

# ENSO Update – OCOF 215

14 August 2025



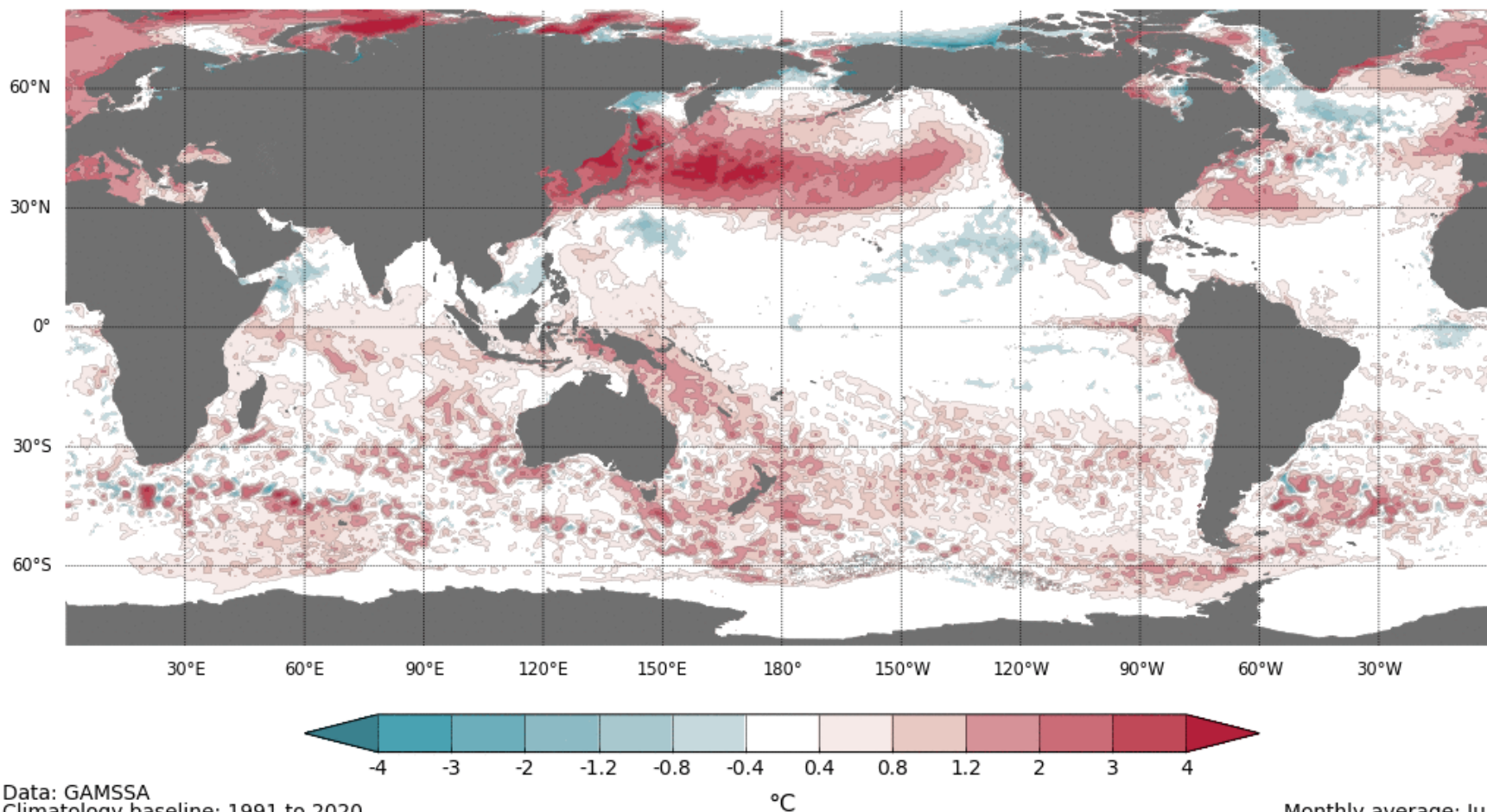
# ENSO Update

- The El Niño–Southern Oscillation (ENSO) is neutral.
- Global SSTs remain substantially above average. Monthly averaged SSTs have been third average on record since May, behind only 2024 and 2023.
- The Bureau's model predicts a neutral ENSO (neither El Niño nor La Niña) until at least January. This is consistent with forecasts from 7 out of 9 international models assessed.
- A negative Indian Ocean Dipole event likely in the coming months

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# July 2025 SSTs

Sea surface temperature anomaly: 01/07/2025 to 31/07/2025



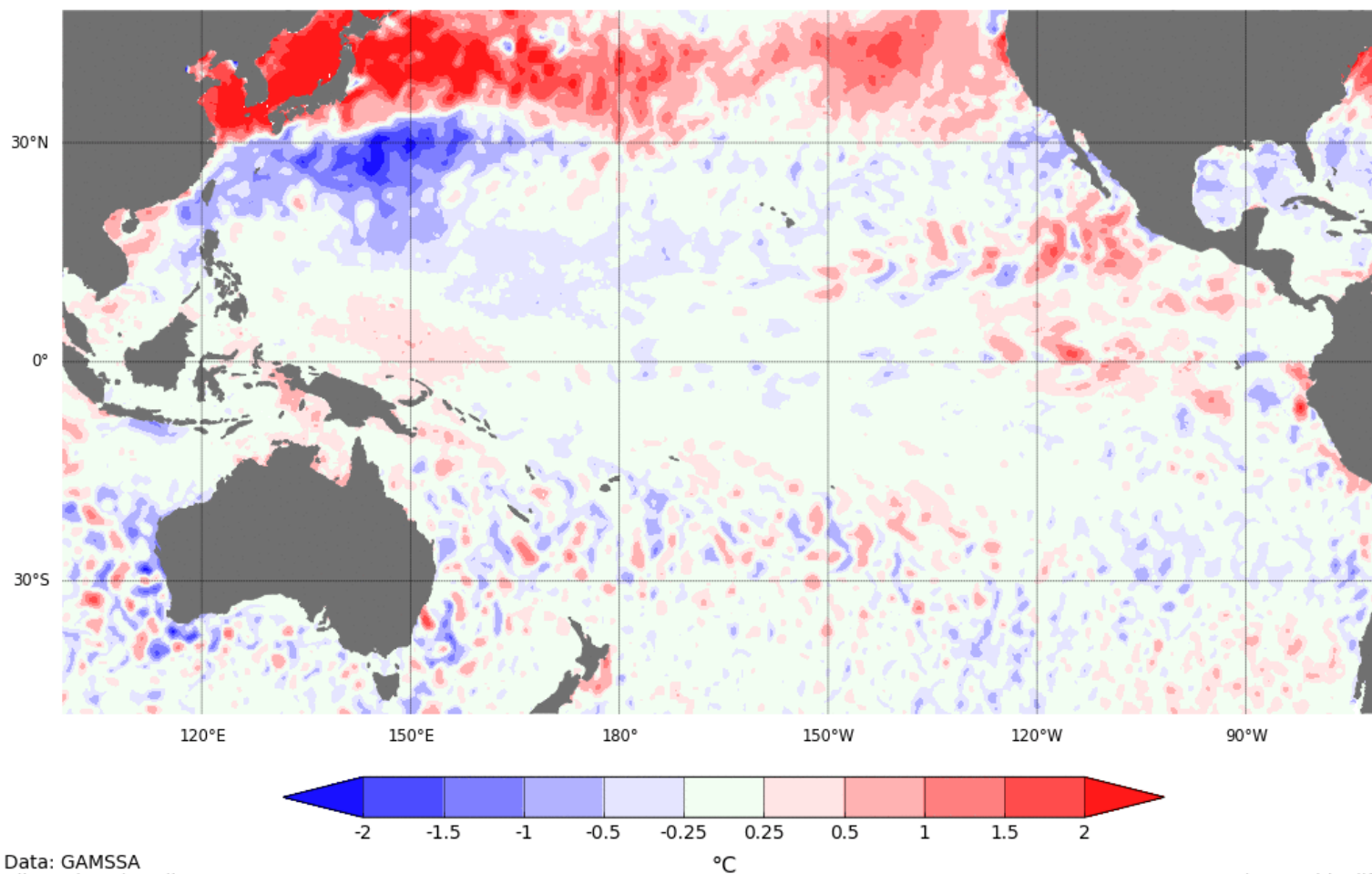
Data: GAMSSA  
Climatology baseline: 1991 to 2020  
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<http://www.bom.gov.au/climate>

Monthly average: July 2025  
Created: 03/08/2025

# July – June SSTs

Change in the monthly SST anomaly: July-2025 - June-2025

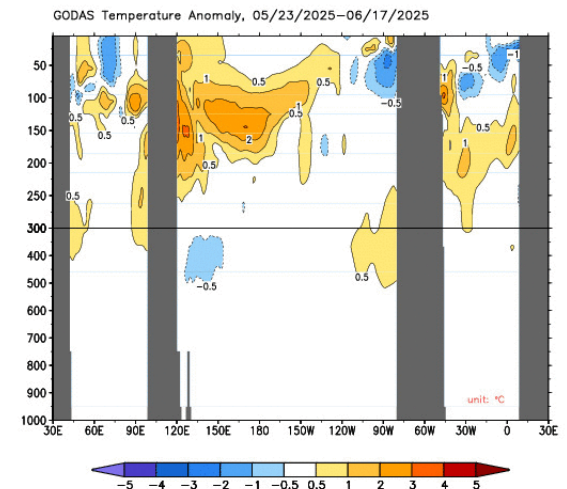
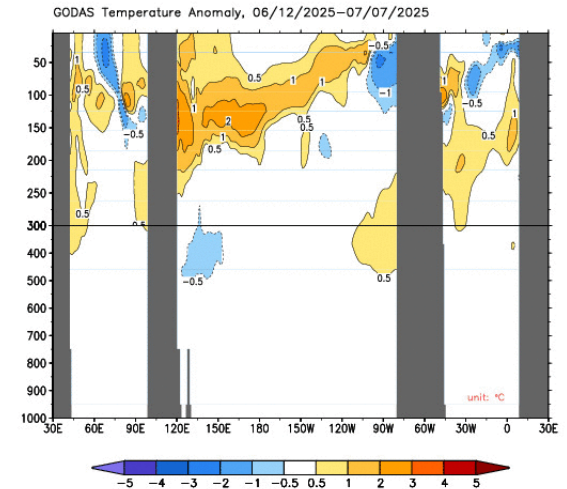
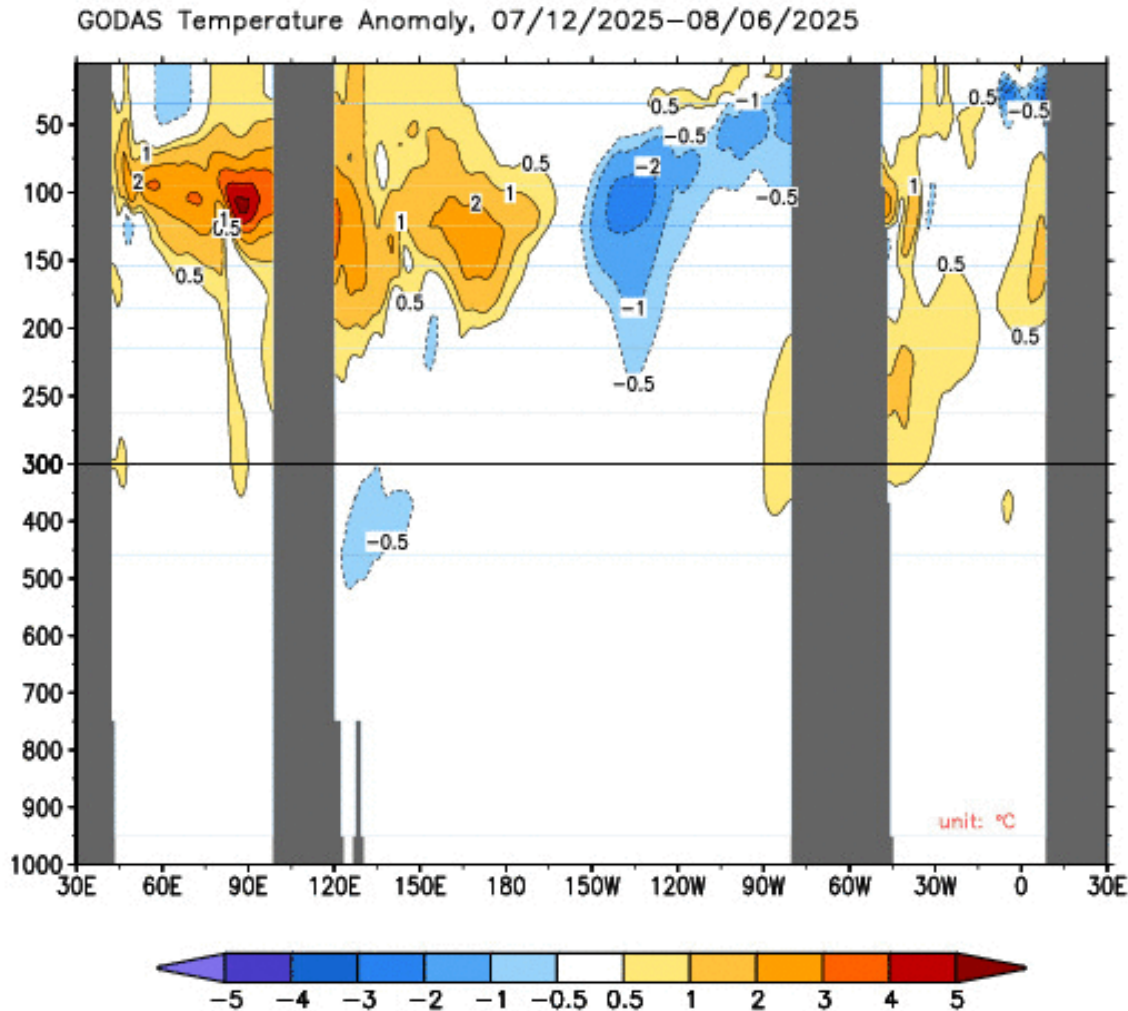


