



The Bureau  
of Meteorology

# Pre-Season Briefing

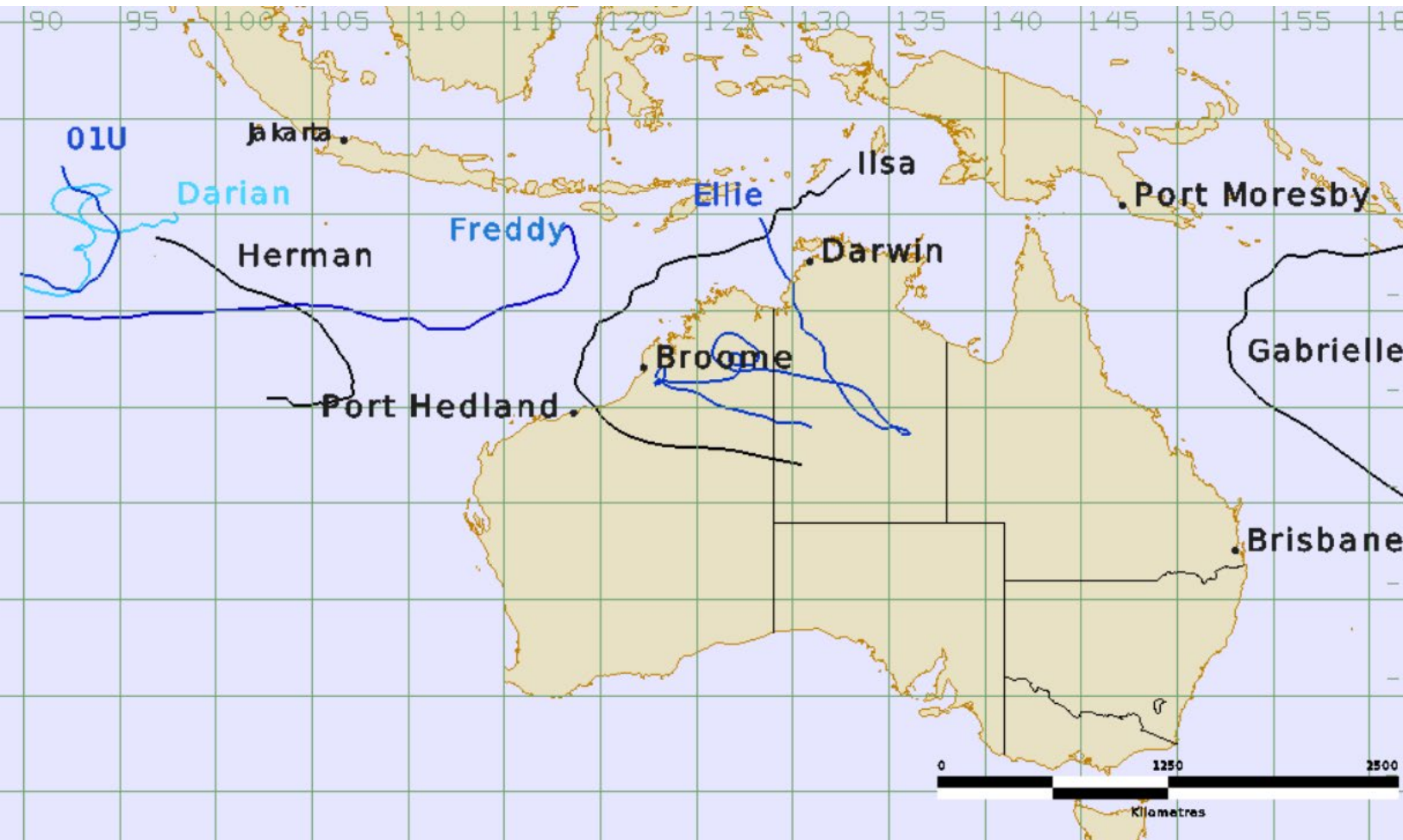
Outlook for the warm season 2023-2024

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Feedback form:



# 2022-2023 Warm Season



# Warm Season hazards for the Midwest

## Hazard

## Likelihood compared to recent decades



Bushfire



Increased risk during fire season



Extreme heat



Very much increased chance



Widespread flooding



Lower than normal risk



Thunderstorm



Close to average



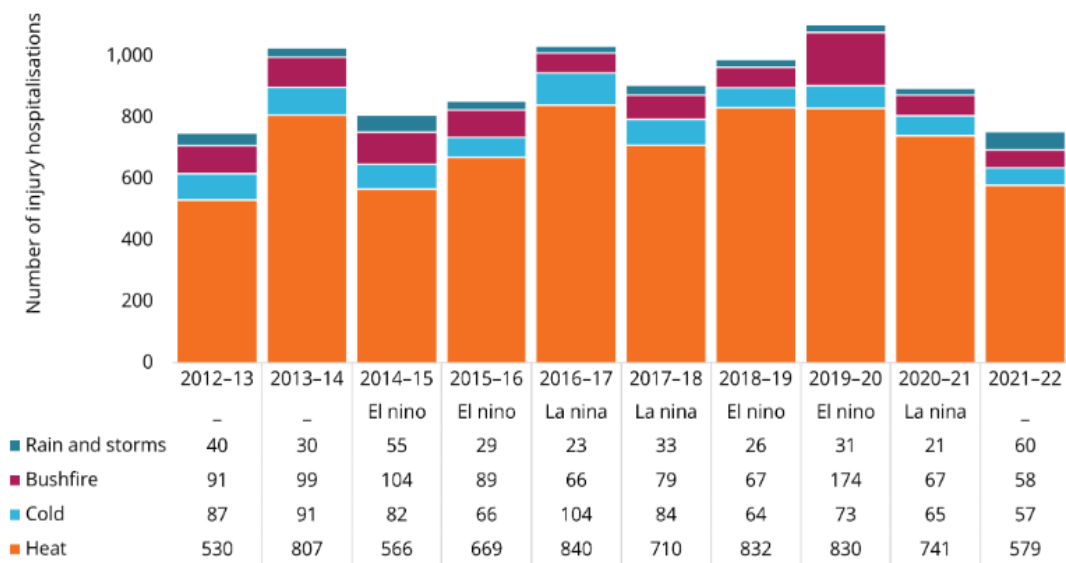
Tropical cyclone



Expect fewer than average

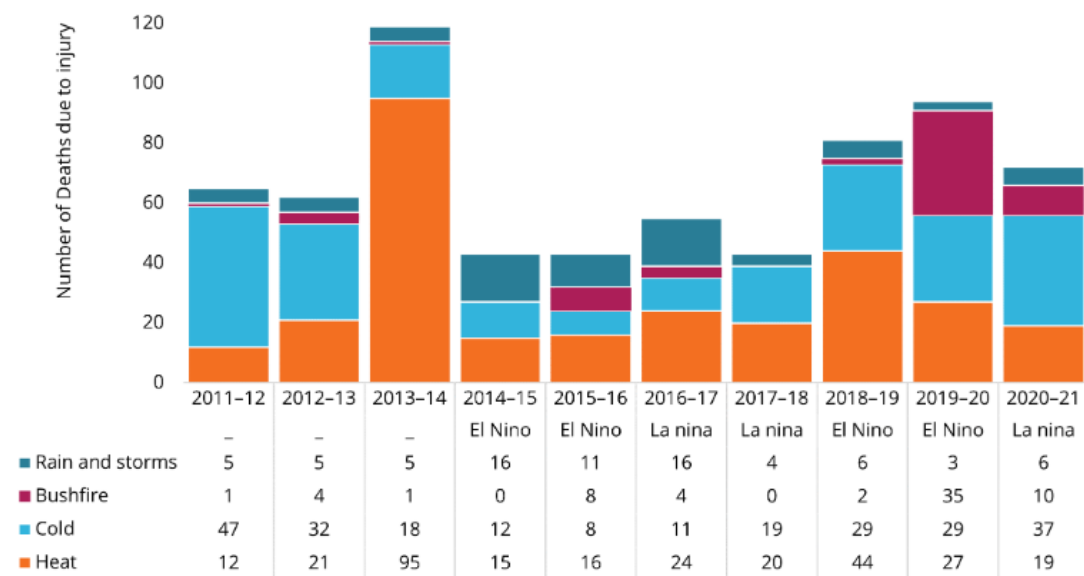


Figure 1: Extreme weather-related injury hospitalisations, 2012-13 to 2021-22



Source: National Hospital Morbidity Database (NHMD)

