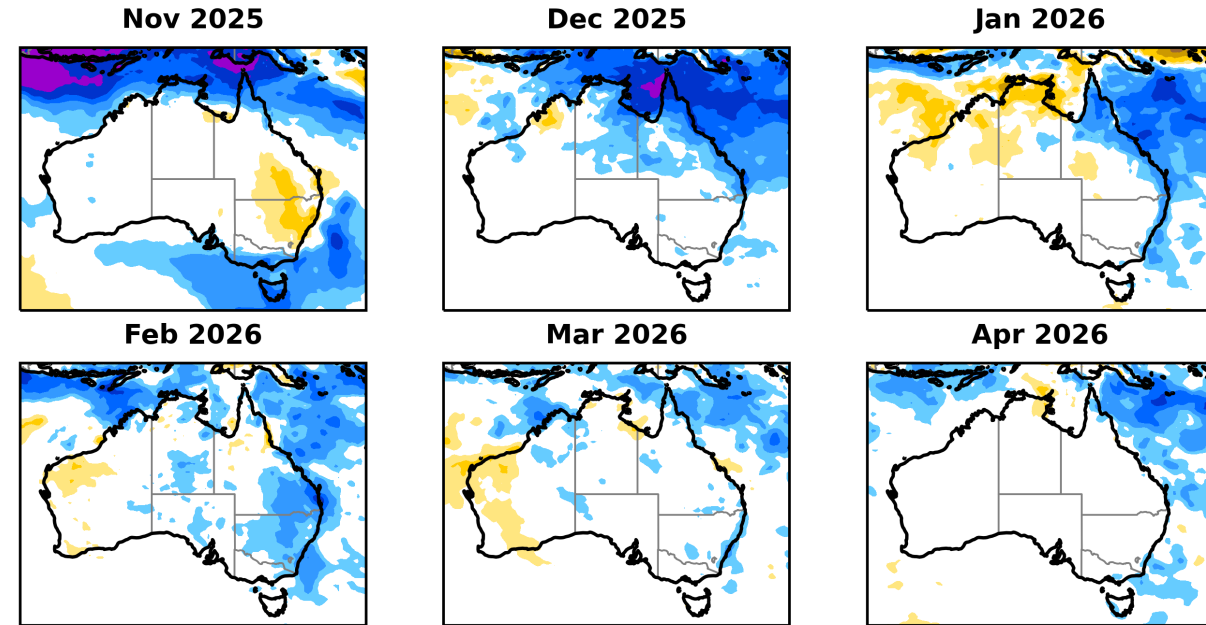
Forecast Anomaly  
(1991-2020 mean)

# Forecast rainfall anomalies

## Mean Sea Surface Temperature Anomalies



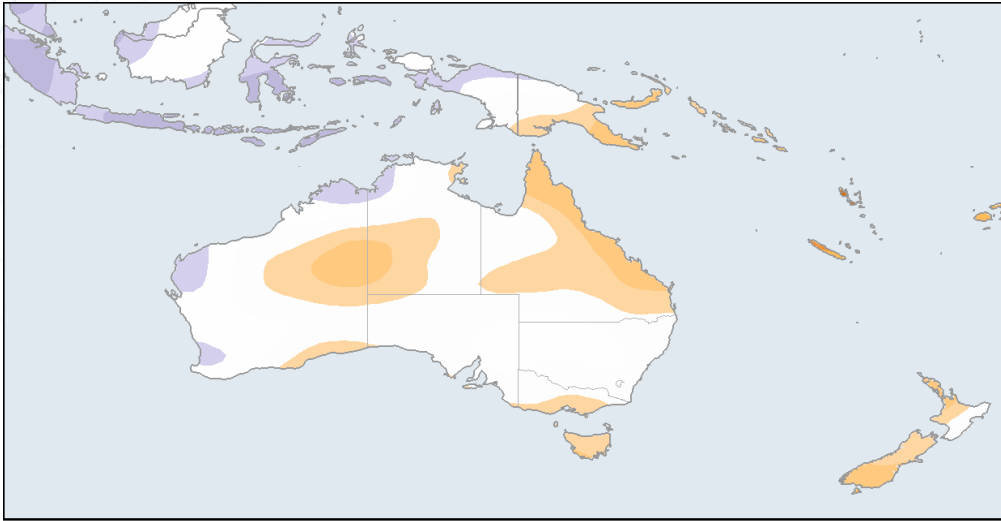
## Mean Rainfall Anomalies



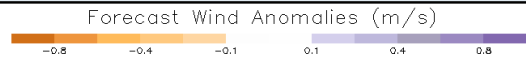
Warm oceans (especially off eastern Australia) will increase humidity; amplifying heat and thunderstorms, and increase the risk of heavy rainfall and flooding for Queensland and NSW