Data: GAMSSA  
Climatology baseline: 1991 to 2020  
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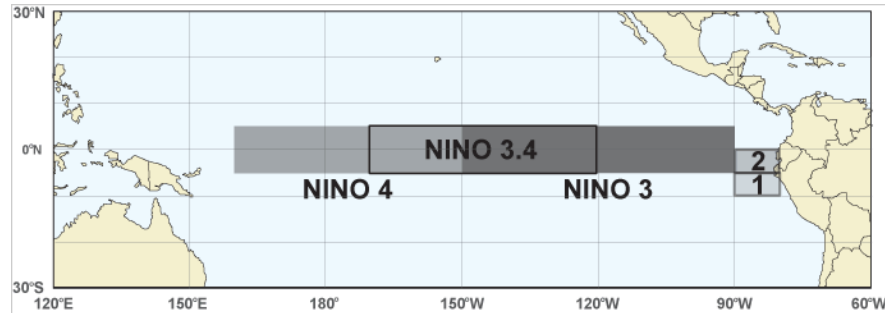
<http://www.bom.gov.au/climate>

Anomaly monthly difference  
Created: 03/08/2025

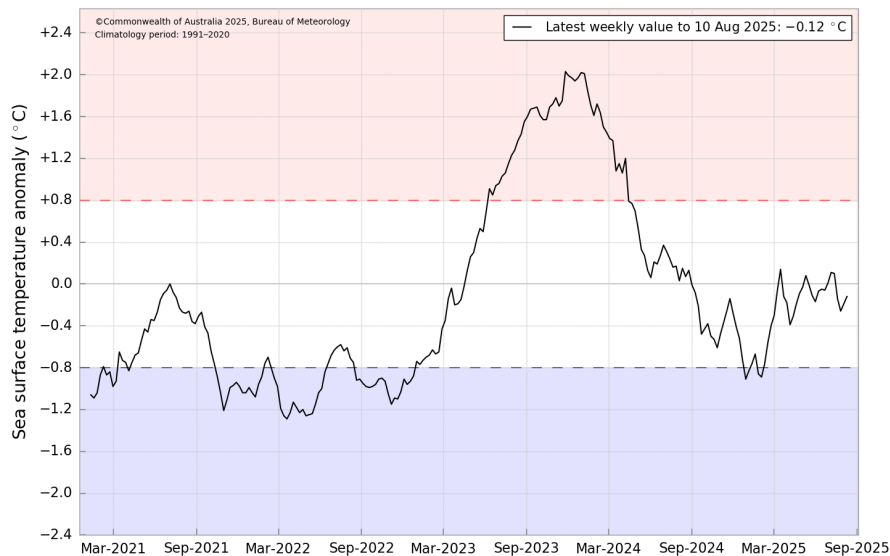
# Equatorial Pacific Sub-surface Profile



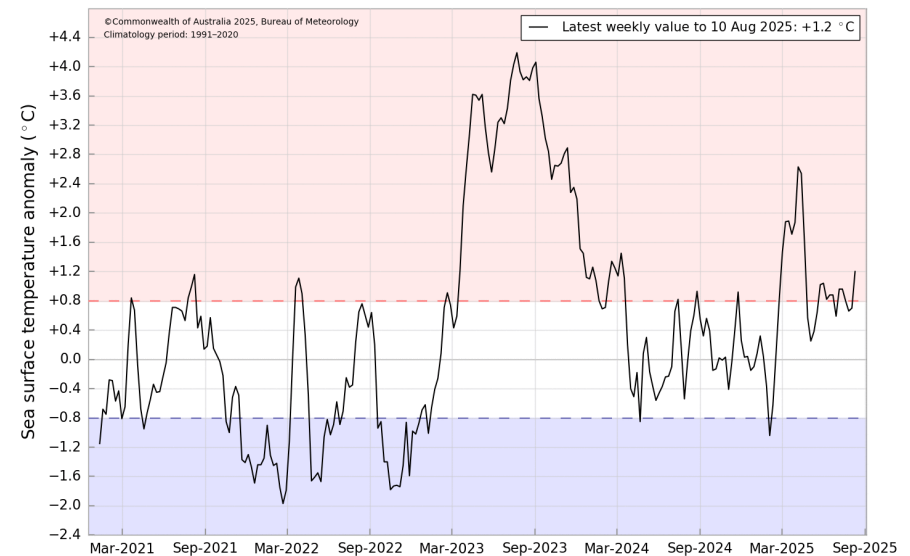
# NINO Indices SST Anomalies (°C)