Figure 2: Extreme weather-related injury deaths, 2011-12 to 2020-21

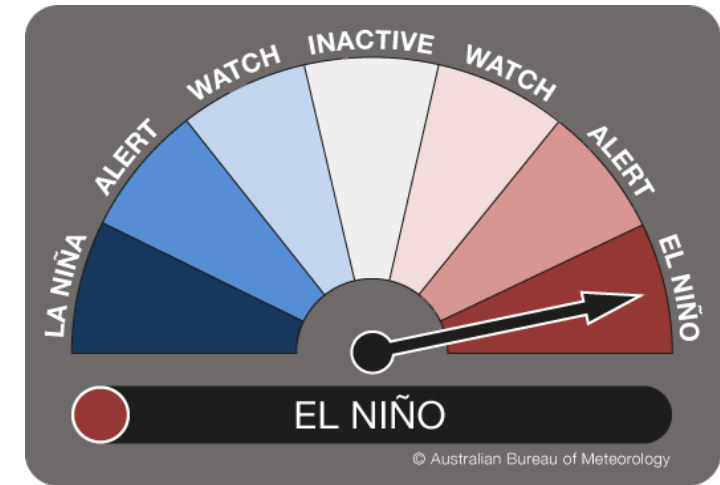
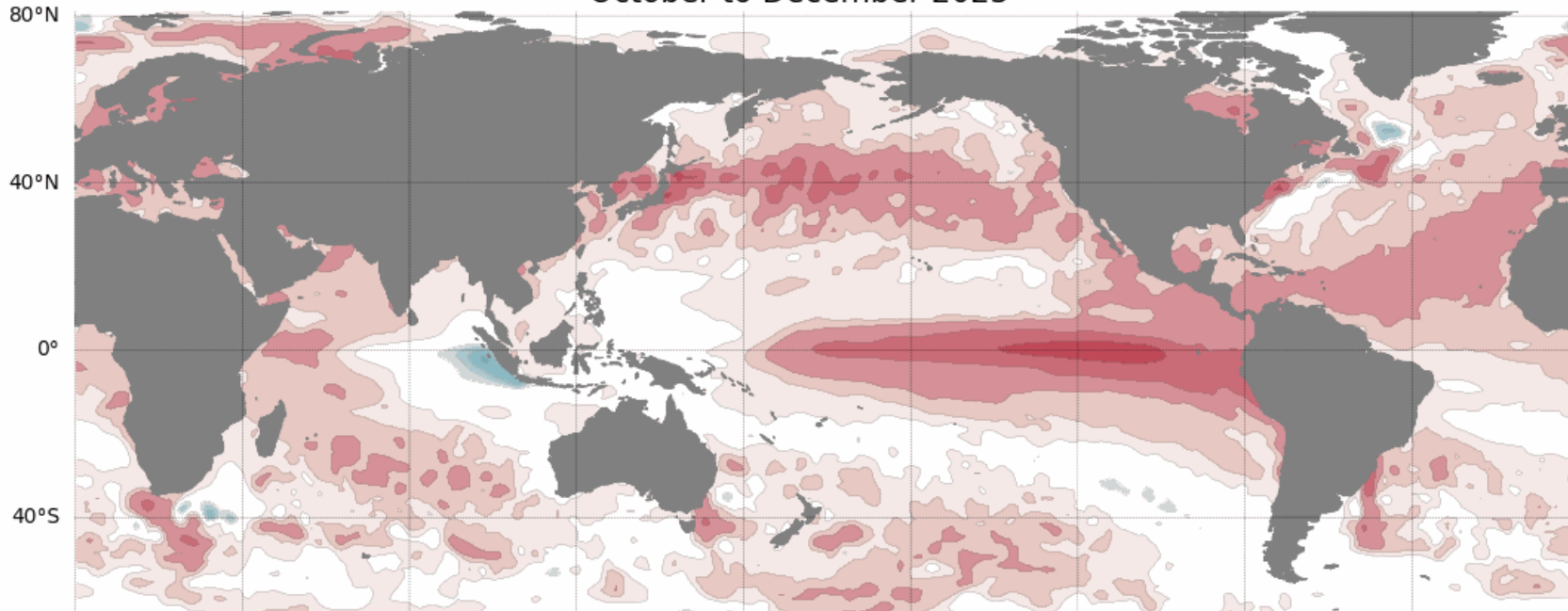


Source: National Hospital Mortality database (NMD)



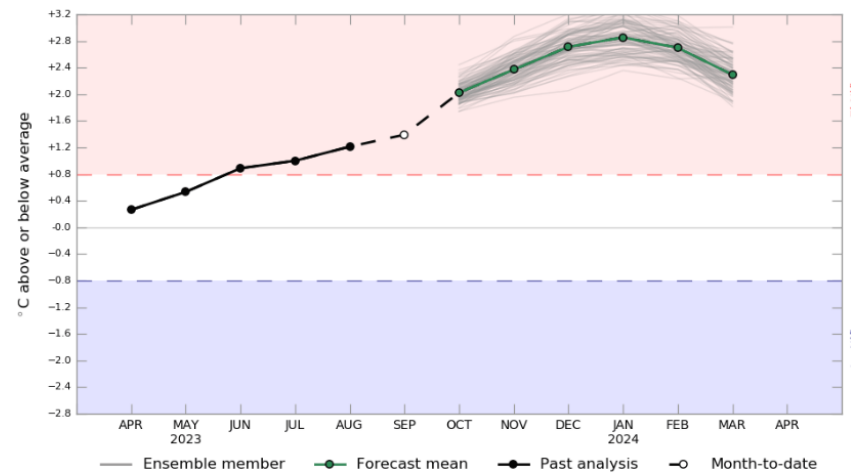
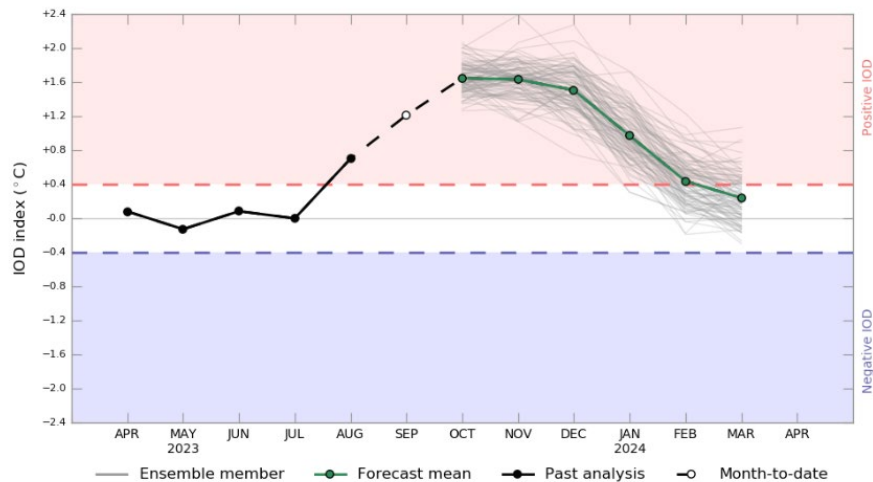
# Outlook for 2023-2024

Difference from average sea surface temperature forecast for October to December 2023

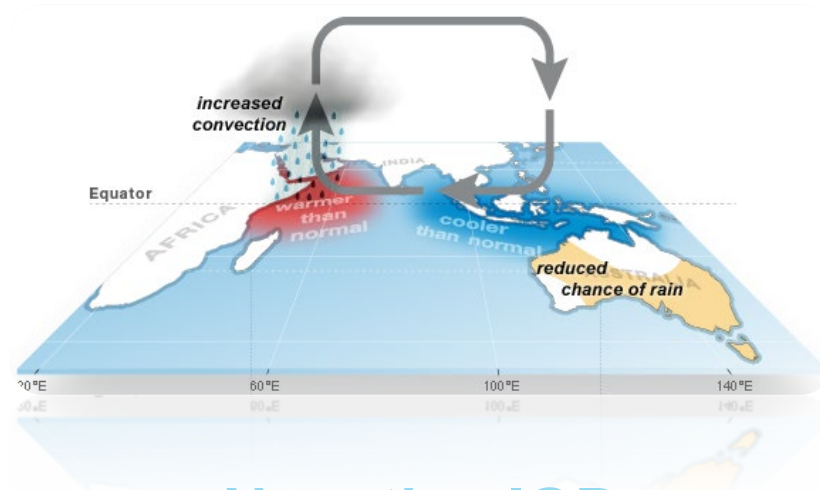


Monthly sea surface temperature anomalies for IOD region

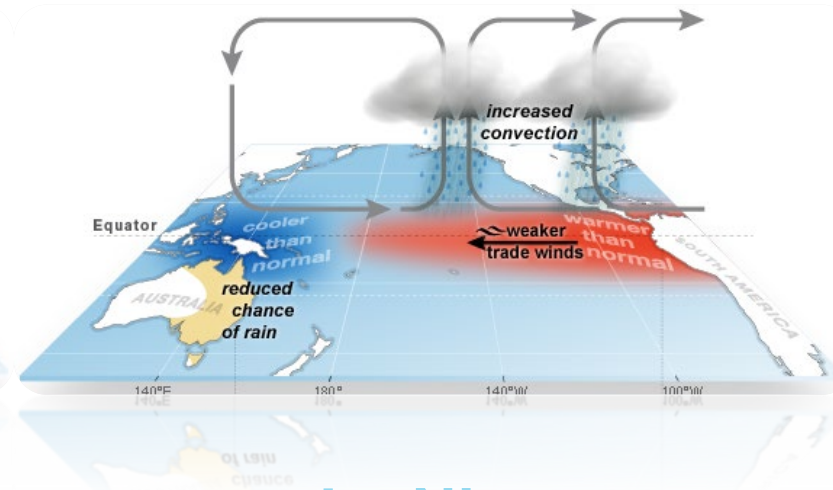
Monthly sea surface temperature anomalies for NINO3.4 region