Drier conditions over western and southern Australia could see increased solar production

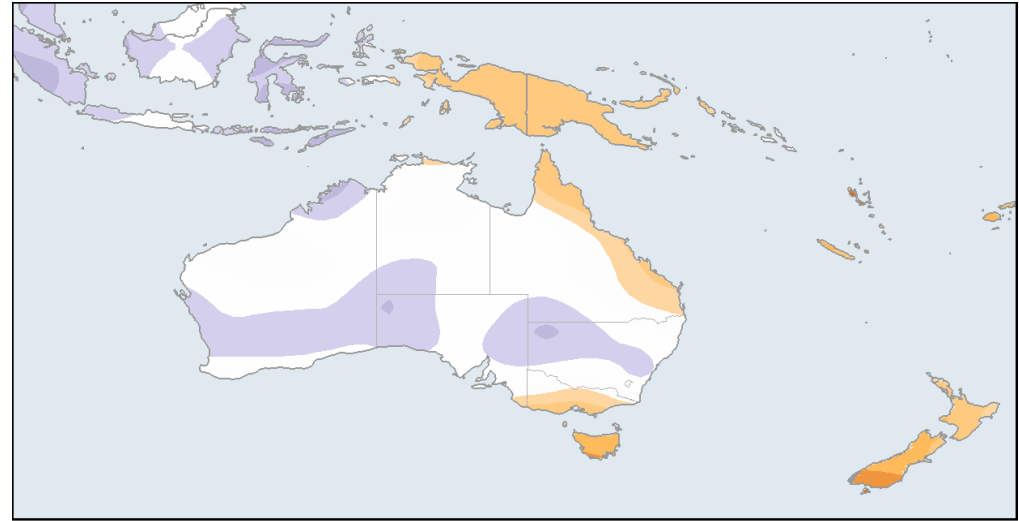
# Forecast wind anomalies



Valid for:  
DEC 2025



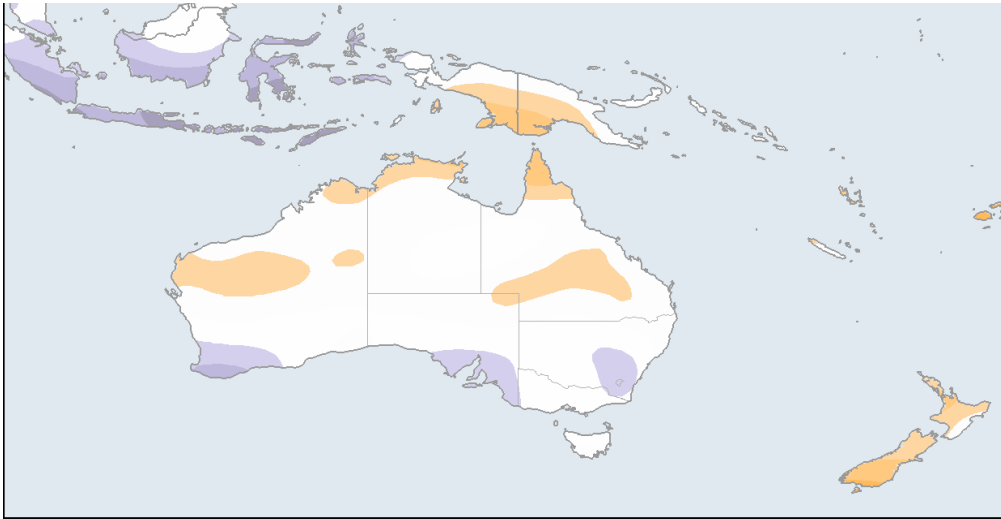
DTN<sup>o</sup>