### Niño3.4 index



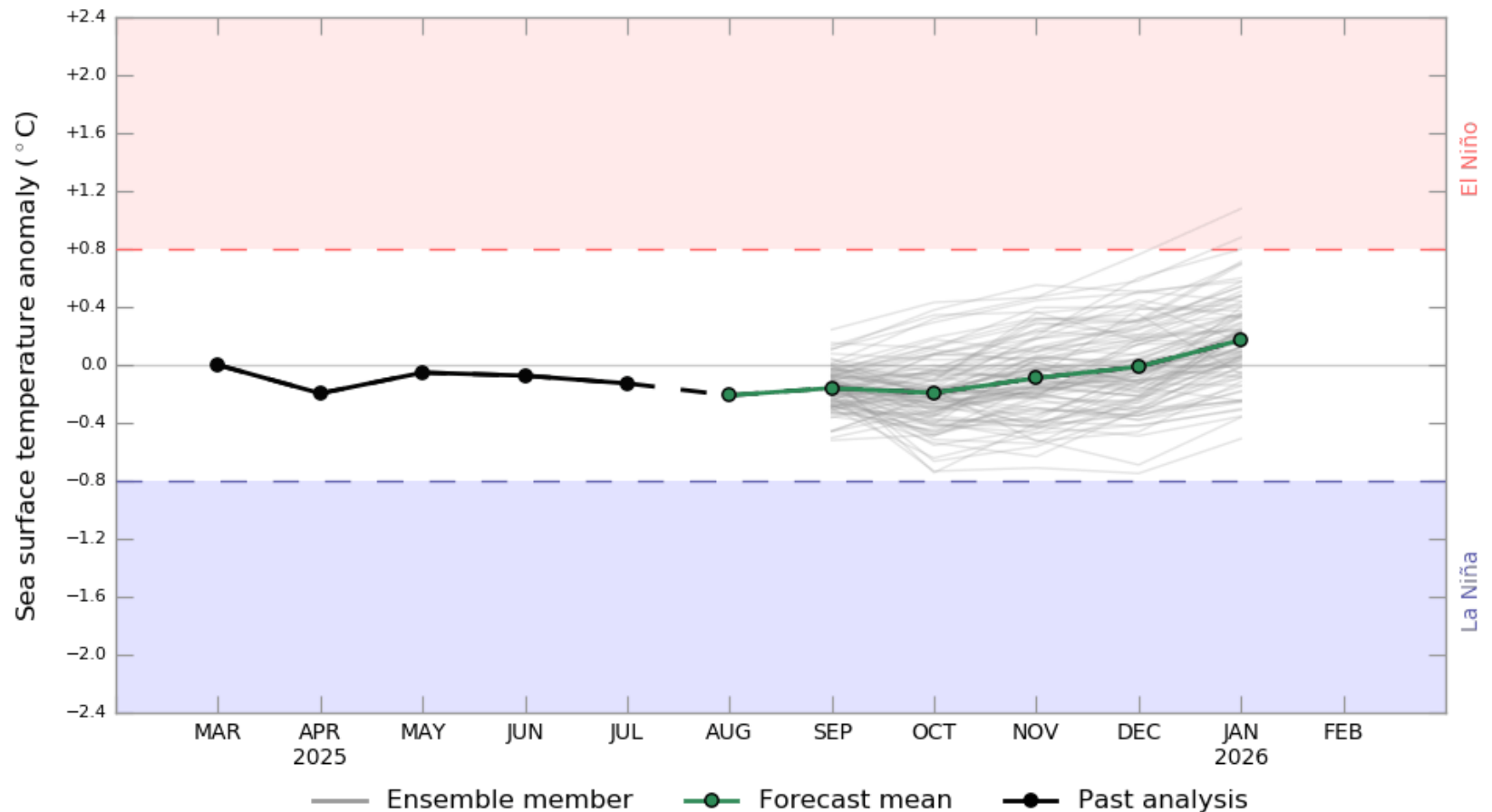
### Niño2 index



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# ENSO Outlook

Niño3.4 index



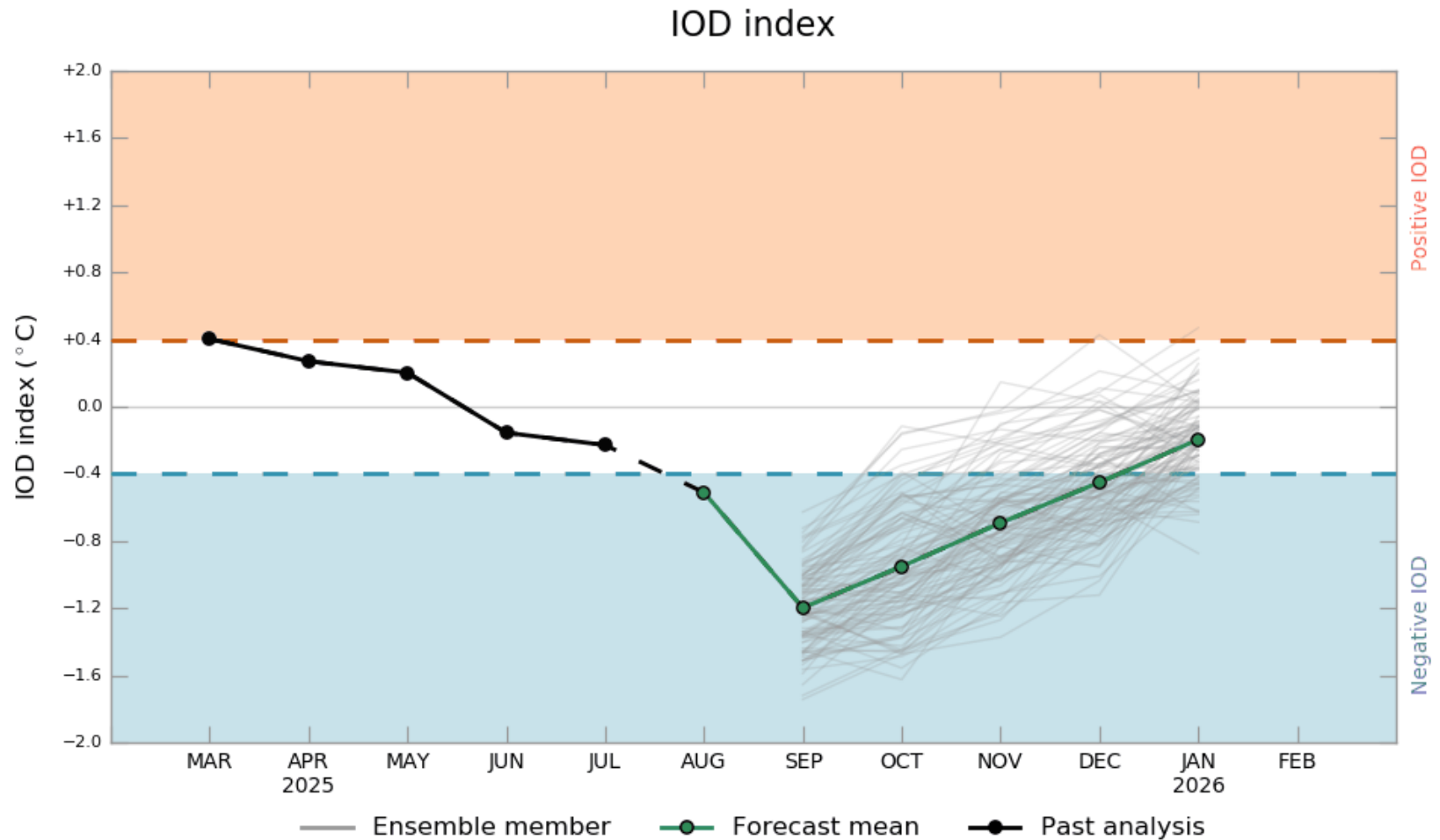
[www.bom.gov.au/climate](http://www.bom.gov.au/climate)  
Commonwealth of Australia 2025, Australian Bureau of Meteorology

Past analysis base period: 1991-2020  
Forecast base period: 1981-2018

Model: ACCESS-S2  
Model run: 9 Aug 2025

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# IOD Outlook

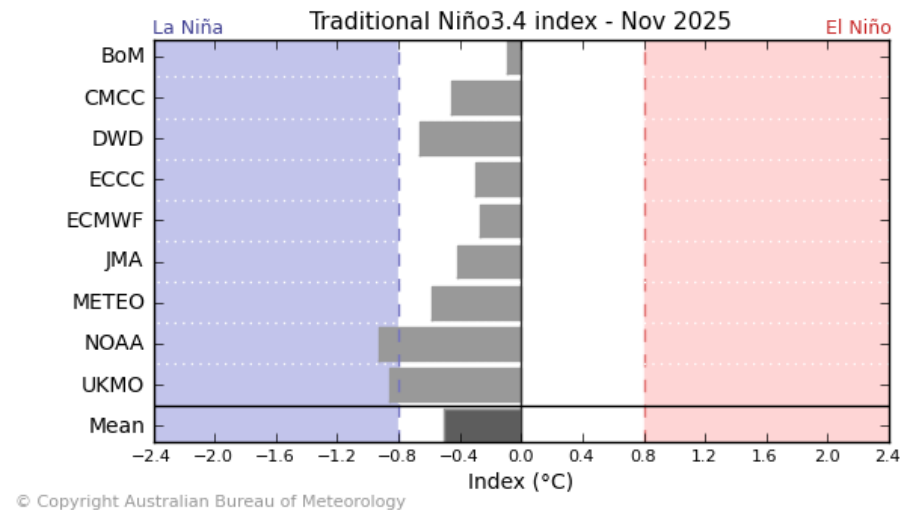
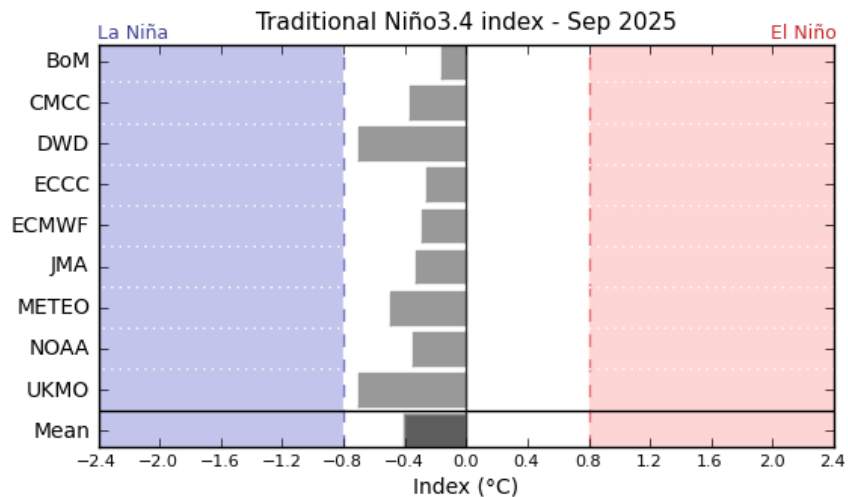
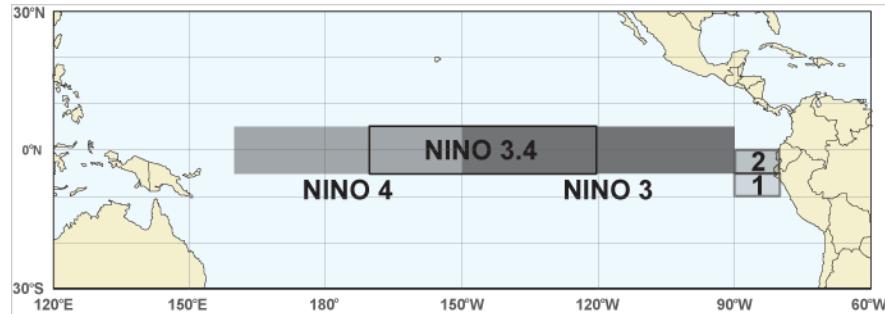


[www.bom.gov.au/climate](http://www.bom.gov.au/climate)  
Commonwealth of Australia 2025, Australian Bureau of Meteorology

Past analysis base period: 1991-2020  
Forecast base period: 1981-2018

Model: ACCESS-S2  
Model run: 9 Aug 2025

# ENSO Outlook



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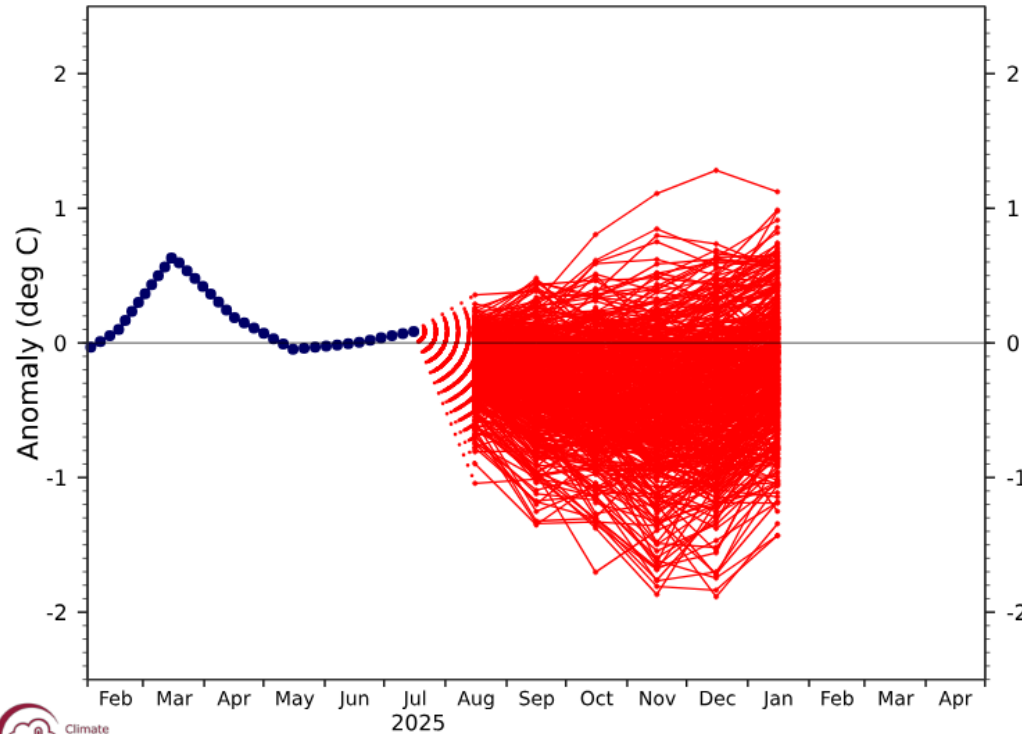
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# NINO3.4 SST Anomaly Plume

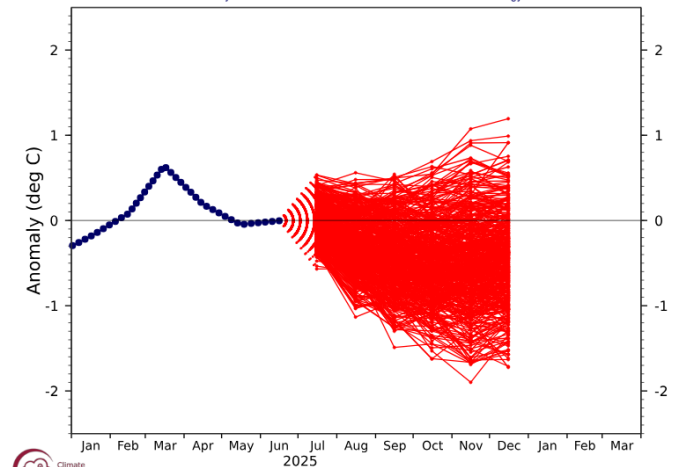
NINO3 SST anomaly plume

C3S multi-system forecast from 1 Aug 2025

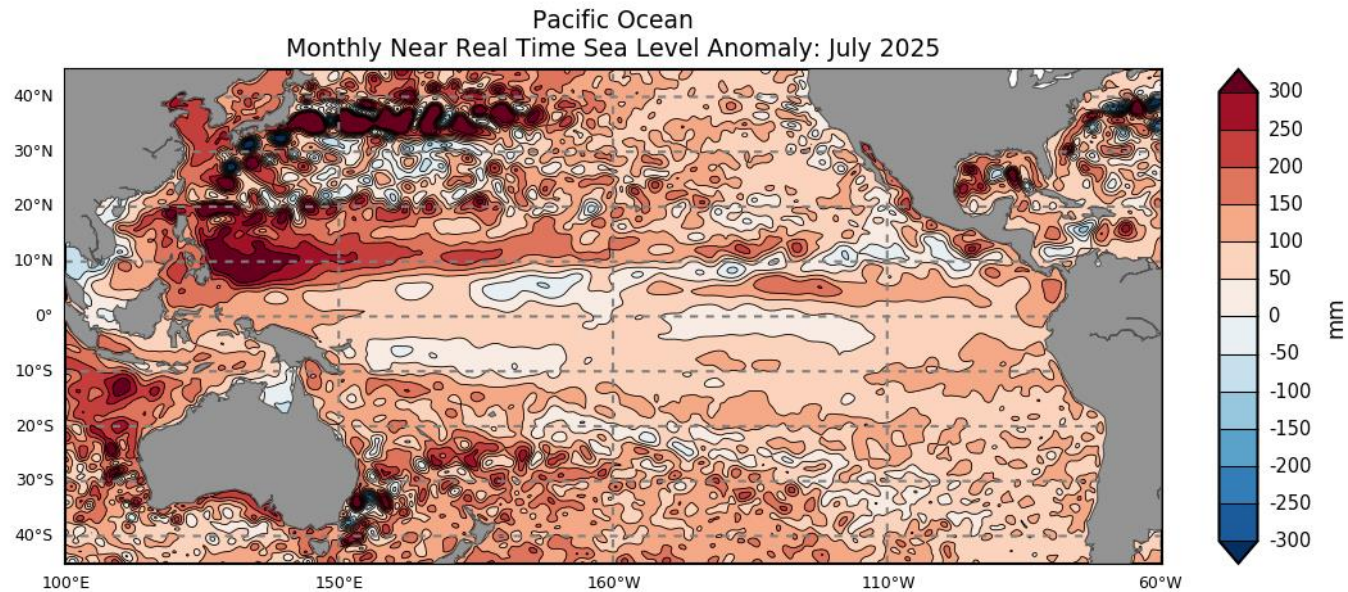
ECMWF, Met Office, Météo-France, CMCC, DWD, NCEP, JMA, ECCO, BOM  
Monthly mean anomalies relative to ERA5 1981-2010 climatology