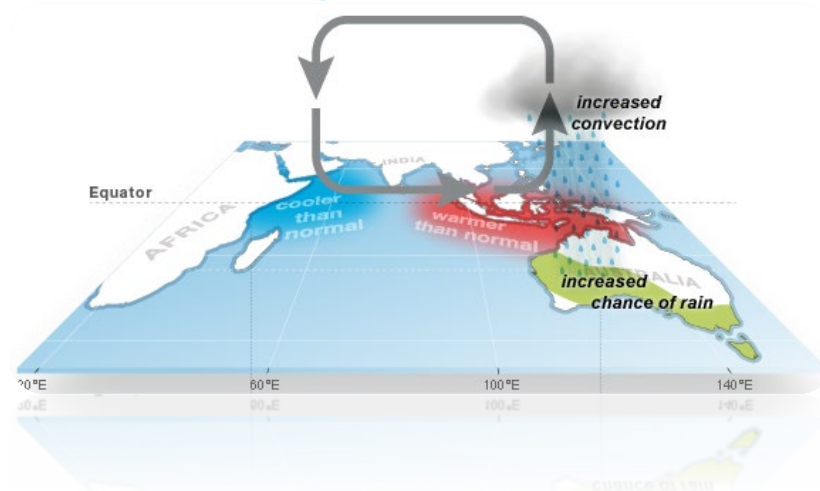
## Positive IOD



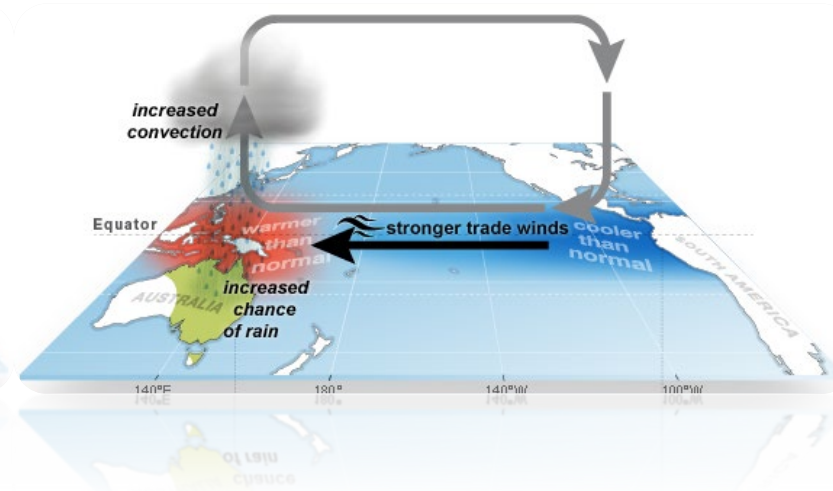
## El Nino



## Negative IOD



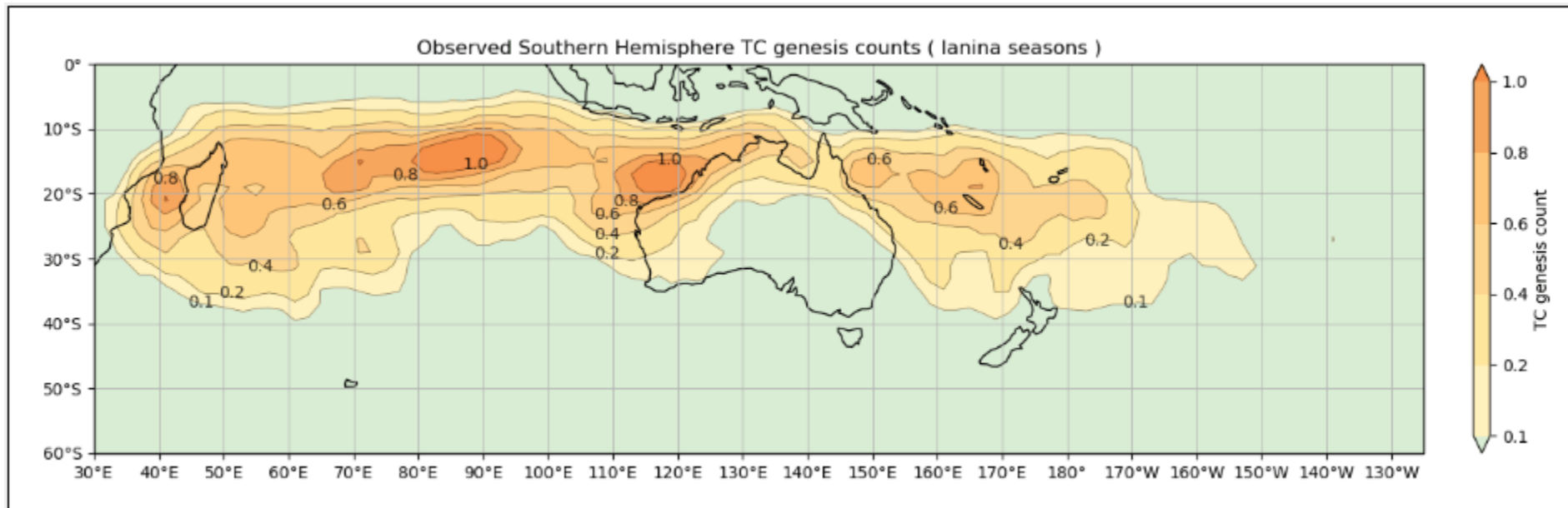
## La Nina



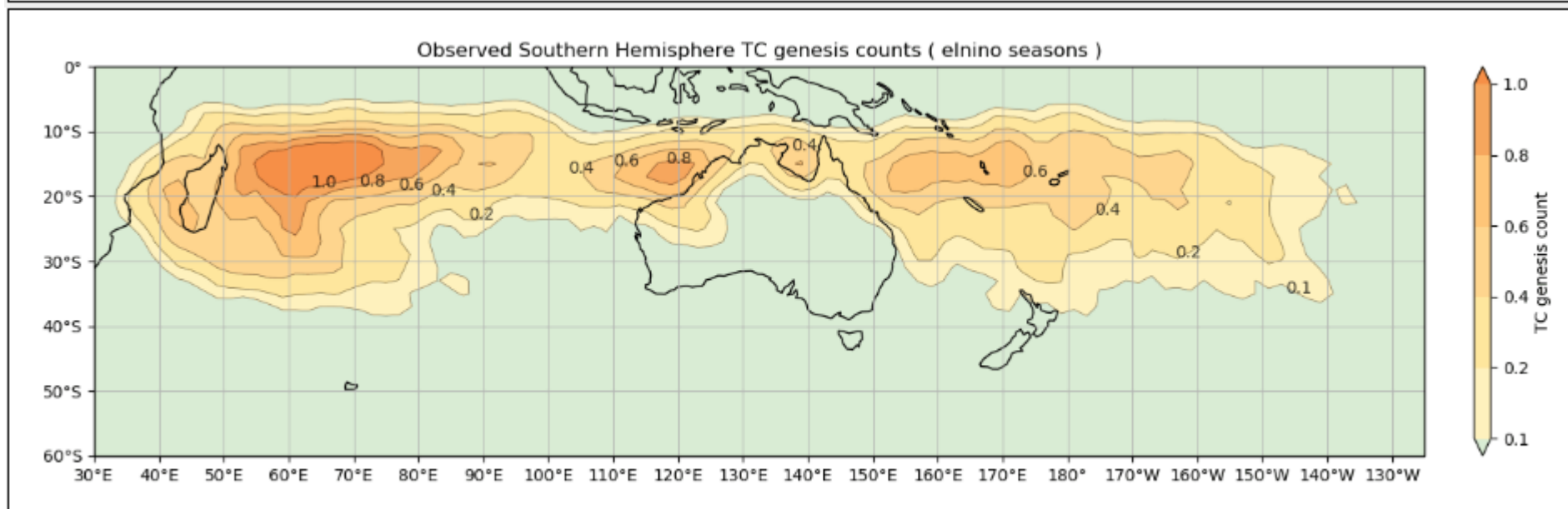
# El Nino and Positive Indian Ocean Dipole