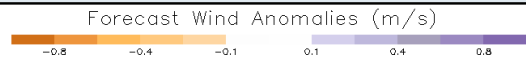
Valid for:  
JAN 2026



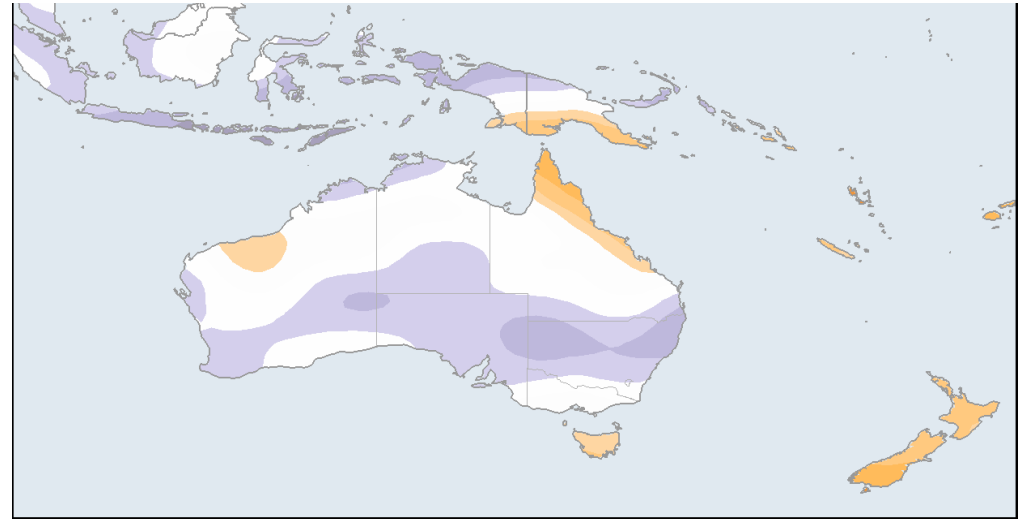
DTN<sup>o</sup>



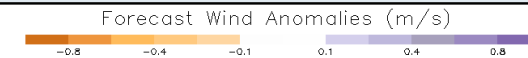
Valid for:  
FEB 2026



DTN<sup>o</sup>



Valid for:  
MAR 2026