NINO3 SST anomaly plume  
C3S multi-system forecast from 1 Jul 2025  
ECMWF, Met Office, Météo-France, CMCC, DWD, NCEP, JMA, ECCO, BOM  
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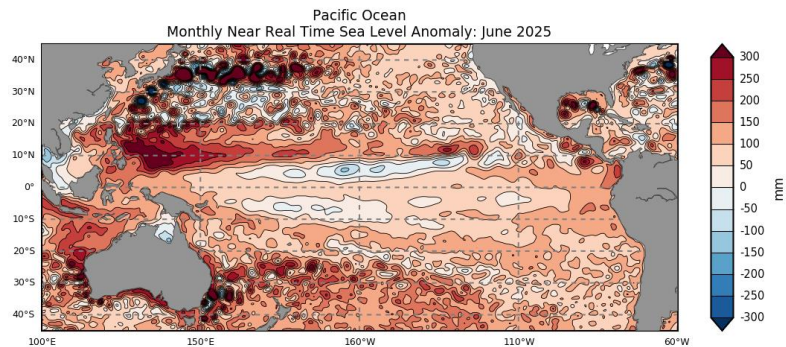


# June 2025 Sea Level Anomaly



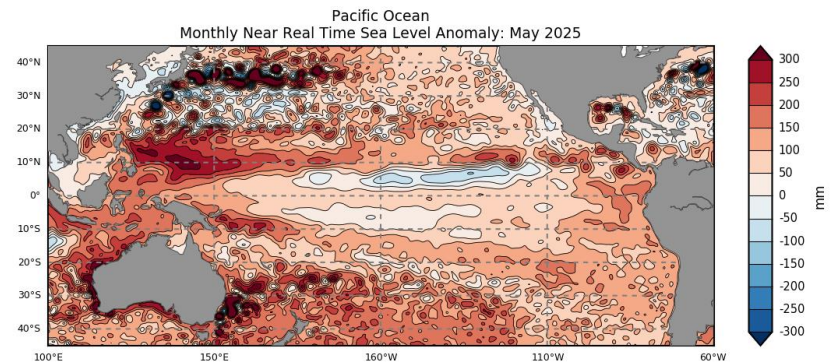
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Australian Bureau of Meteorology, COSPPac

AVISO Ssalto/Duacs SLA



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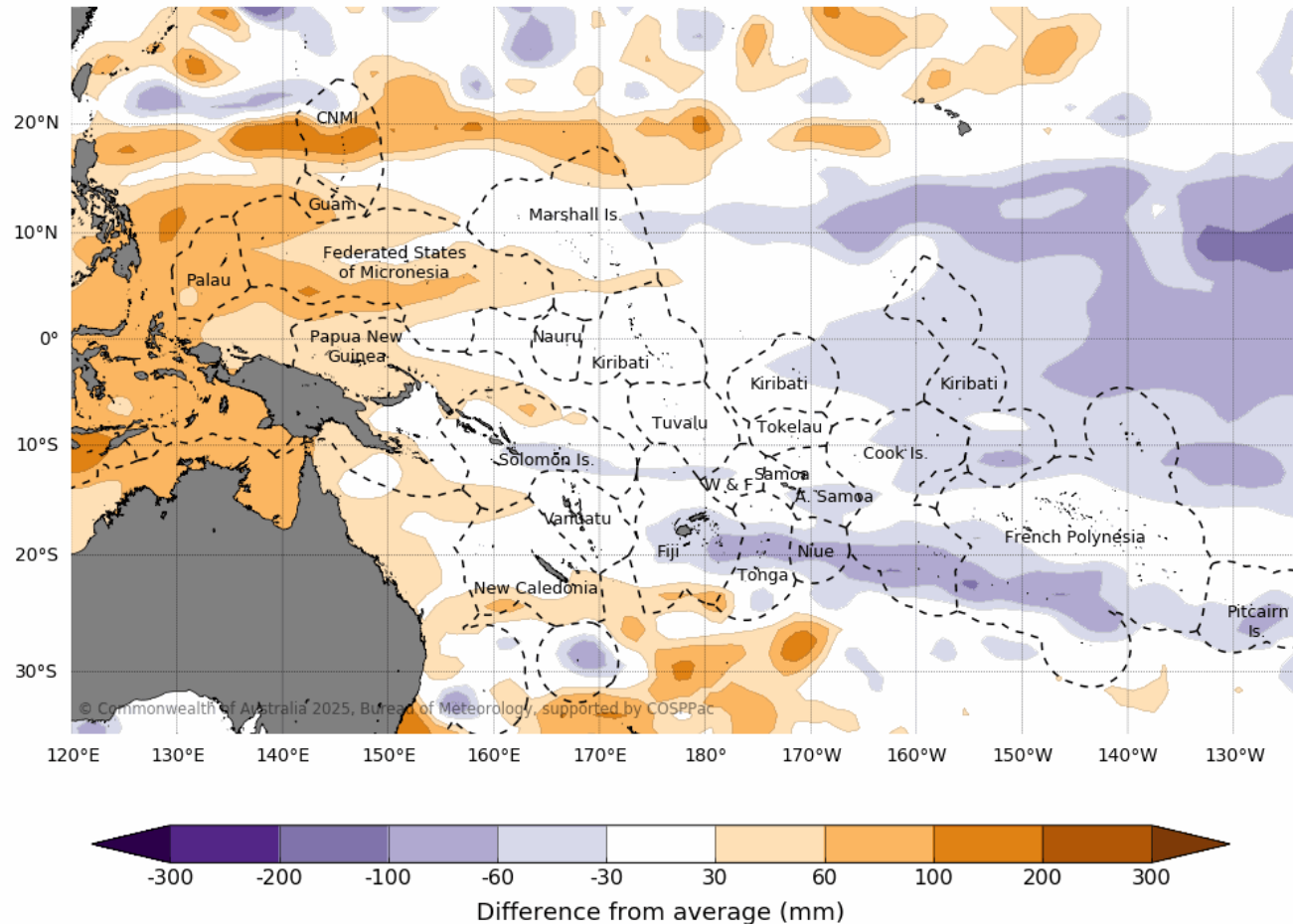
AVISO Ssalto/Duacs SLA

# Seasonal Forecast: Sea Surface Height Anomaly

Base period: 1981-2018  
Model: ACCESS-S2

Difference from average sea surface height forecast for  
September to November 2025

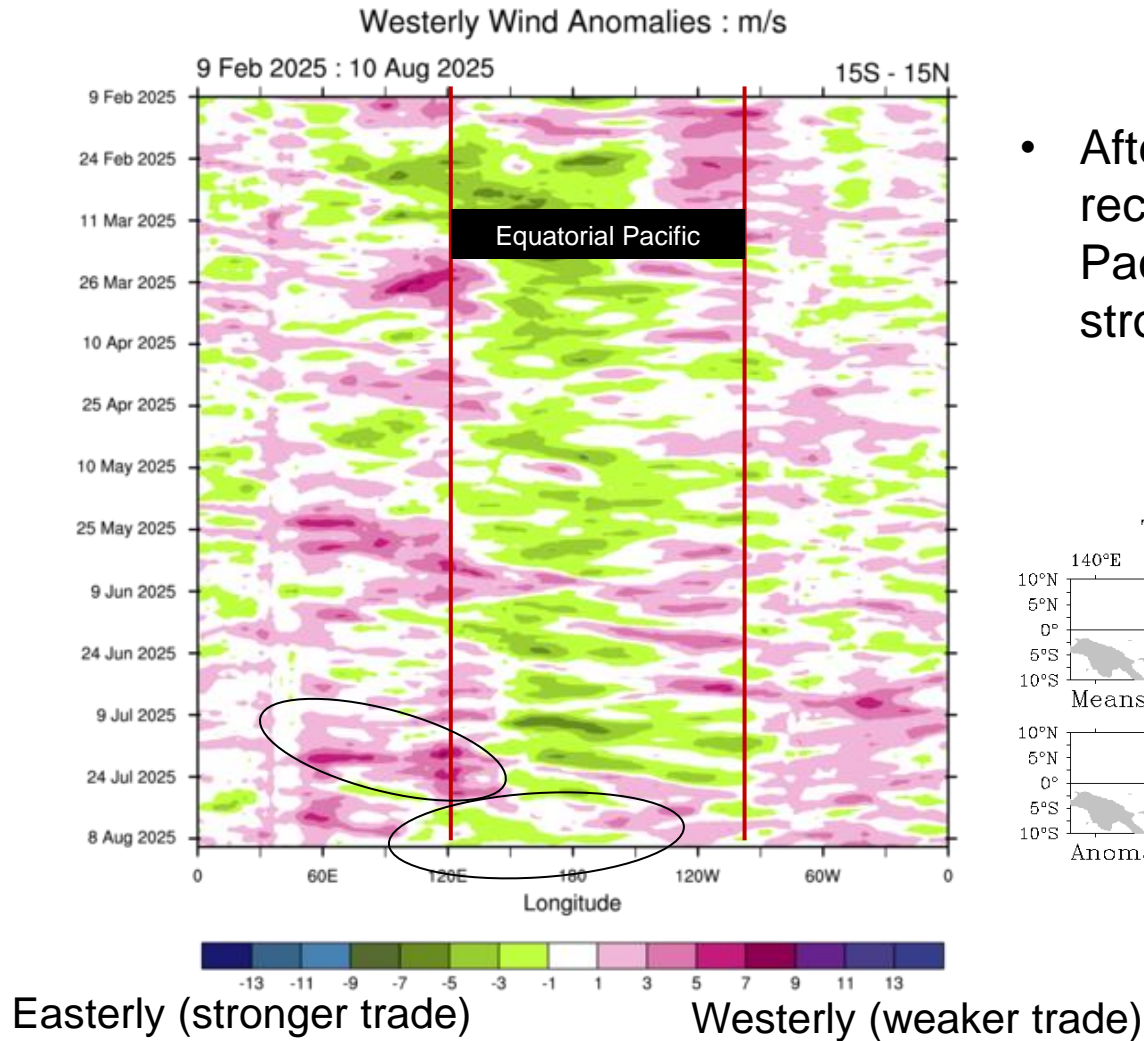
Model run: 09/08/2025  
Issued: 11/08/2025