- Later start to the northern rainfall onset (accumulation of 50mm)
- Later first tropical cyclone of the season
- Fewer tropical systems (tropical cyclones and tropical lows)
- Tropical systems less likely to head south
- Warmer than normal – heatwaves more likely, bushfire risk





La Niña

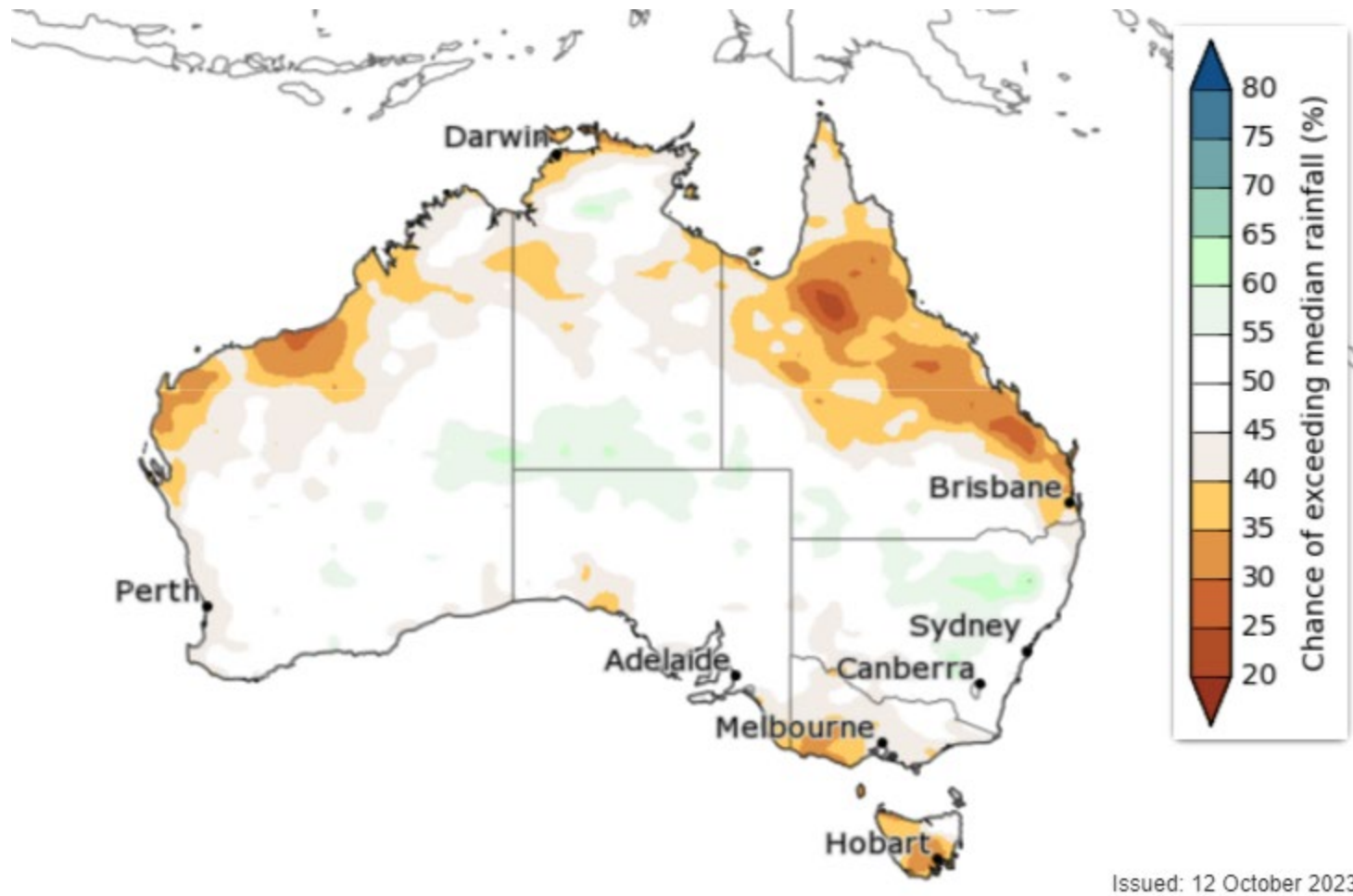


El Niño





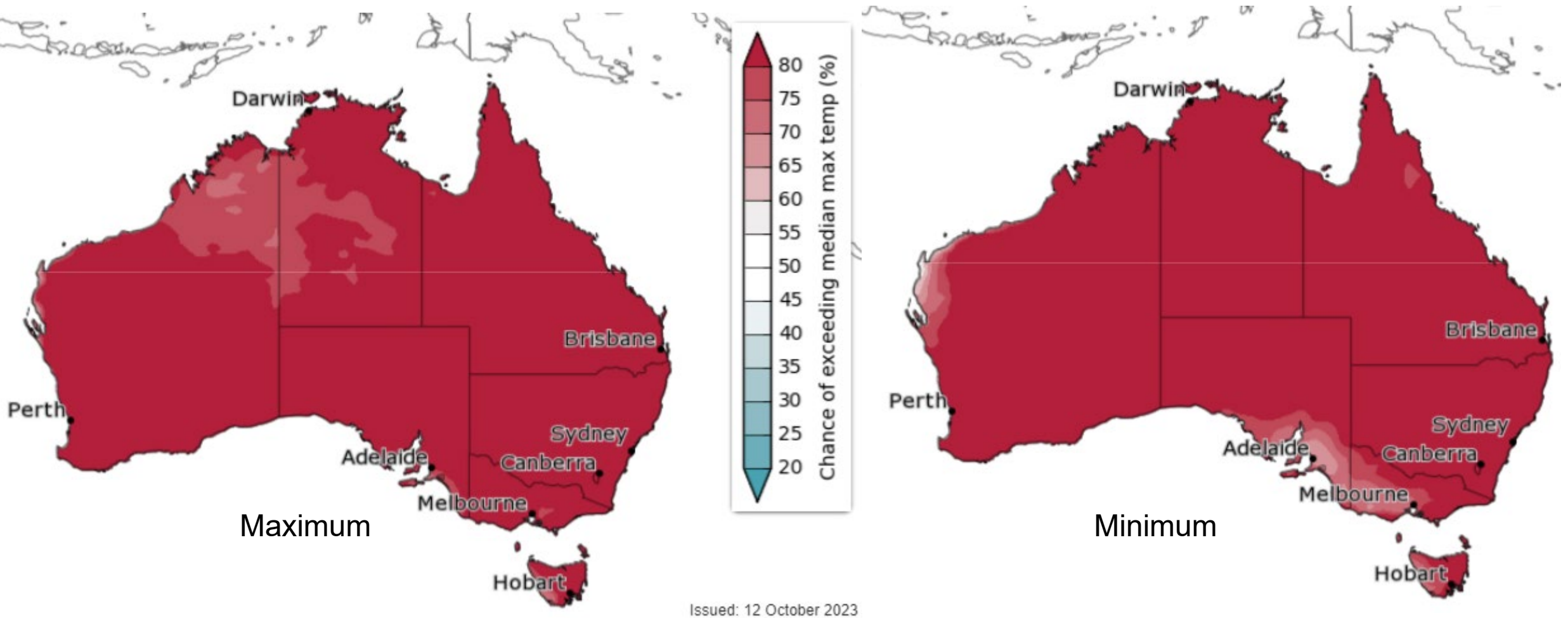
# Outlook for 2023-2024 – December to February