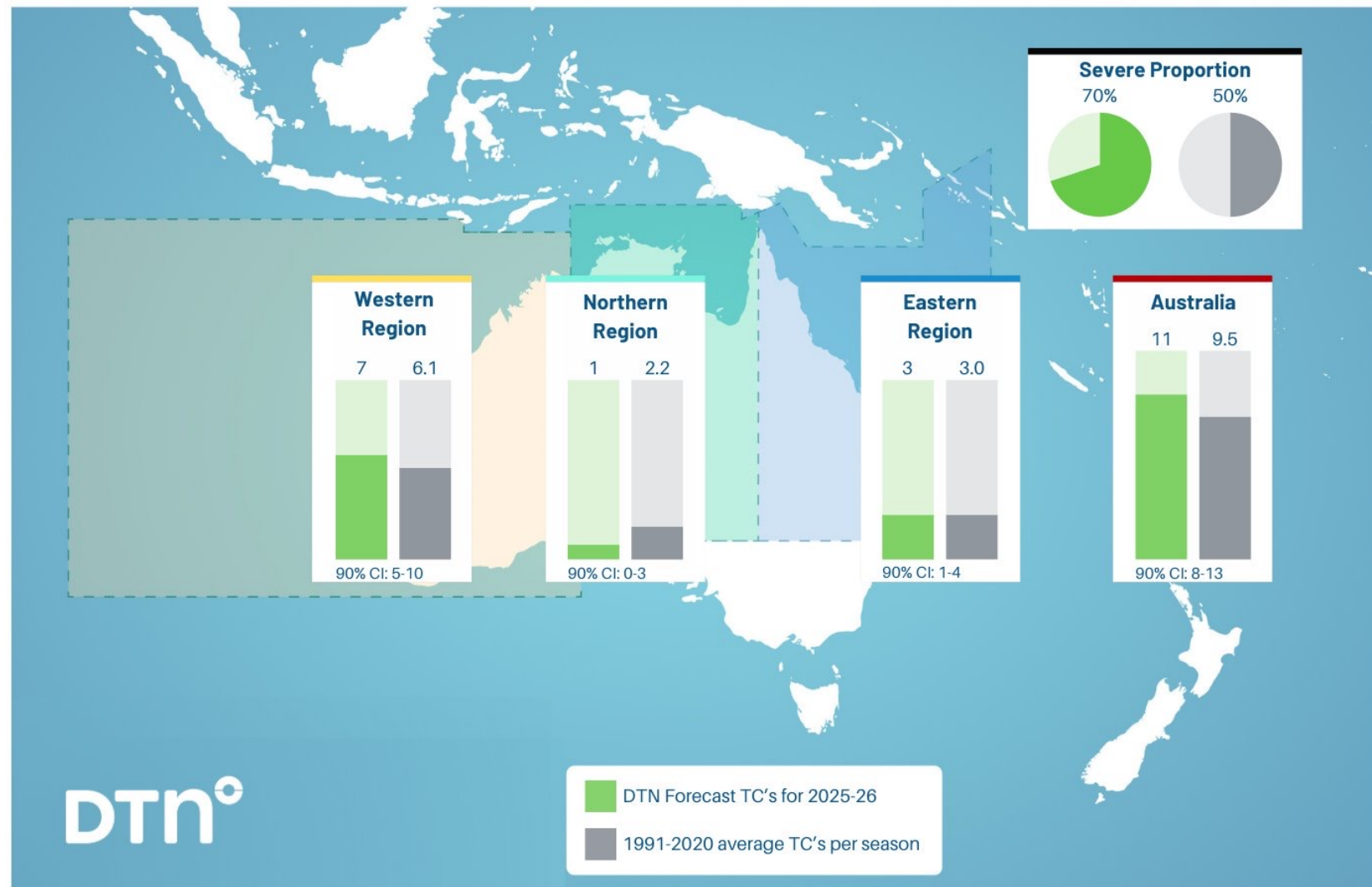


DTN<sup>o</sup>

## Upcoming Names

- Fina
- Grant
- Hayley
- Iggy
- Jenna
- Koji
- Luana
- Mitchell
- Narelle
- Oran
- Peta
- Riordan

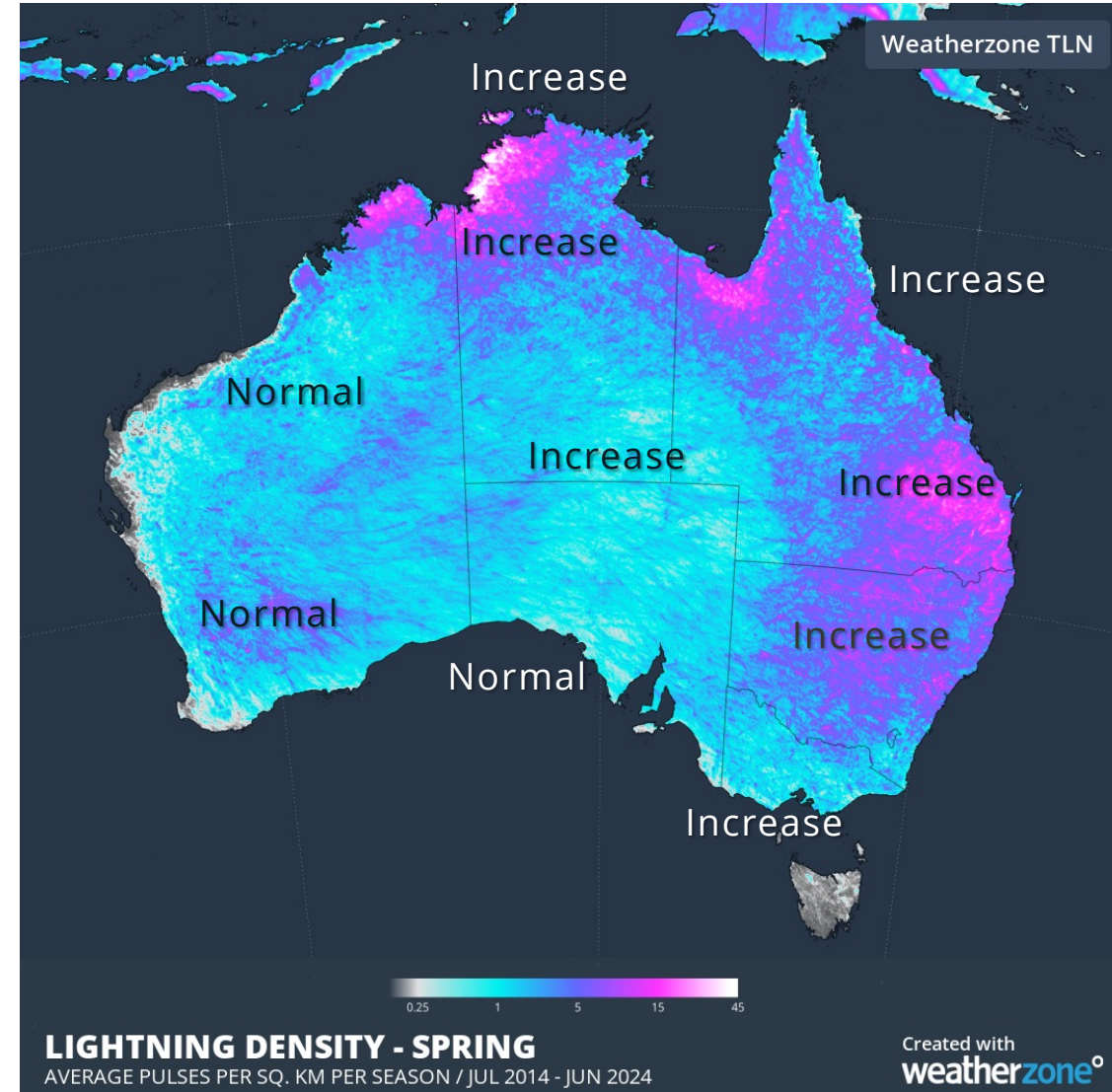
## DTN Tropical Cyclone Forecast 2025-26