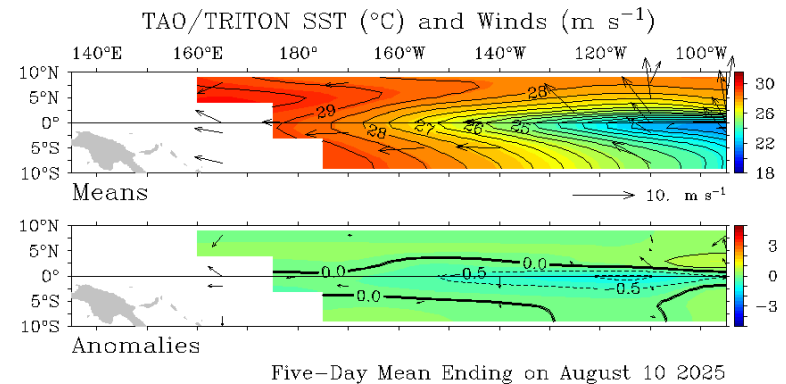
# Atmosphere



# Wind Anomalies

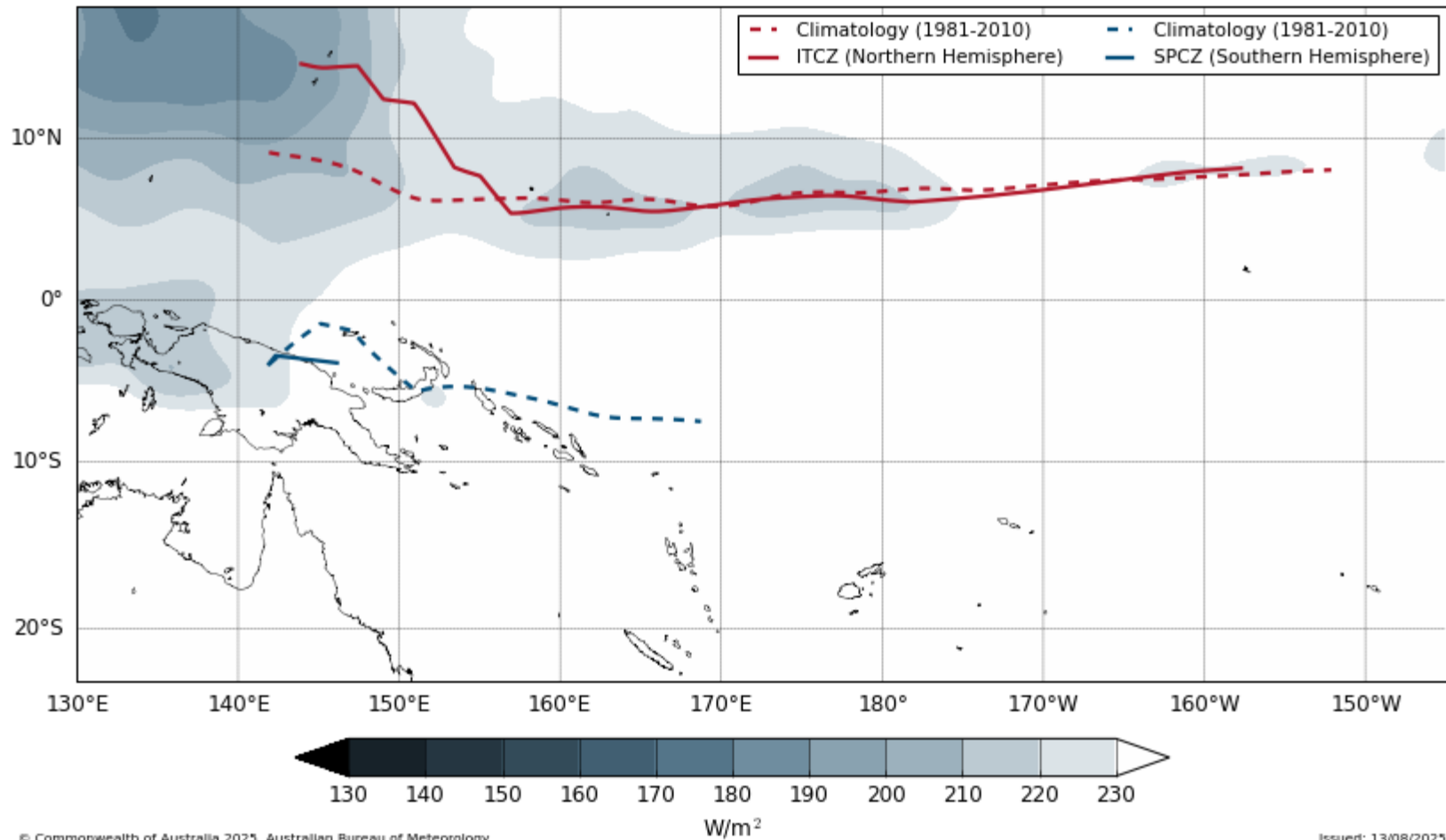


- After stronger westerlies during a recent MJO event, equatorial Pacific trade winds have been stronger than average.



# ITCZ and SPCZ

30 Day Average Outgoing Longwave Radiation (OLR) minimum to 2025-08-10



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Issued: 13/08/2025

# Madden – Julian Oscillation



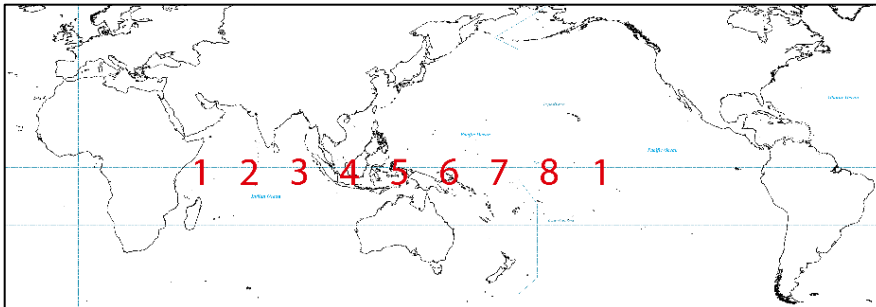
The **MJO** is currently located over the Maritime Continent (**Phase 4**).



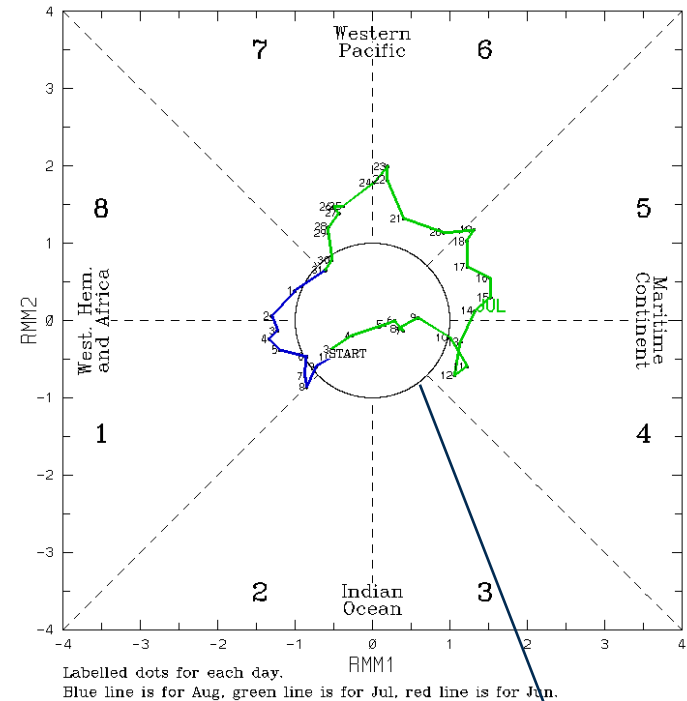
Phases **6, 7 and 8** are typically associated with **increased rainfall** across the Pacific.



Phases **2, 3 and 4** are typically associated with **decreased rainfall** across the Pacific.



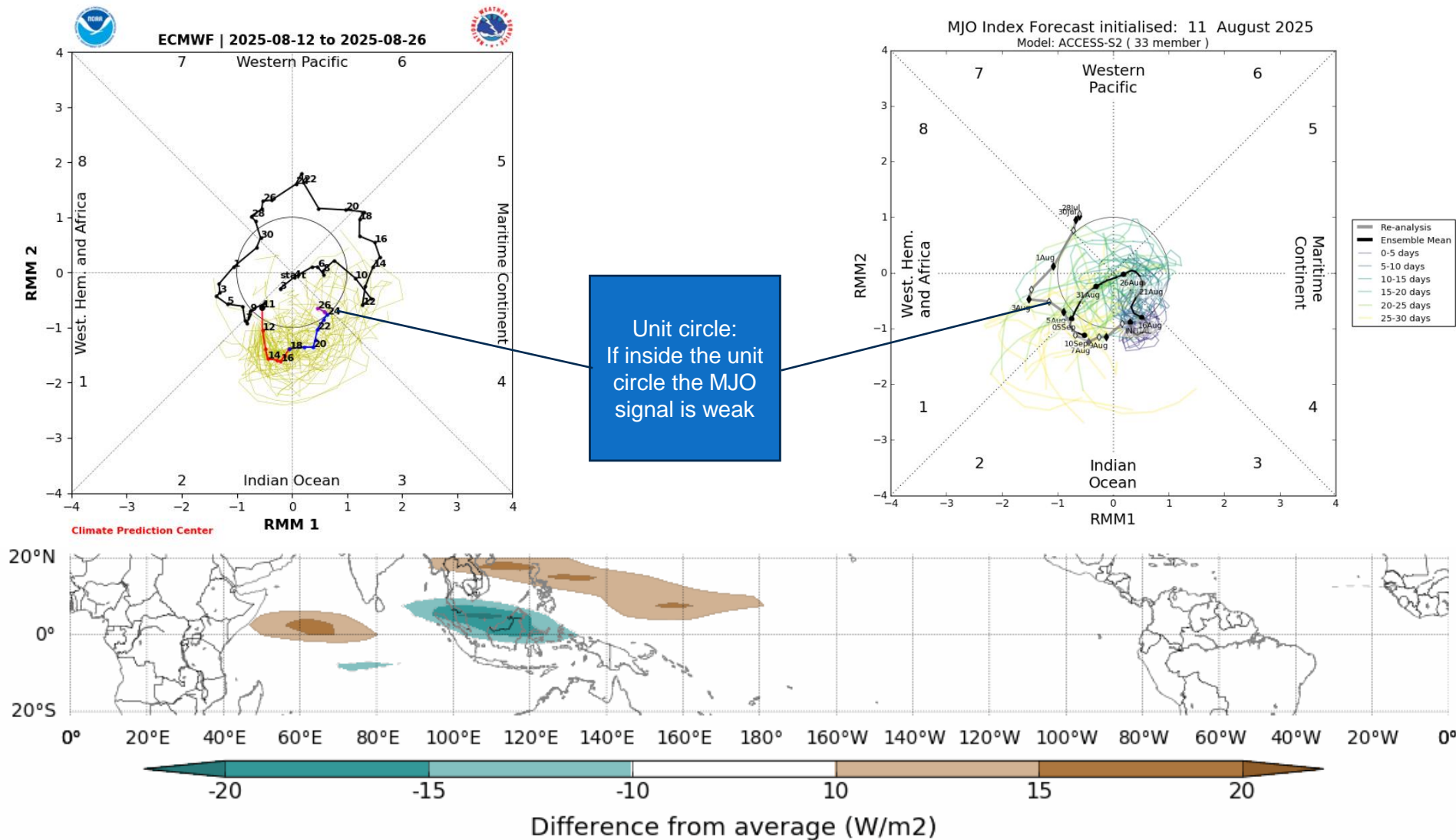
(RMM1,RMM2) phase space for 2-Jul-2025 to 10-Aug-2025