Rainfall - Chance of above median for December to February



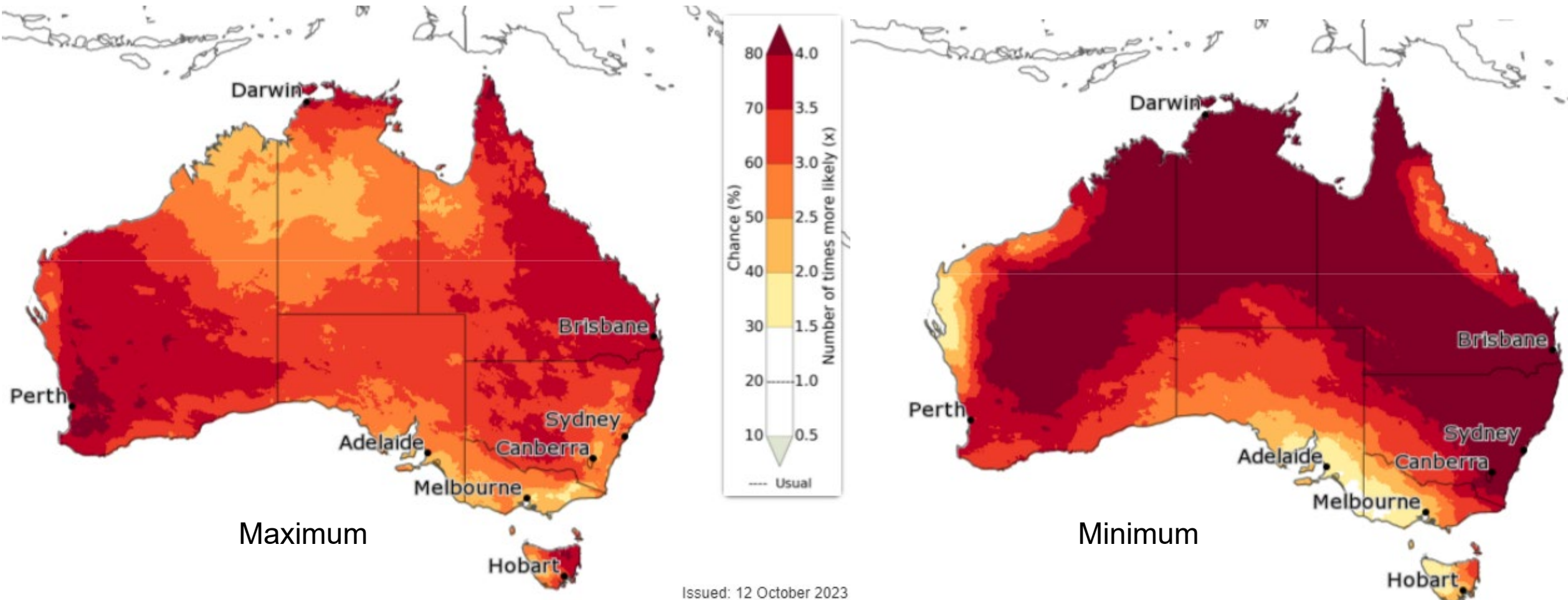
# Outlook for 2023-2024 – December to February



Max/Min temperature - Chance of above median max/min temperature for December to February



# Outlook for 2023-2024 – December to February

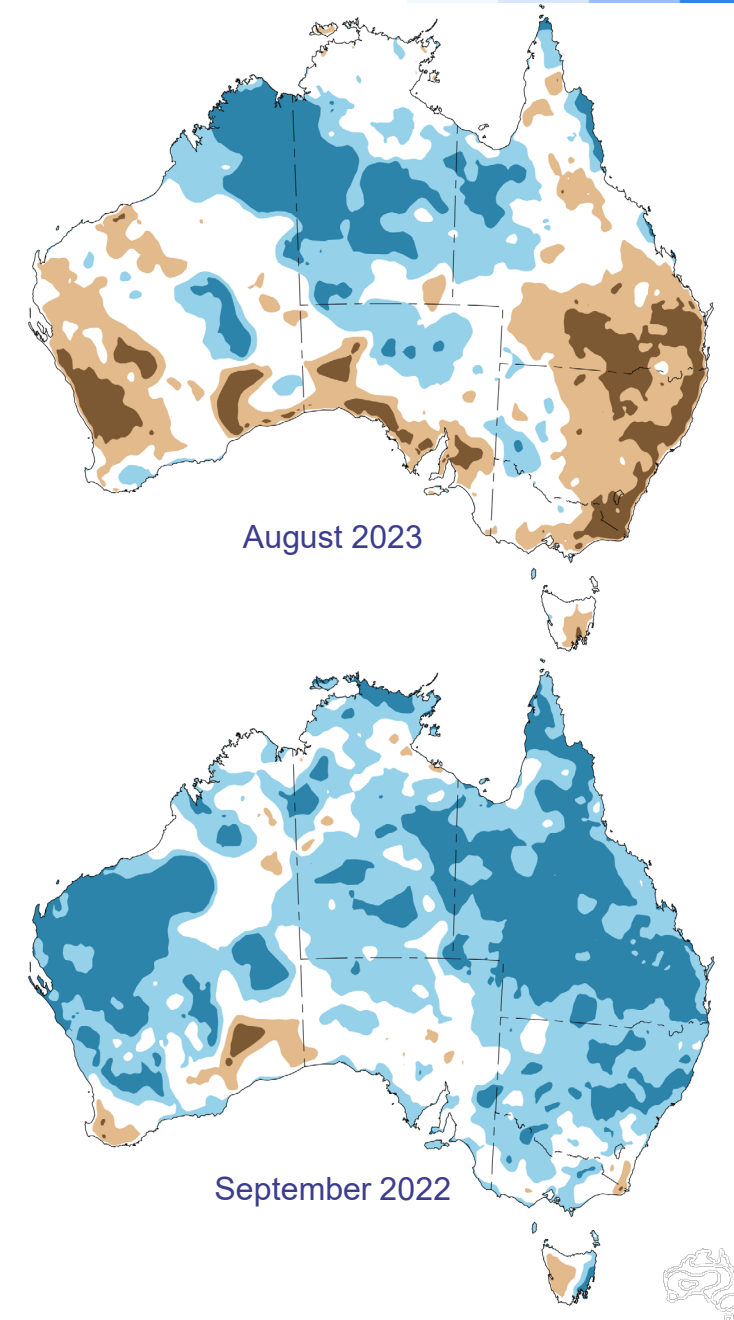
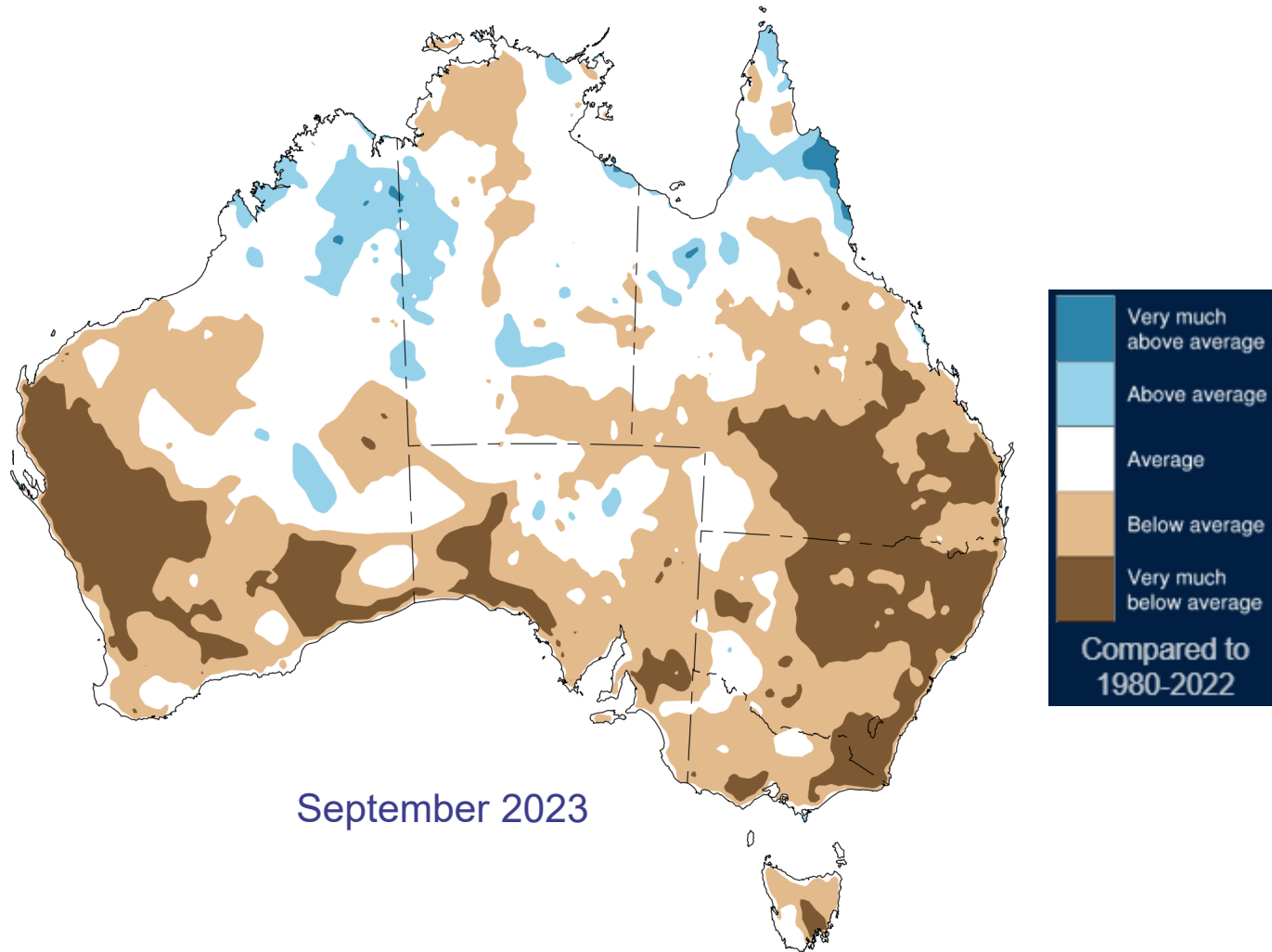


Temperature - Chance of being in the highest 20% of the historical range for December to February