Severe TCs more likely, mainly due to very warm ocean temperatures

# Thunderstorms

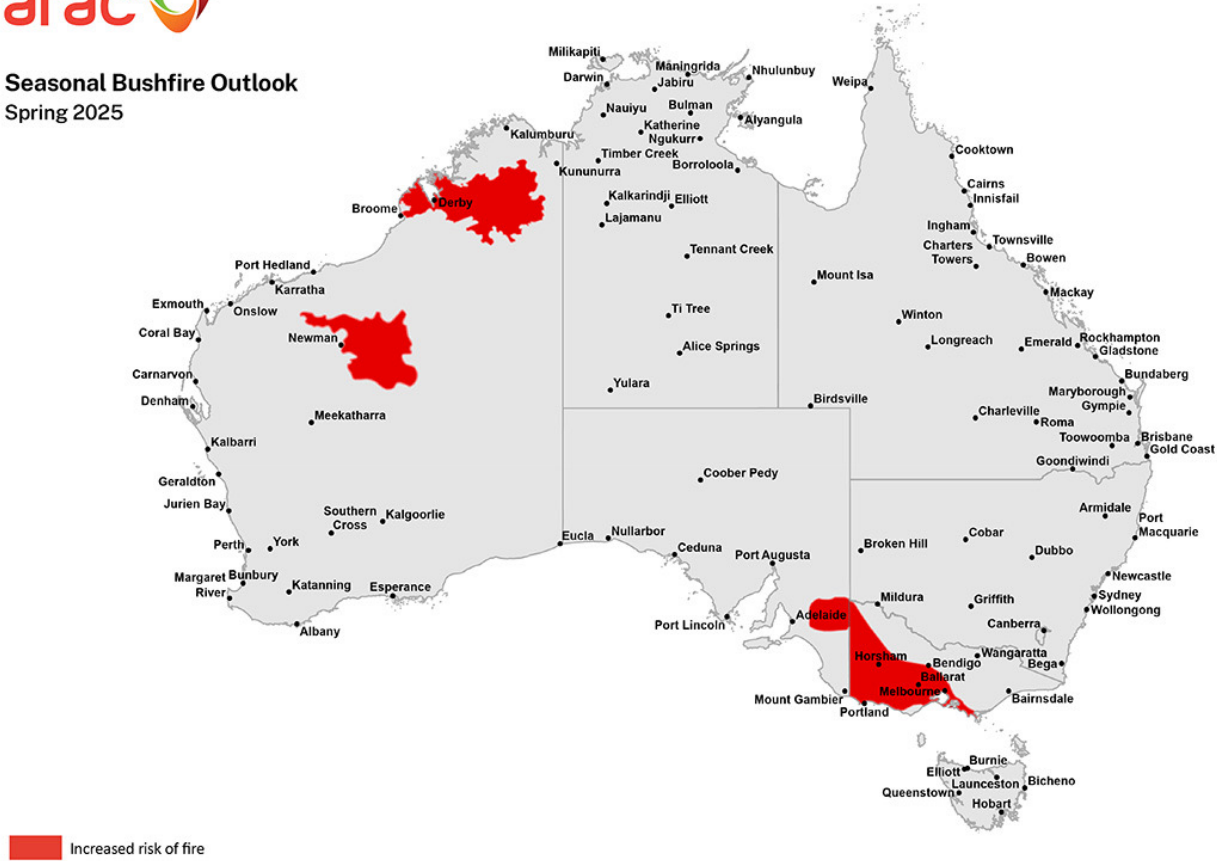
- Severe thunderstorm season usually runs from November to April
- Increased potential in east with cold upper air and warm SSTs, average for south, southwest WA and interior.
- Damaging winds – Normal risk
- Hail – Increased risk
- Heavy rainfall – Increased risk for eastern Australia (warm SSTs)



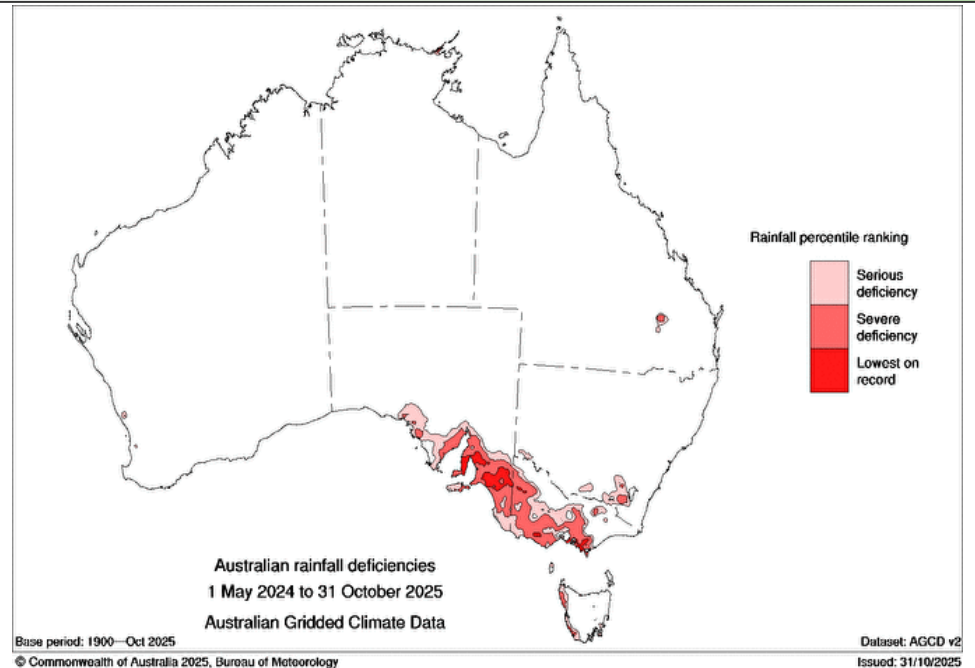
# Bushfire risk



Seasonal Bushfire Outlook  
Spring 2025



- Persistent rainfall deficiencies bringing increased risk for SA into summer.
- Increased risk for Vic, depends on impacts of negative IOD
- Increased risk for northern WA and parts of Qld with growth from last wet season



# Summer 2025-26 outlook

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**Less frequent heatwaves**



**Increased risk of extreme heat, higher humidity**



**Above average rain and cloud in the east, drier in the south**



**Increased risk of heavy rainfall and flooding in the east**



**Increased thunderstorm activity**



**Decreased frequency of strong wind events in late summer**



**Above average bushfire risk in the south, below average in the east**

# Questions?

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