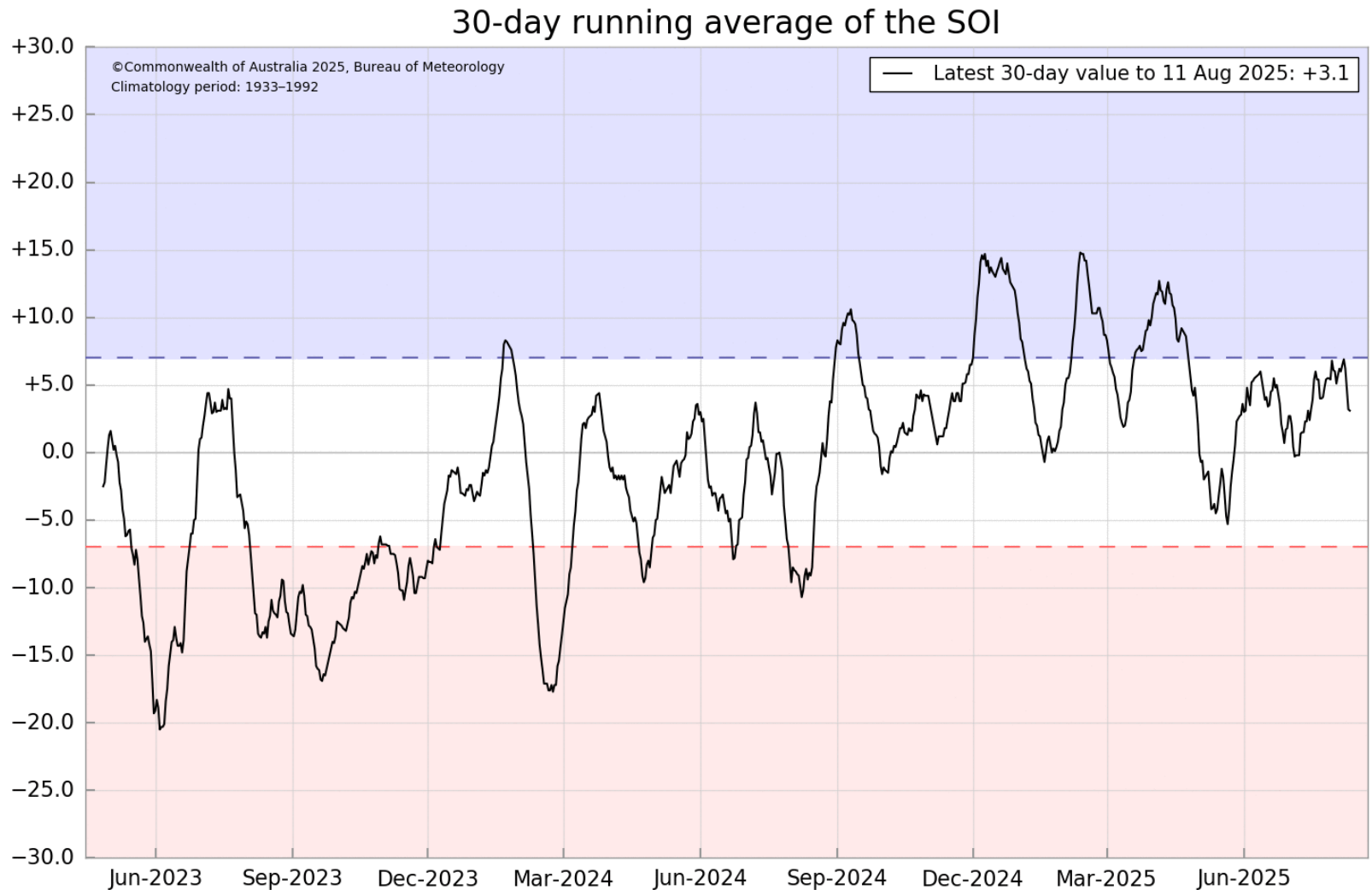
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Unit circle:  
If inside the unit circle the MJO signal is weak

# Madden – Julian Oscillation



# Southern Oscillation Index

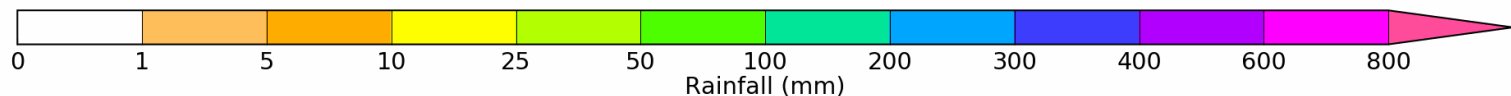
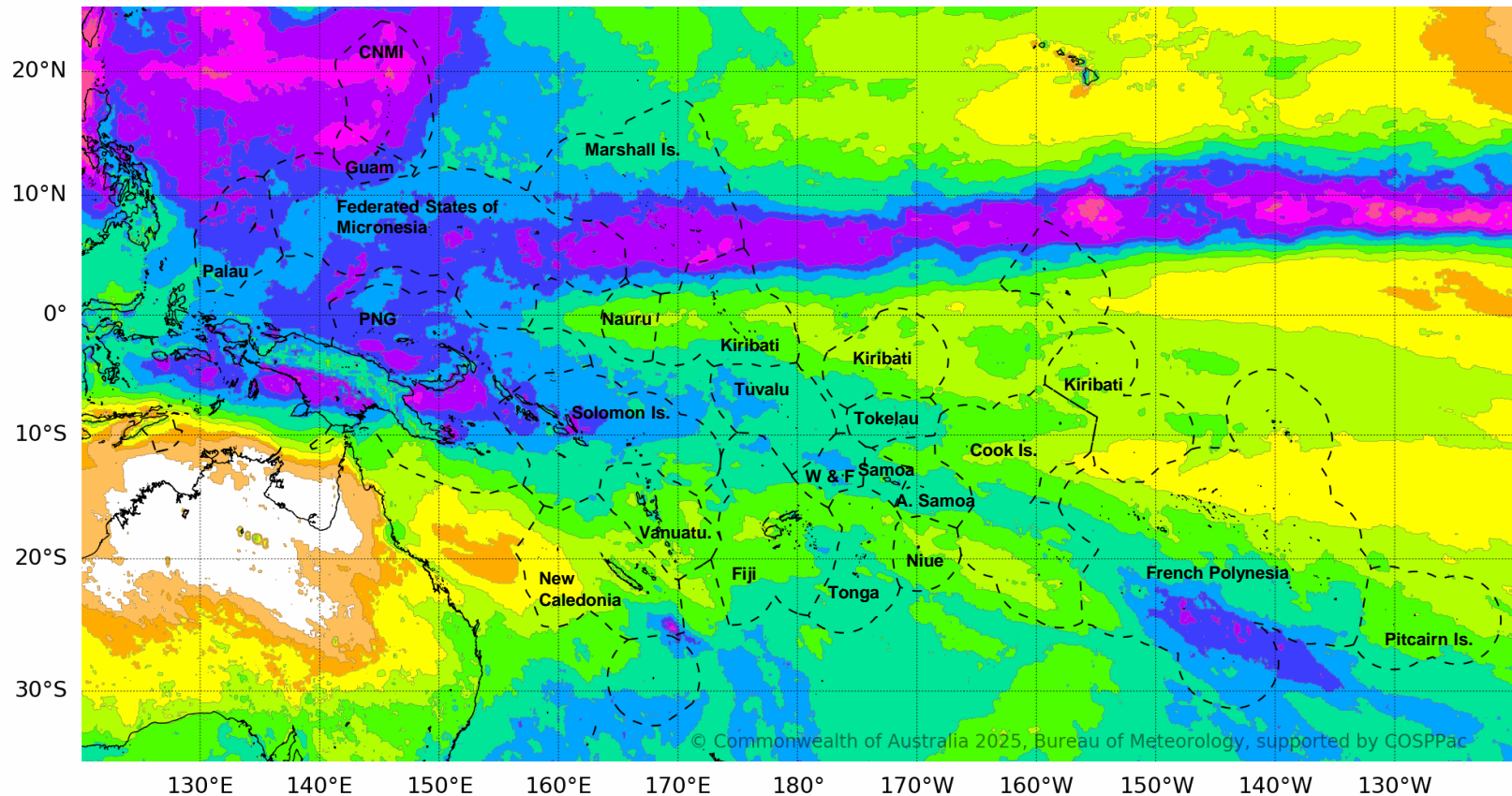


# Satellite Rainfall – July 2025

1-month total rainfall ending July 2025

Data source: MSWEP

Issued: 07/08/2025



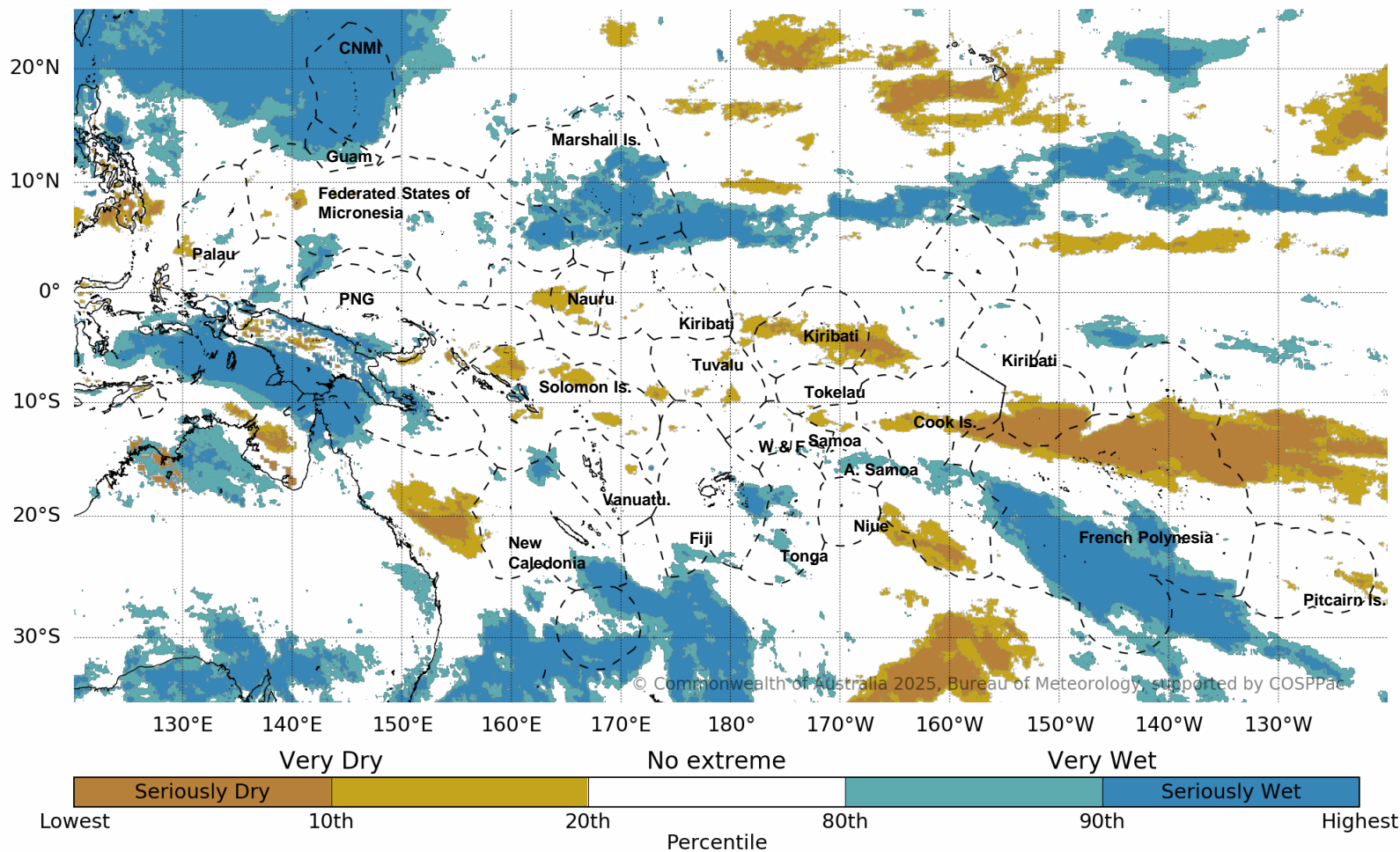
-- -- EEZ border V11 (Flanders Marine Institute, 2019)

# Rainfall Extremes – July 2025

Base period: 1981-2021  
Data source: MSWEP

1-month Rainfall status to July 2025

Issued: 07/08/2025

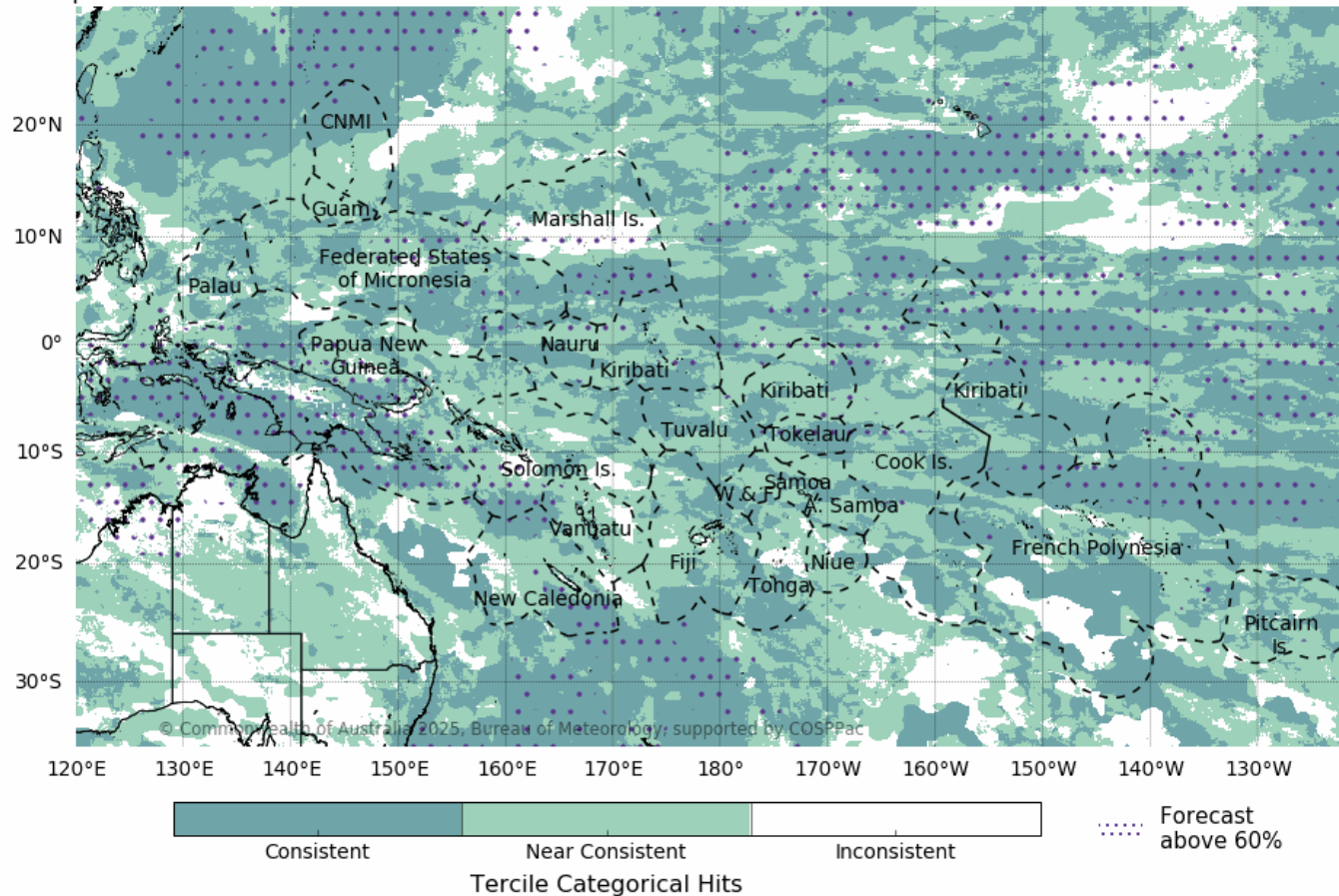


# Forecast Verification – July

Near real-time tercile verification hit rate: rainfall July 2025

Data source: ACCESS-S2  
Observations: MSWEP  
Base period: 1981-2018

Model Run: 01/07/2025  
Issued: 12/08/2025



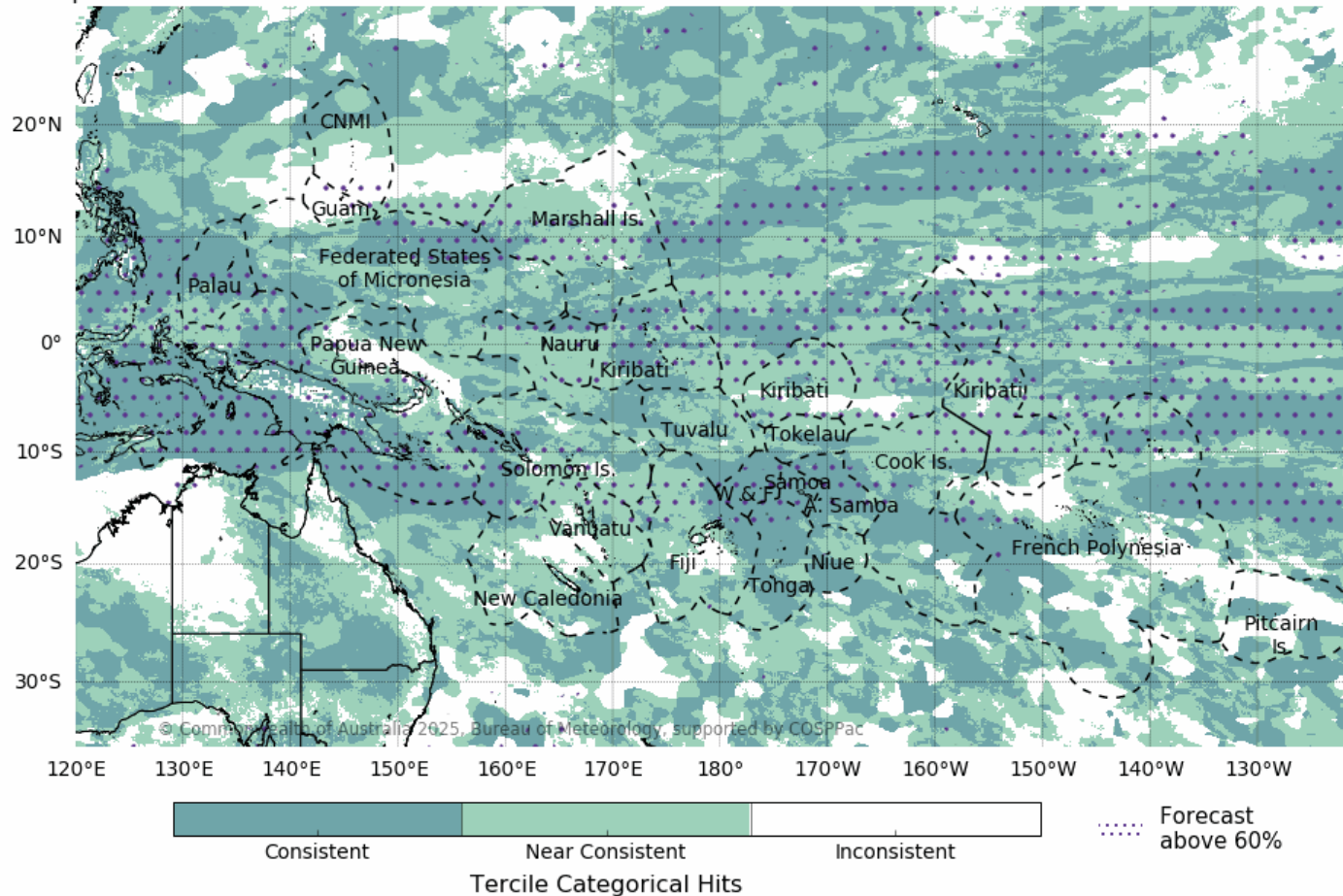
-- EEZ border V11 (Flanders Marine Institute (2019))

# Forecast Verification – May to July 2025

Near real-time tercile verification hit rate: rainfall May to July 2025

Data source: ACCESS-S2  
Observations: MSWEP  
Base period: 1981-2018

Model Run: 01/05/2025  
Issued: 12/08/2025



-- EEZ border V11 (Flanders Marine Institute (2019))

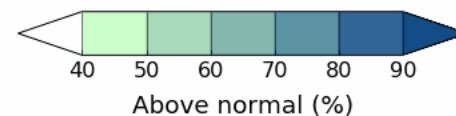
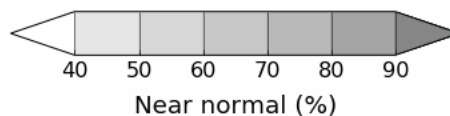
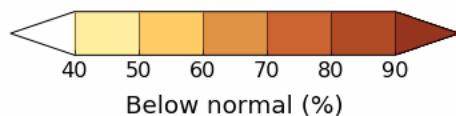
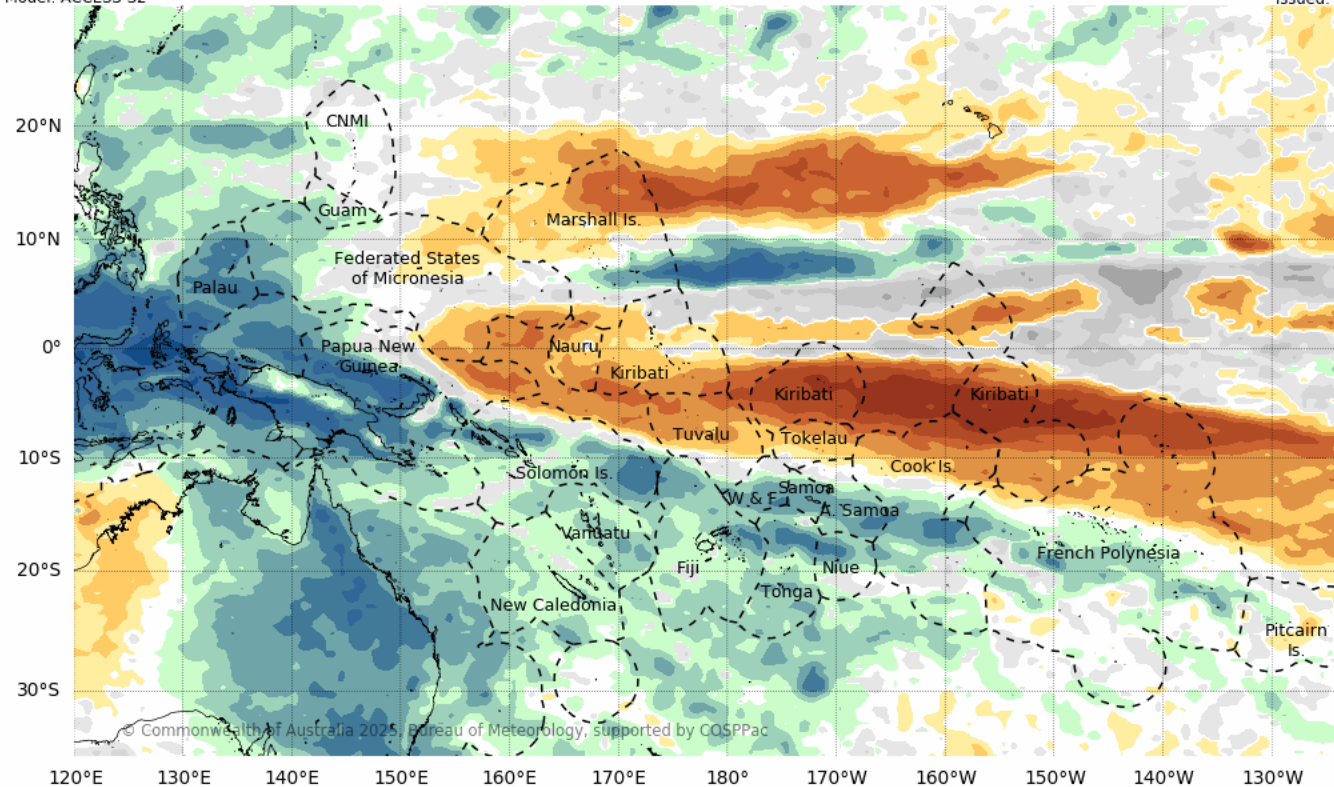
# Model Rainfall Predictions (SON)

Tercile rainfall probabilities for  
September to November 2025

ACCESS-S2

Base period: 1981-2018  
Model: ACCESS-S2

Issued: 11/08/2025



-- EEZ border V11 (Flanders Marine Institute, 2019).