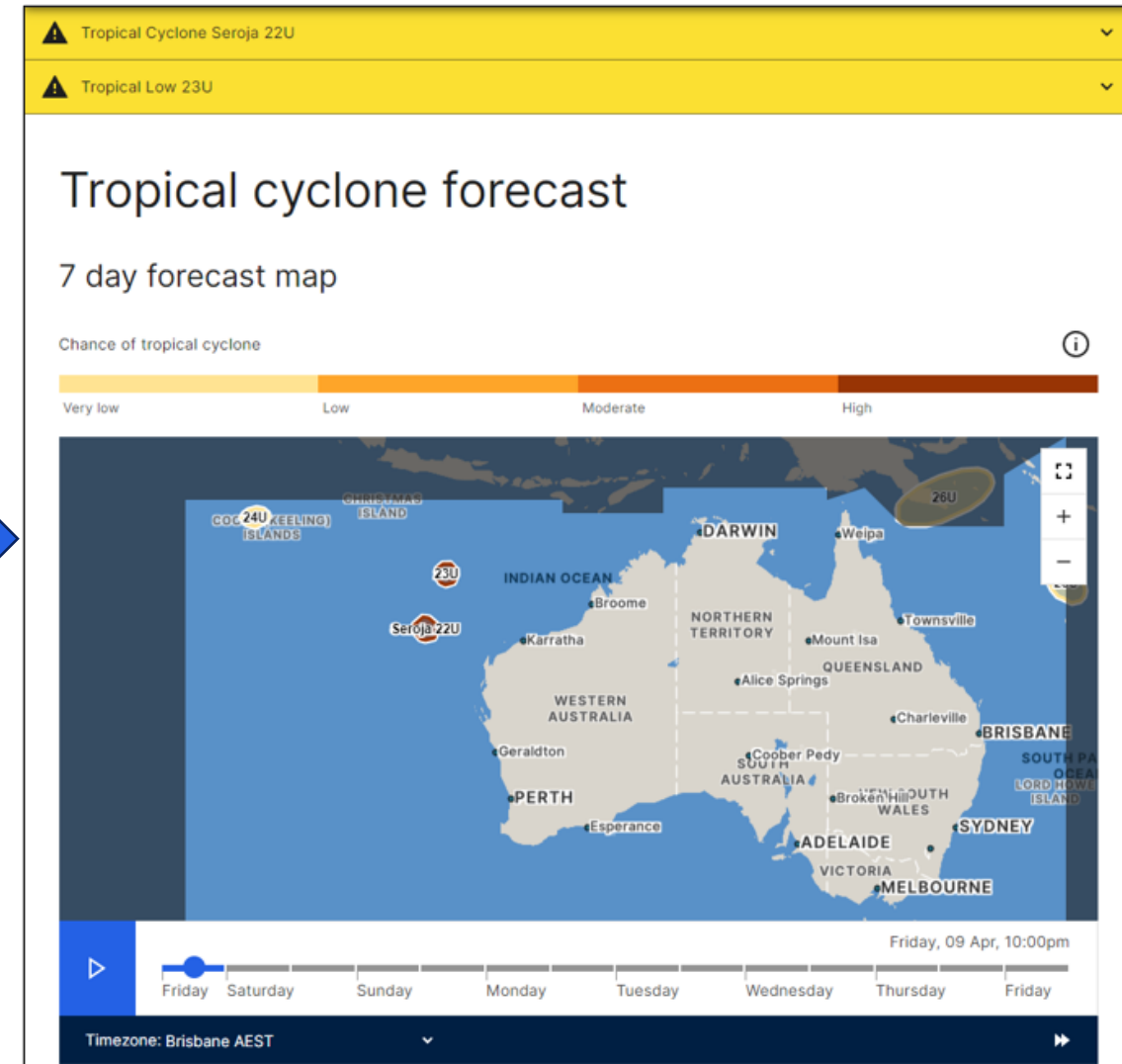
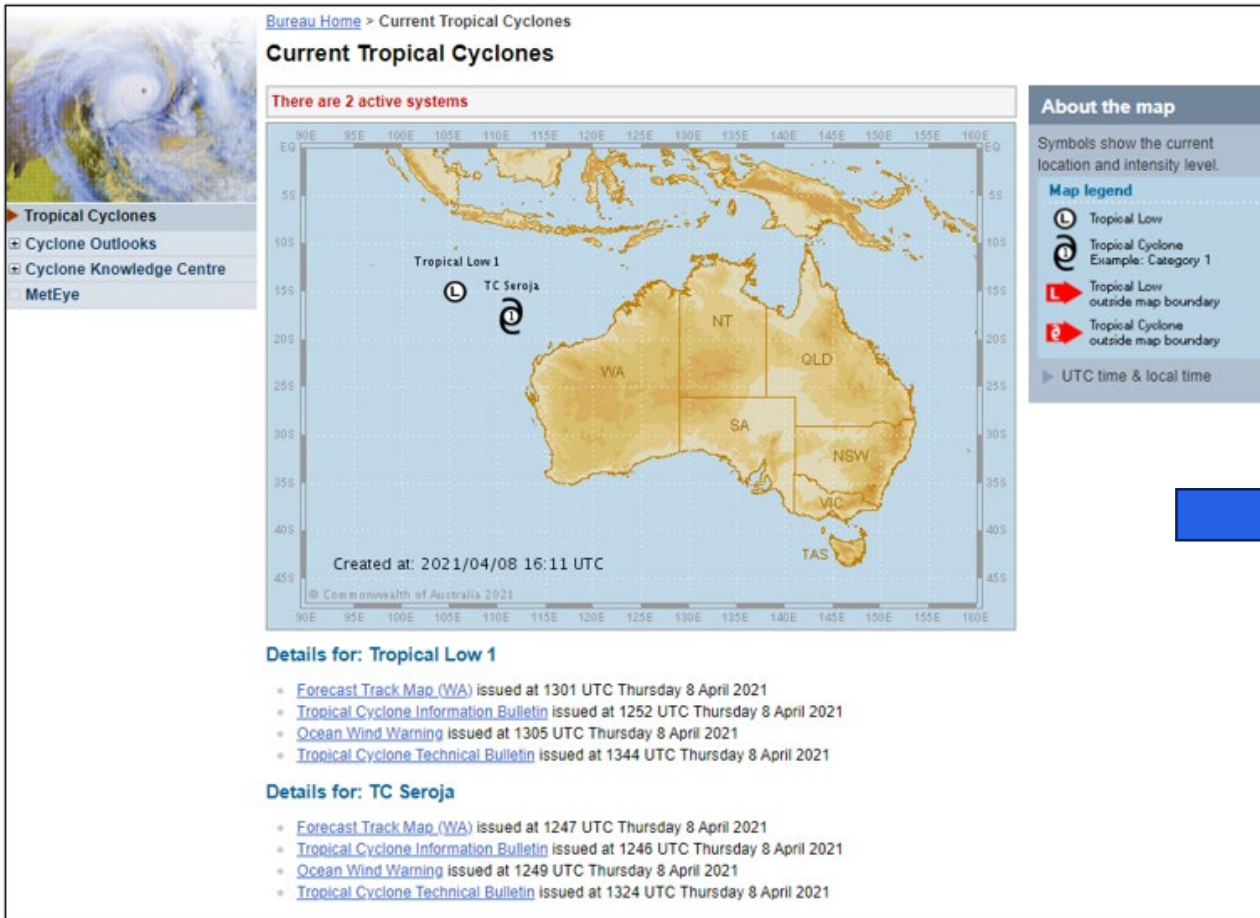


# Root zone soil moisture

## Recent conditions (0–100 cm below surface)



# New this season – Tropical Cyclone 7 Day Forecast



# New this season – Tropical Cyclone 7 Day Forecast

## Tropical Cyclone Outlook for the Western Region

IDW10800

### Tropical Cyclone Outlook for the Western Region

Issued at 2:00 pm WST on Wednesday 7 April 2021  
for the period until midnight WST Saturday 10 April 2021.

#### Existing Cyclones in the Western Region:

Tropical Cyclone Seroja lies well to the north of the Pilbara coast. On Thursday and Friday It will slowly intensify as it moves southwest well off the Pilbara coast and not directly impact the WA mainland during this period.

On Saturday it may take a southerly track to the west of the Northwest Cape before moving southeast on Sunday towards the Gascoyne or west coast. People in the northwest of WA are urged to keep up-to-date with the latest forecasts and warnings at <http://www.bom.gov.au/cyclone/index.shtml>.

Likelihood of this system remaining a tropical cyclone in the Western Region on:

Thursday: High  
Friday: High  
Saturday: High

#### Potential Cyclones:

A tropical low (23U) lies well to the south of Christmas Island and will be slow moving today. From late Thursday it is possible for the low to strengthen to tropical cyclone intensity and start moving towards the east.

There remains some uncertainty in the track and intensity on Friday and Saturday. With Tropical Cyclone Seroja approaching from the northeast, the interaction between these two systems is likely to limit development of the tropical low. There is the risk of a period of strong winds and rain associated with this system across the northwest corner of the State over the weekend.

Likelihood of this system being a tropical cyclone in the Western Region on:

Thursday: Moderate  
Friday: High  
Saturday: Moderate

Another tropical low (24U) lies well to the northwest of the Cocos (Keeling) Islands. It is expected to move east with little development on Thursday before taking a southeast track from Friday where it may enter the region. The system will continue tracking southeast over the weekend and may pass close to the Cocos (Keeling) Islands while intensifying. There is a moderate chance it develops into a tropical cyclone over the weekend and could be near the Islands. Even if it remains a tropical low, the Cocos (Keeling) Islands may experience increased squally shower and thunderstorm activity during this time with some gusty winds. Thankfully, there are no other significant systems expected in the region for at least the next three days.

Likelihood of this system being a tropical cyclone in the Western Region on:

Thursday: Very Low  
Friday: Low  
Saturday: Moderate

**NOTES:** The likelihood is an estimate of the chance of each system being a tropical cyclone in the Region for each day.

Very Low:	less than 5%	Low:	5% to 20%
Moderate:	20 to 50%	High:	Over 50%

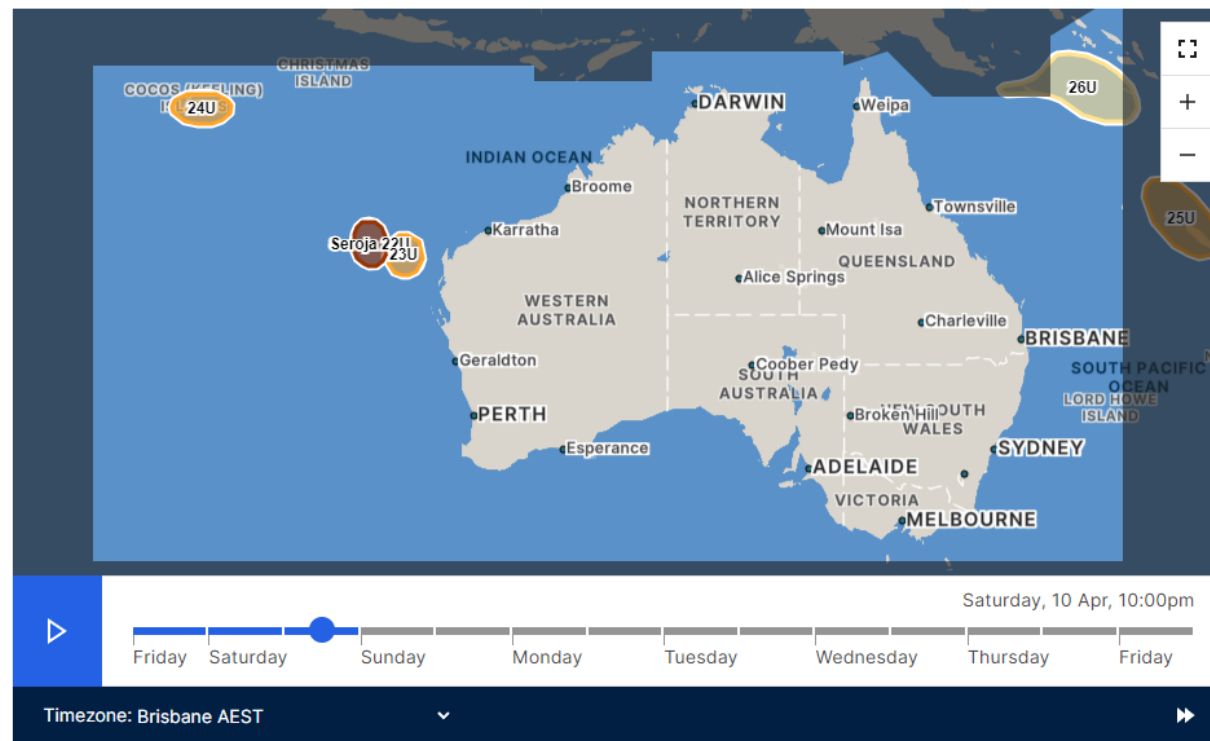
The Western Region refers to the Indian Ocean between Longitudes 90-125E and south of 10S.



## Tropical cyclone forecast

### 7 day forecast map

Chance of tropical cyclone



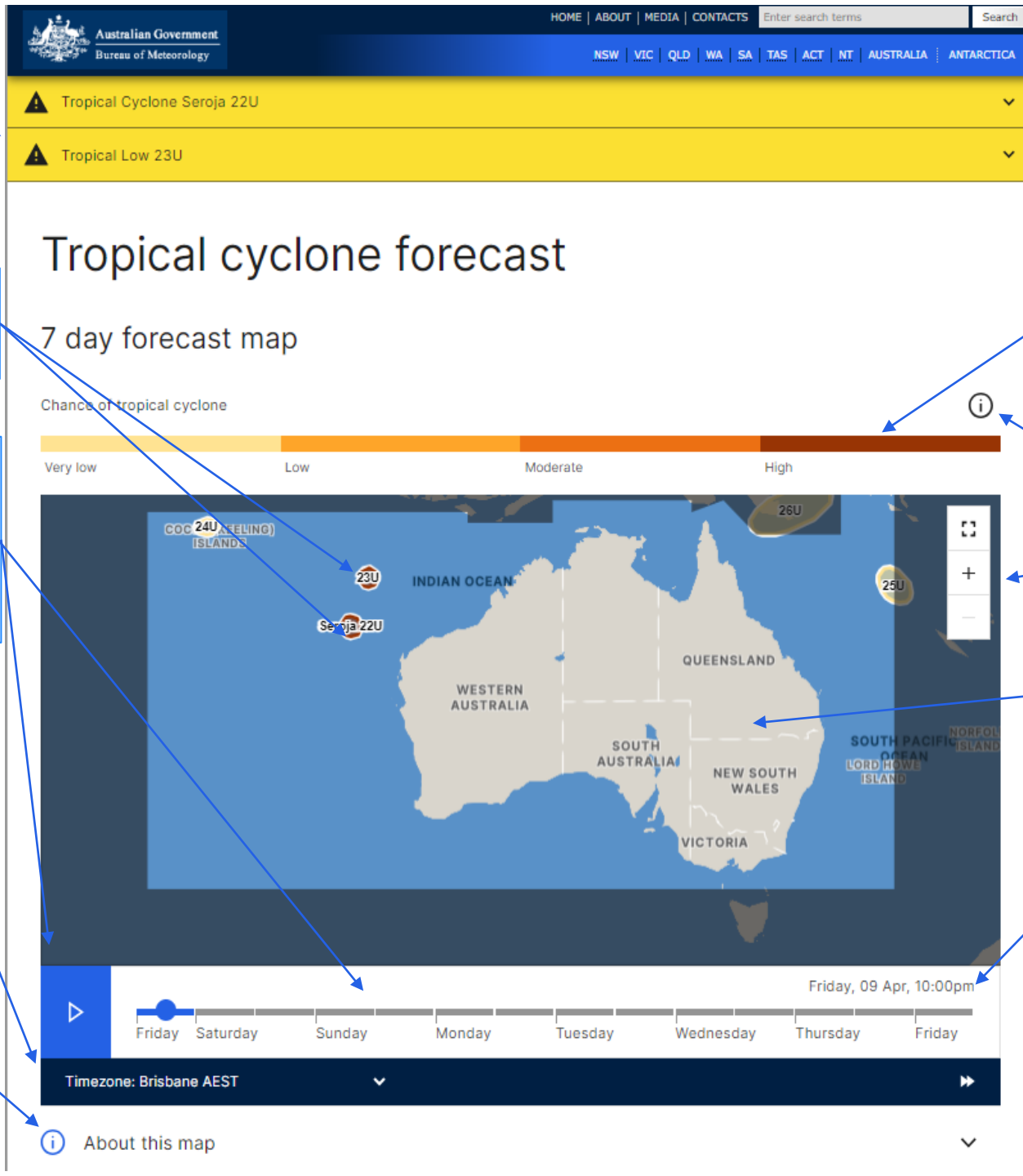
Warning banners

Colour coded Forecast Confidence Area

Step through the 7-day forecast using the slide bar or click on the play button

Time zone (defaults to browser time)