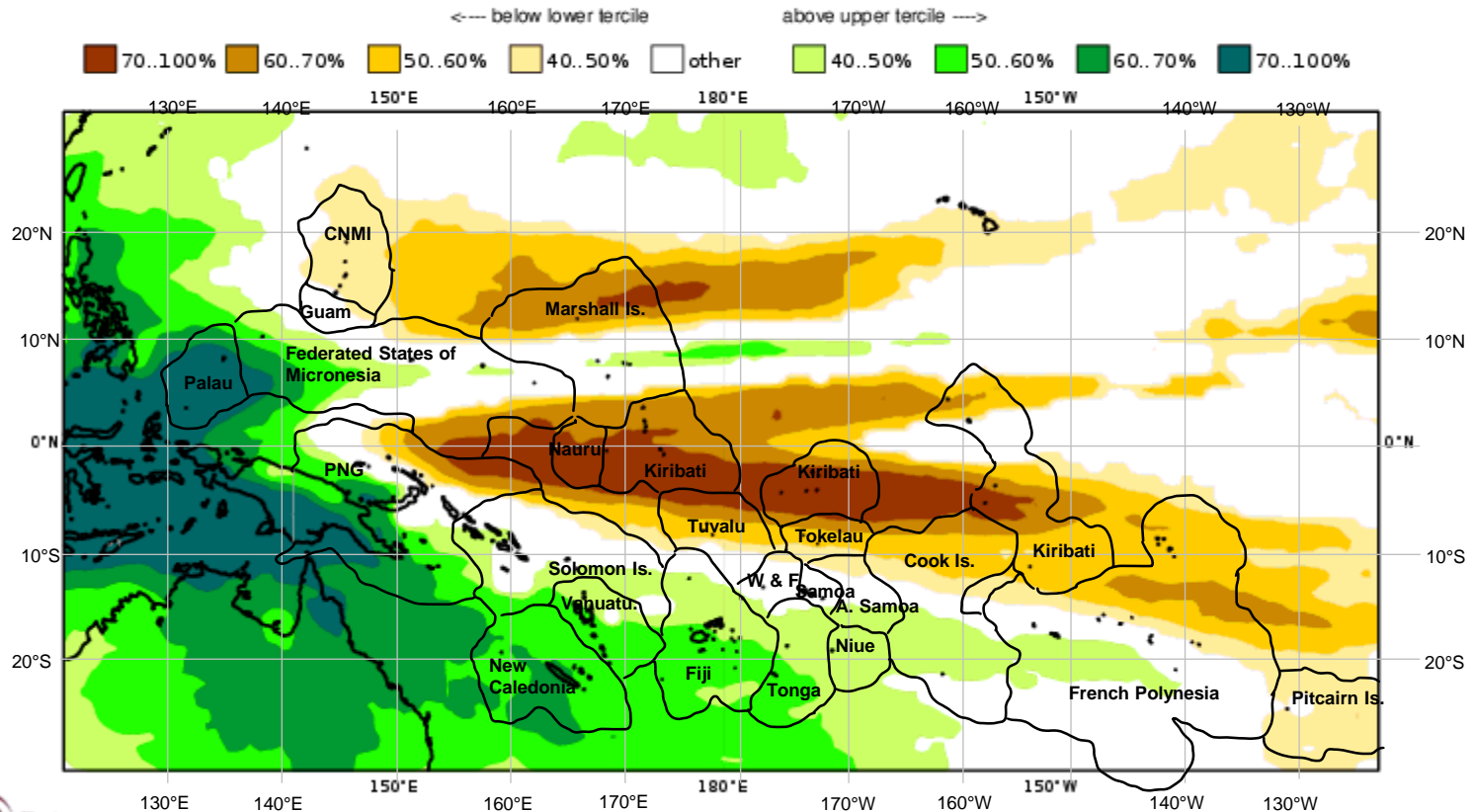
# Model Rainfall Predictions (SON)

C3S

C3S multi-system seasonal forecast ECMWF/Met Office/Météo-France/CMCC/DWD/NCEP/JMA/ECCC/BOM  
 Prob(most likely category of precipitation)  
 SON 2025

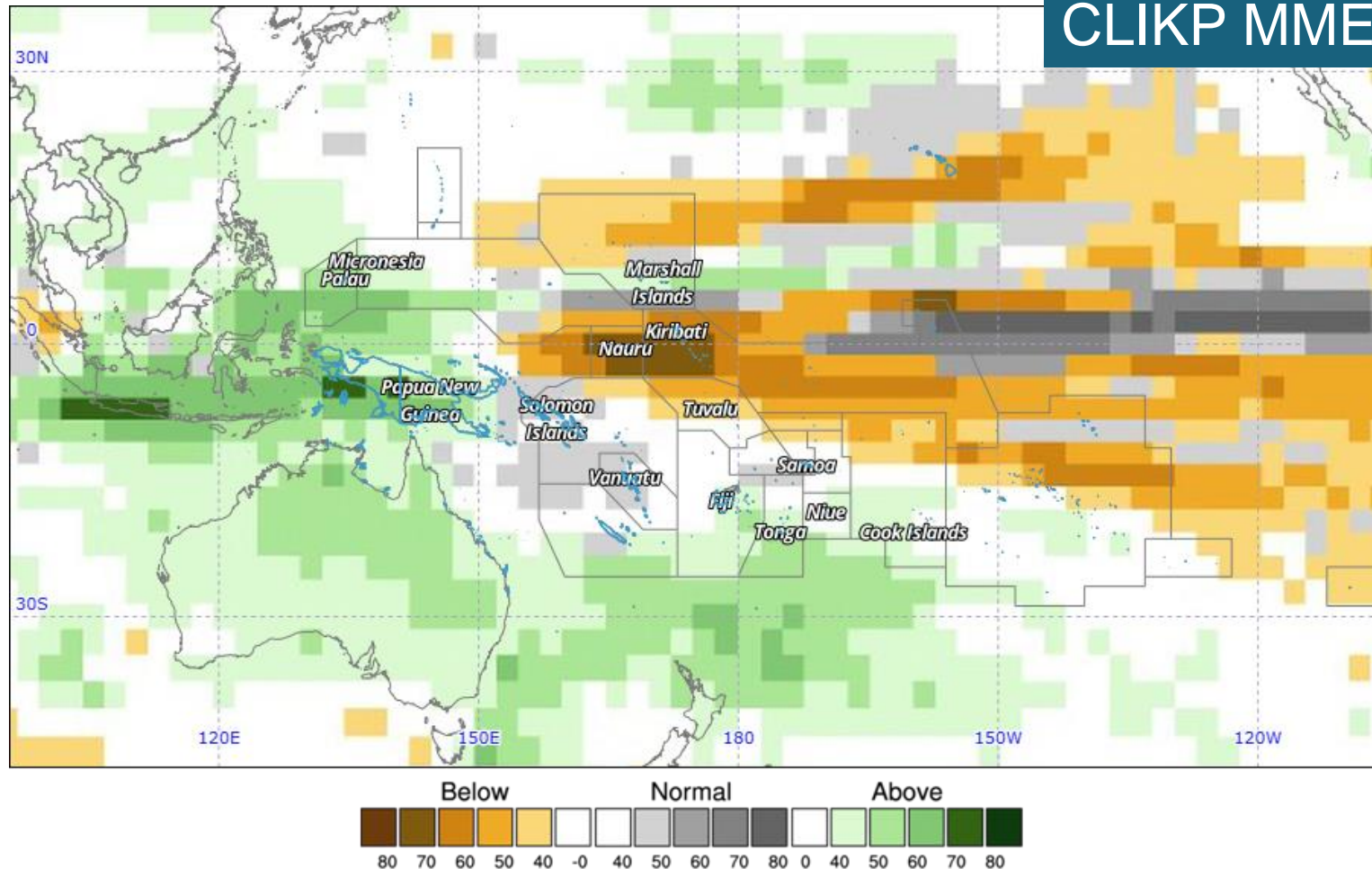
Nominal forecast start: 01/08/25

Unweighted mean



# Model Rainfall Predictions (ASO)

CLIKP MME



Year: 2025, Season: ASO, Lead Month: 3, Method: GAUS

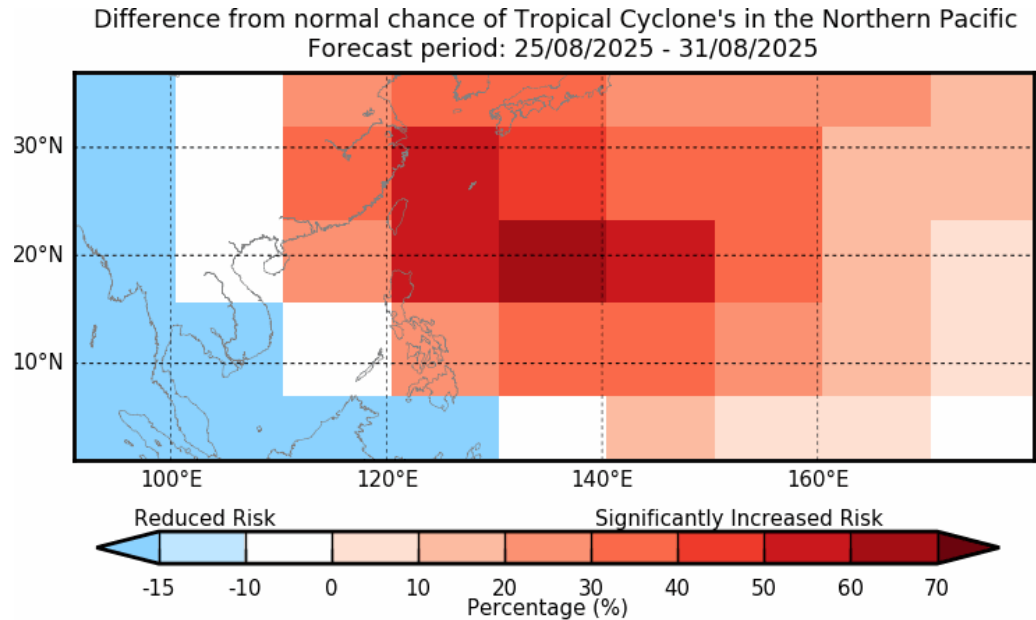
Model: APCC, BOM, CMCC, CWA, ECCO, NASA, NCEP, PNU

Generated using CLIKP (2025-8-13)

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# TC Outlooks – Two Weeks

## North Pacific



Calibrated Model anomaly probability in overlapping 15 x 20 degree boxes  
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Model: ACCESS\_S2 Model Run: 10/08/2025 Issued: 12/08/2025

## South Pacific

**Out of season: November to April.**

# Thank you

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