More information



Colour scale for chance of being at tropical cyclone strength

More information

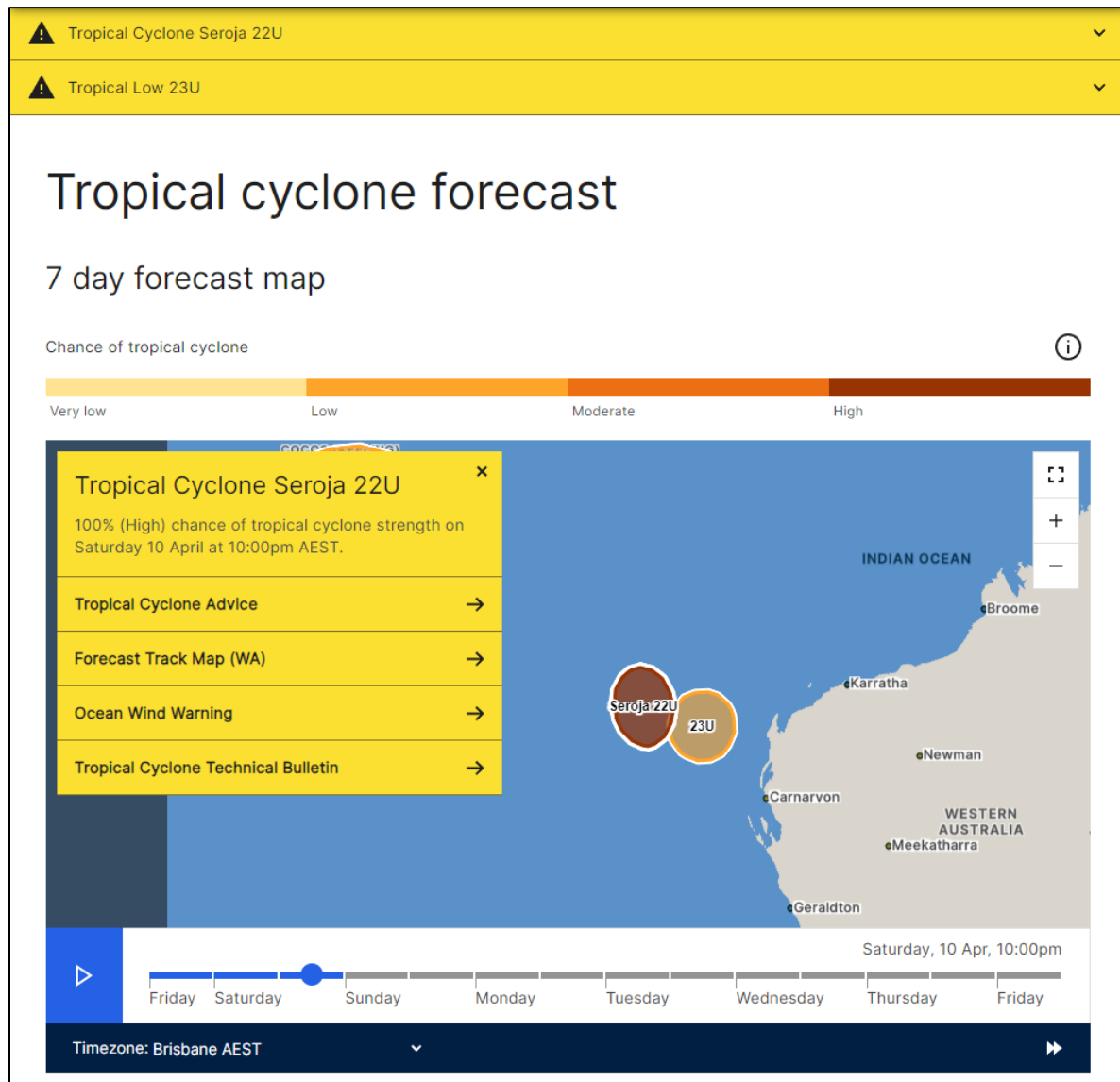
Zoom and pan

Location density increases with zoom

Time of selected forecast



# New this season – Tropical Cyclone 7 Day Forecast



### 7 day forecast table

[Table legend](#)

Tropical lows	Sat 10 Apr 12:00 am	Sat 10 Apr 12:00 pm	Sun 11 Apr 12:00 am	Sun 11 Apr 12:00 pm	Mon 12 Apr 12:00 am	Mon 12 Apr 12:00 pm
Tropical Cyclone Seroja 22U	100% High	100% High	100% High	100% High	95% High	55% High
Tropical Low 23U	75% High	35% Moderate	10% Low	Less than 5% Very Low	None	None

### Forecast description

#### Tropical Cyclone Seroja 22U

Tropical Cyclone Seroja expected to cross the west coast of WA late Sunday night or early Monday.

- Please refer to the Advice and Forecast Track Map for more detail.
- Seroja lies offshore from Exmouth and is forecast to continue moving southwest today then turn to the south then southeast during Saturday 10 April.
- Seroja is interacting with nearby Tropical Low 23U, which increases the forecast uncertainty in both movement and intensity.
- Seroja is expected to cross the west coast of Western Australia between Geraldton and Carnarvon later Sunday or early Monday, possibly as a category 3 severe tropical cyclone.
- Once over land, Seroja will weaken quickly and will be below tropical cyclone intensity by Tuesday 13 April, and then weaken into a trough in the Bight.

**Last updated**  
5 days ago, 23 Jun 2023





# Heatwave

## Definition

A heatwave occurs when the maximum and the minimum temperatures are unusually hot over a three-day period at a location.

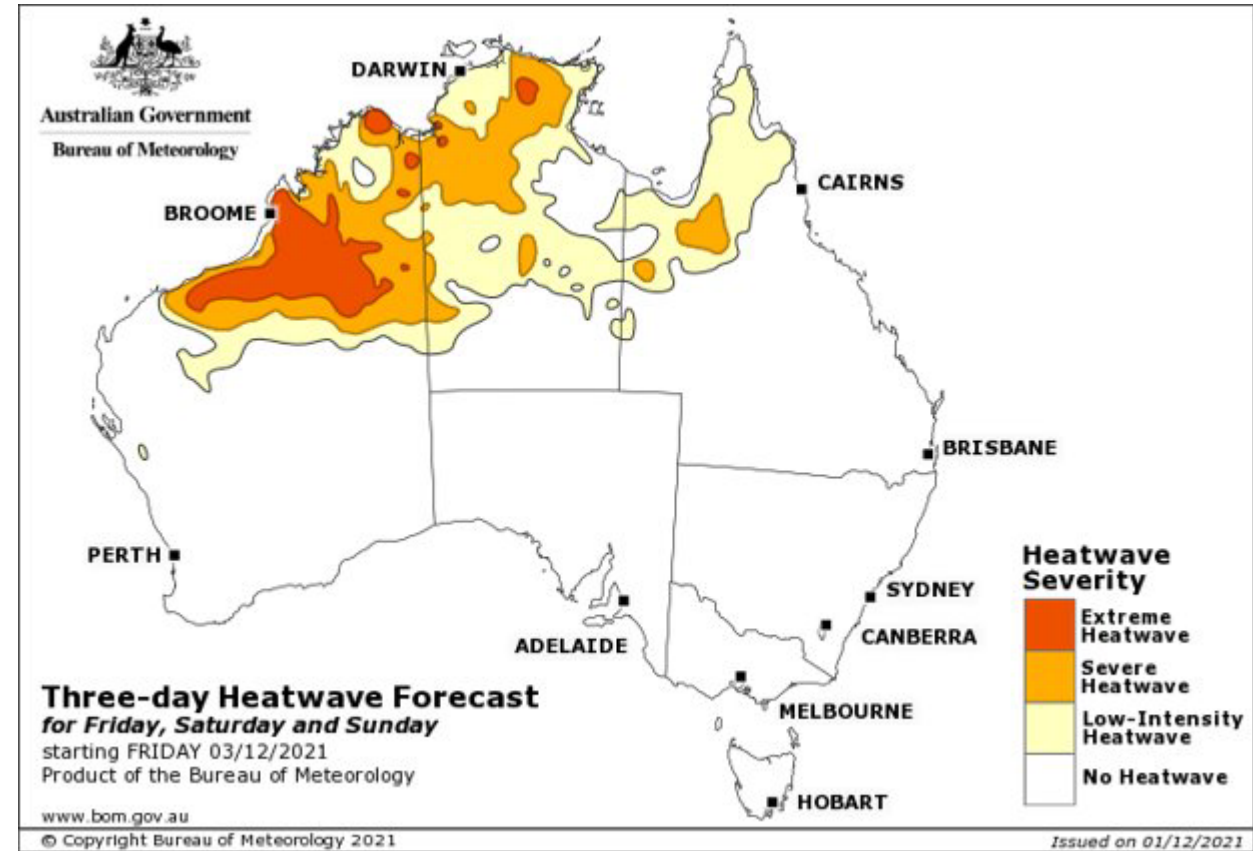
This is considered in relation to the local climate and past weather at the location

## Heatwave warnings

Issued for two types of heatwave:

**Severe Heatwaves** are likely to be more challenging for vulnerable people such as older people, particularly those with medical conditions.

**Extreme Heatwaves** are rare. They are a problem for people who don't take precautions to keep cool—even for people who are healthy. People who work or exercise outdoors are at greater risk.





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**Thank you**

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We would love your feedback,  
please take 2 minutes to  
complete this form:

