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# ENSO Update – OCOF 223

15 April 2026





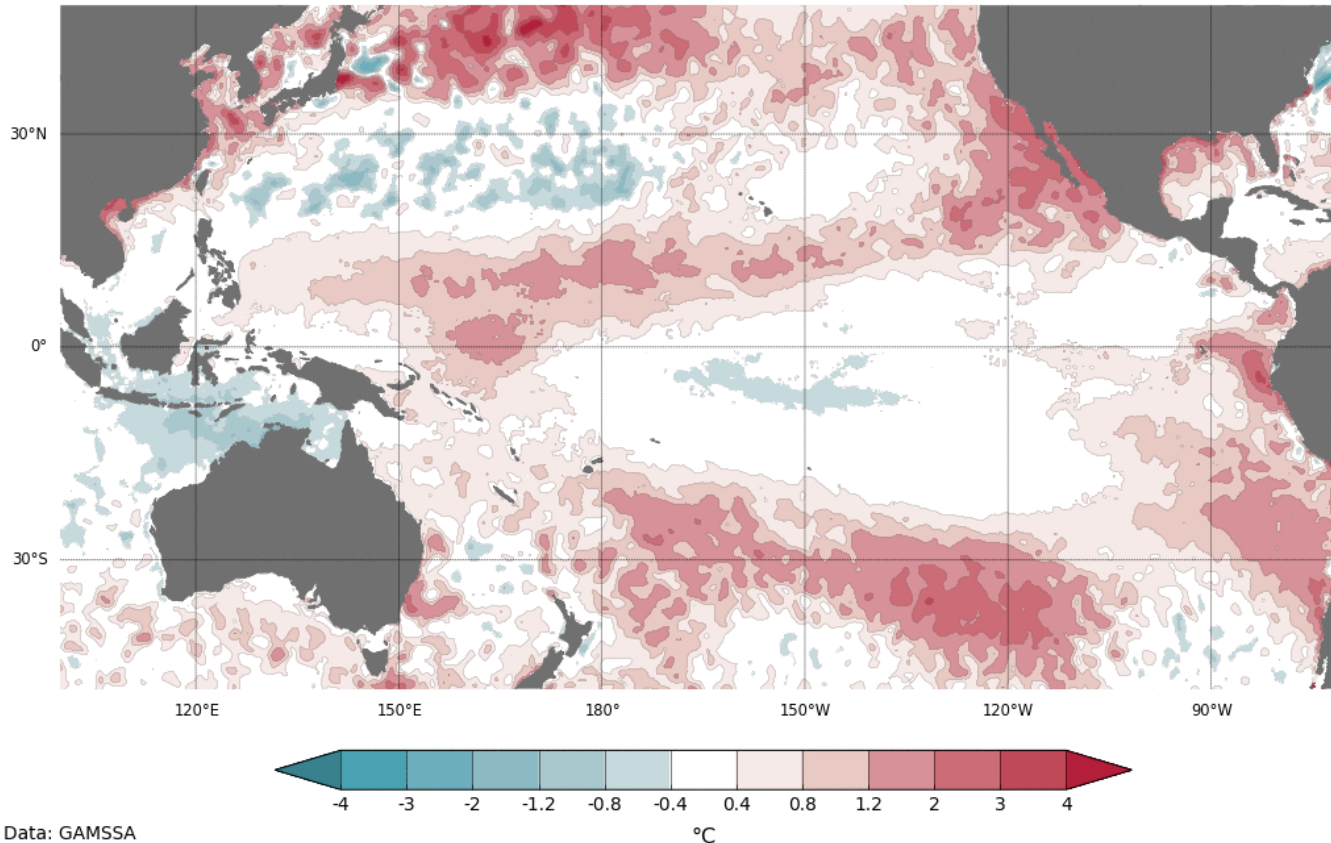
# ENSO Update

- The 2025–26 La Niña has ended. Collectively, oceanic and atmospheric indicators of the El Niño–Southern Oscillation (ENSO) reflect an ENSO-neutral state.
- Sea surface temperatures (SSTs) in the central tropical Pacific have been within the ENSO-neutral range ( $-0.80$  to  $+0.80$  °C) for the past 6 weeks, with the latest relative Niño3.4 index value for the week ending 29 March 2026 at  $-0.42$  °C. A recent pulse of warming in the sub-surface suggests further warming of SSTs is likely in the coming weeks.
- Atmospheric indicators, such as trade winds, pressure and cloud patterns in the tropical Pacific reflect ENSO-neutral conditions. Westerly wind anomalies have extended into the central equatorial Pacific in the last fortnight and are forecast to persist in the coming weeks. This would also act to enhance warming of tropical Pacific SSTs.
- All models, including the Bureau's, forecast the tropical Pacific to continue warming in the coming months. Neutral ENSO conditions are expected to persist until at least late autumn, with all models indicating warming to levels consistent with El Niño by the end of winter. There is some variation across models in the rate at which El Niño thresholds may be reached, with some suggesting development as early as May, while others show a slower warming with thresholds not met until late winter. Ocean-atmosphere coupling (where the ocean and atmosphere act to reinforce each other) is required for a sustained El Niño state.

# March 2026 SSTs

Warm SST's persist in the off-equatorial Pacific reflecting the La Niña signature as it continues to decay, with equatorial SSTs now largely near normal for this time of year.

Sea surface temperature anomaly: 01/03/2026 to 31/03/2026



Data: GAMSSA  
Climatology baseline: 1991 to 2020  
© Commonwealth of Australia 2026, Australian Bureau of Meteorology

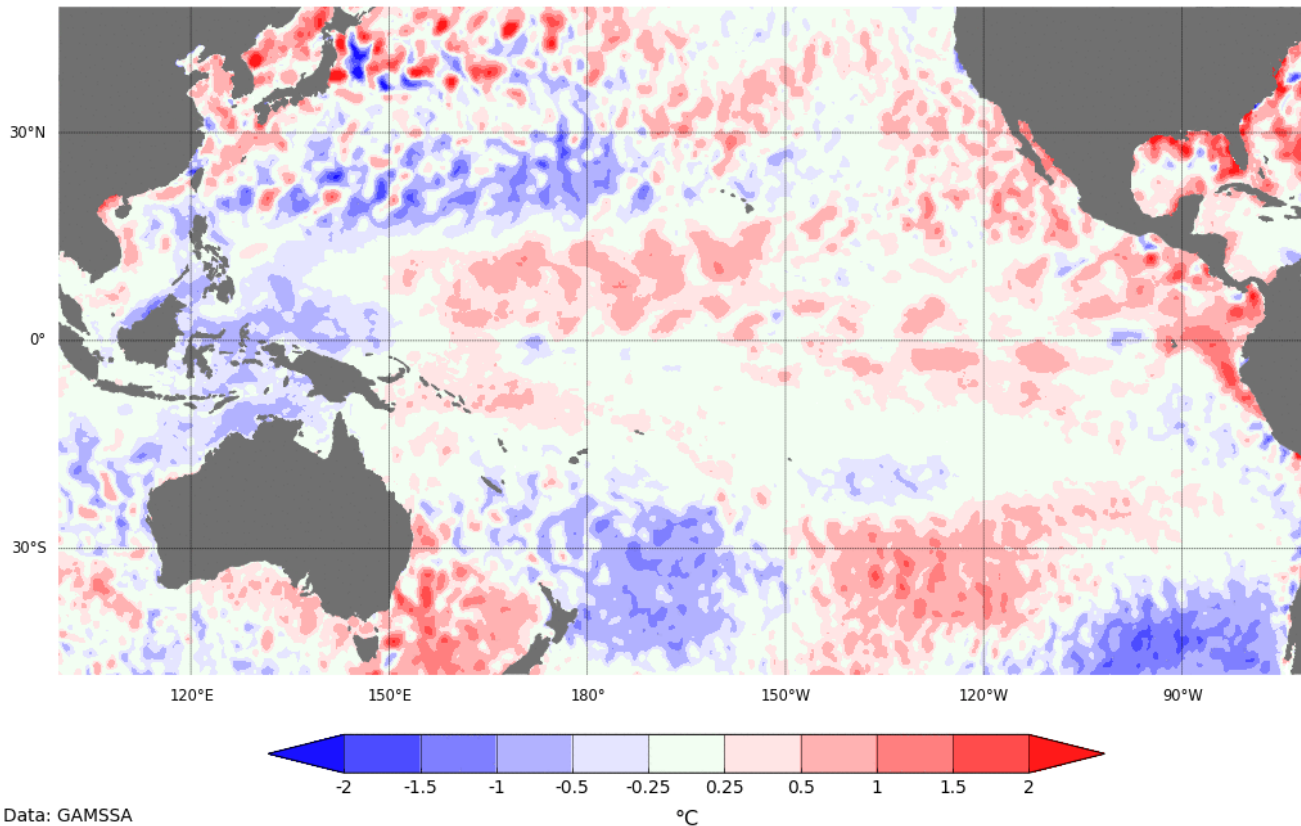
<http://www.bom.gov.au/climate>

Monthly average: March 2026  
Created: 03/04/2026

# March – February 2026 SSTs

The equatorial Pacific has warmed during March when compared to February, with SST's having cooled in the far western Pacific and the off-equatorial regions reflecting the weakening La Niña.

Change in the monthly SST anomaly: March-2026 - February-2026

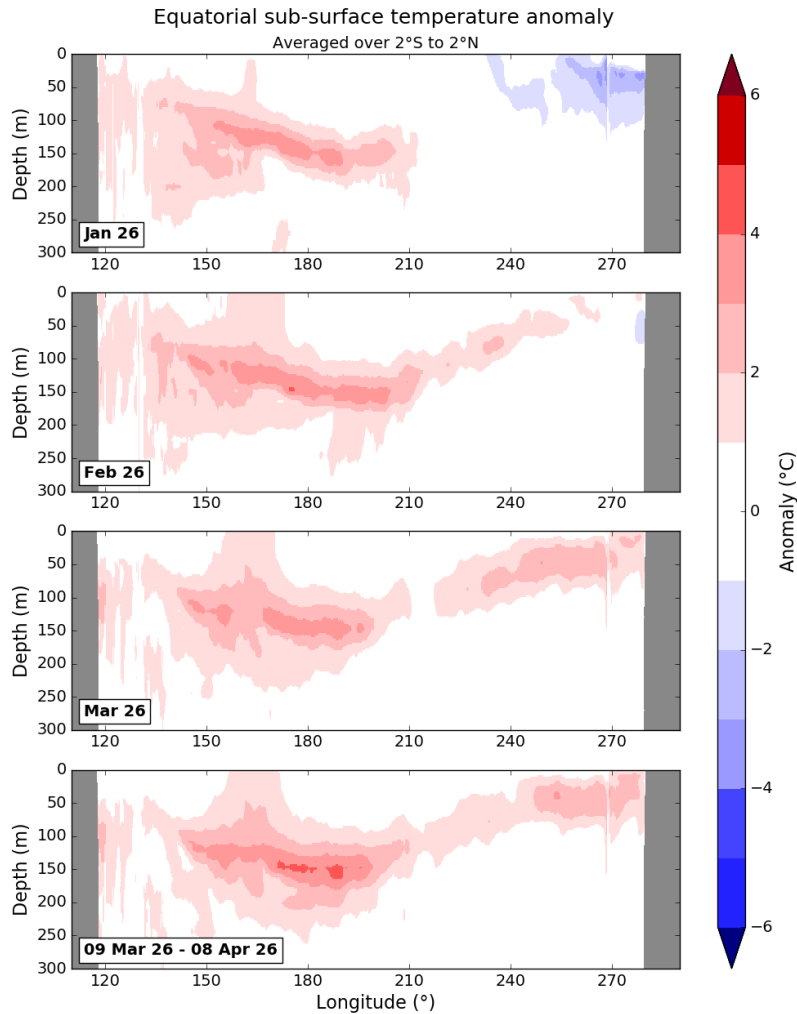


Data: GAMSSA  
 Climatology baseline: 1991 to 2020  
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<http://www.bom.gov.au/climate>

Anomaly monthly difference  
 Created: 03/04/2026

# Equatorial Pacific Sub-surface Profile



The sub-surface slice down to 300m depth across the Pacific shows the warm water that has persisted in the western and central Pacific during 2026 at about 150m depth. The warm water has propagated eastwards reaching the surface in the eastern Pacific during March 2026.

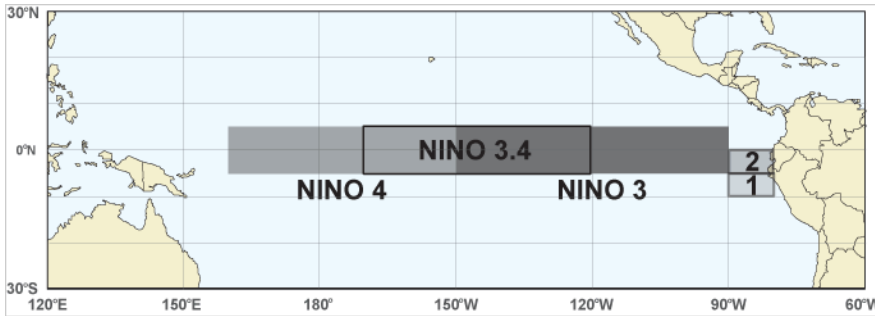
Created: 13/04/2026

© Commonwealth of Australia 2026, Australian Bureau of Meteorology

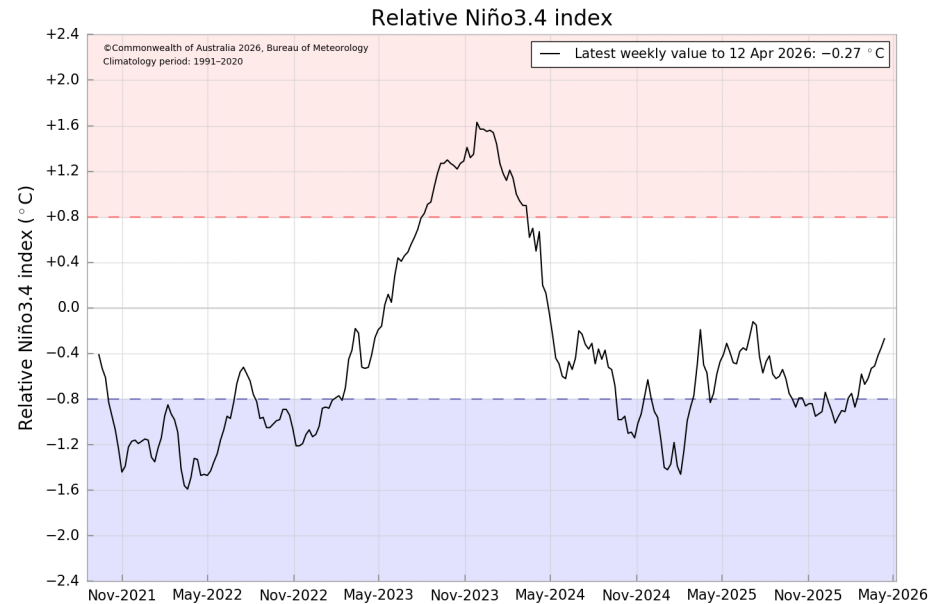
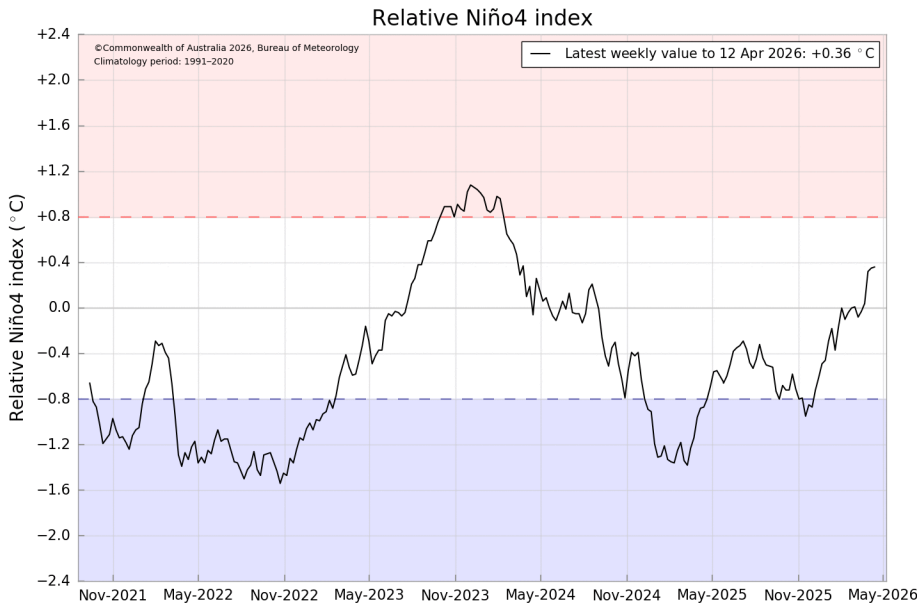
Data: ACCESS-S2 ocean reanalysis

Climatology baseline: 1981 to 2018

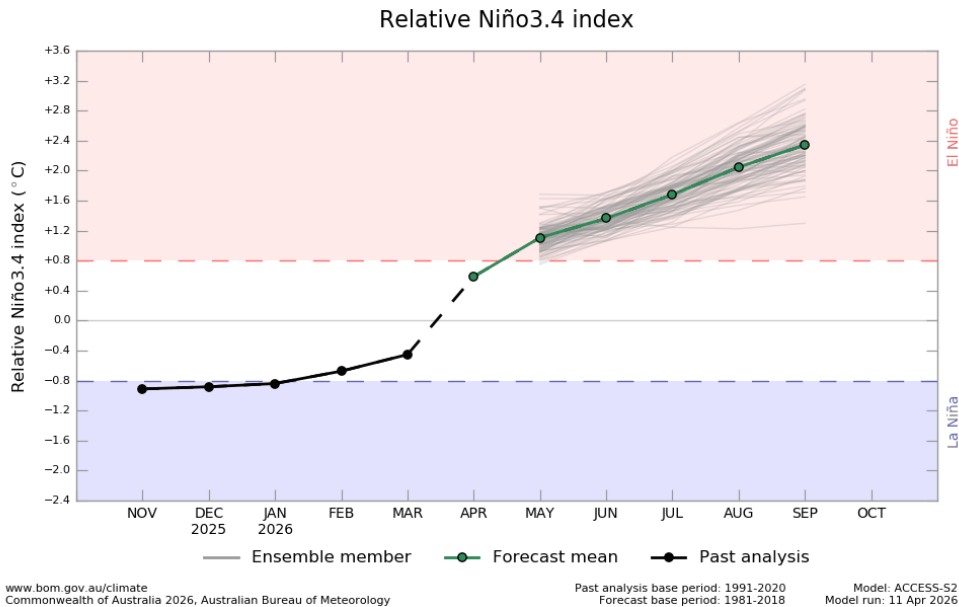
# Observed Relative NINO Indices



The relative Niño indices indicate significant warming in the central and western Pacific (NINO 4, NINO 3.4) during 2026 as the La Niña weakens towards ENSO-neutral.



# Relative ENSO Outlook



The tropical Pacific is ENSO-neutral, that is neither at La Niña nor El Niño levels. El Niño is predicted to develop over the coming months.



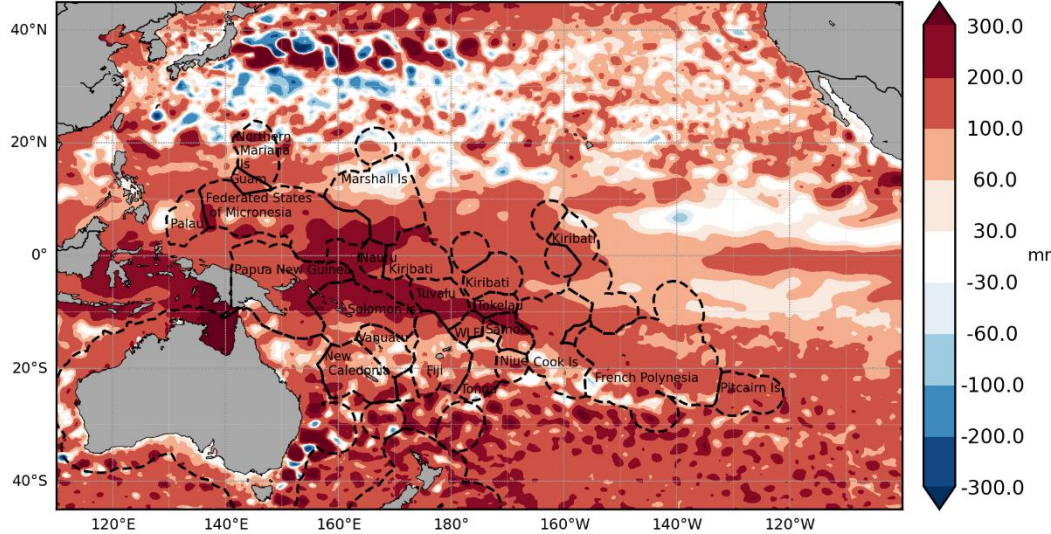
El Niño is associated with **increased rainfall** across the eastern and central Pacific.



El Niño is associated with **decreased rainfall** across the far western Pacific.

# August 2026 Sea Level Anomaly

Pacific Islands  
Monthly Sea Level Anomaly: March 2026

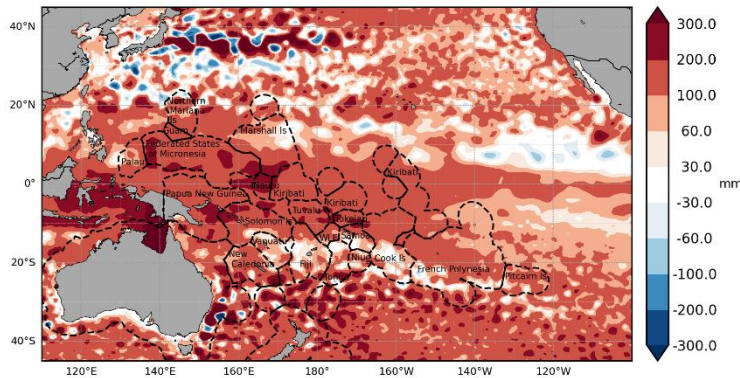


Positive sea levels above 200mm were experienced over Nauru, southeastern FSM, southern RMI, eastern PNG, the northern half of the Solomon Is., most of Tuvalu, southern Tokelau and northern American Samoa during March 2026.

© Pacific Community (SPC) 2025

E.U. Copernicus Marine Service Information;  
<https://doi.org/10.48670/moi-00149>

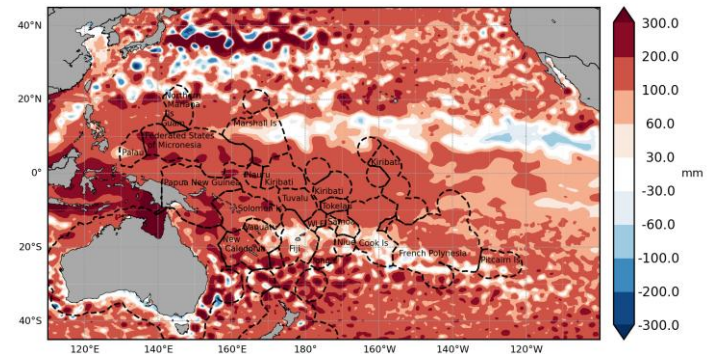
Pacific Islands  
Monthly Sea Level Anomaly: February 2026



© Pacific Community (SPC) 2025

E.U. Copernicus Marine Service Information;  
<https://doi.org/10.48670/moi-00149>

Pacific Islands  
Monthly Sea Level Anomaly: January 2026



© Pacific Community (SPC) 2025

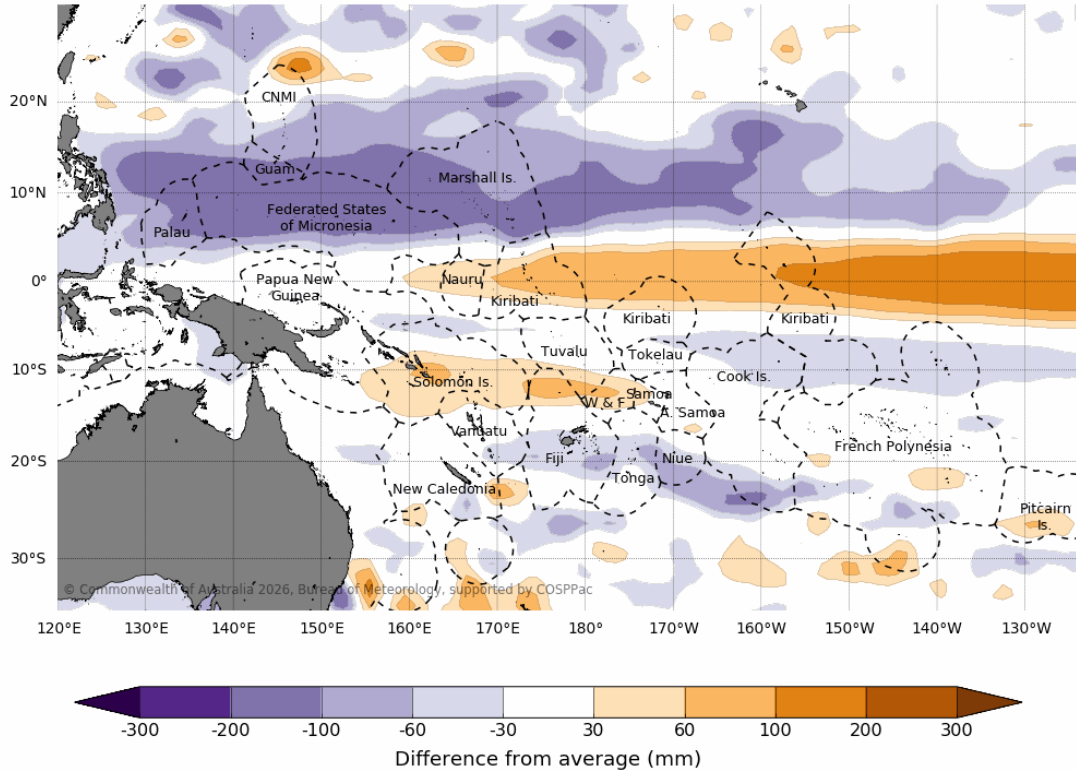
E.U. Copernicus Marine Service Information;  
<https://doi.org/10.48670/moi-00149>

# Seasonal Outlook: Sea Surface Height Anomaly

Difference from average sea surface height forecast for  
May to July 2026

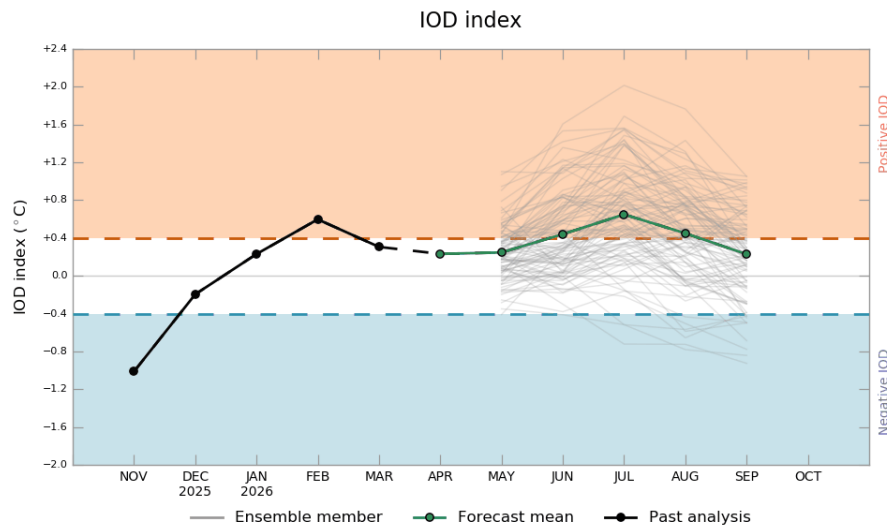
Base period: 1981-2018  
Model: ACCESS-S2

Model run: 06/04/2026  
Issued: 08/04/2026



The sea surface height is forecast to be up to 200mm lower than usual for parts of Palau, Guam, FSM and central RMI for May to July.

# Indian Ocean Dipole (IOD)



www.bom.gov.au/climate  
Commonwealth of Australia 2026, Australian Bureau of Meteorology

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

Model: ACCESS-S2  
Model run: 11 Apr 2026



The peak of the **IOD** is **Sep-Oct** in the southern hemisphere. Decaying with the onset of the monsoon.



**IOD negative** is associated with **increased rainfall** across the far western Pacific.



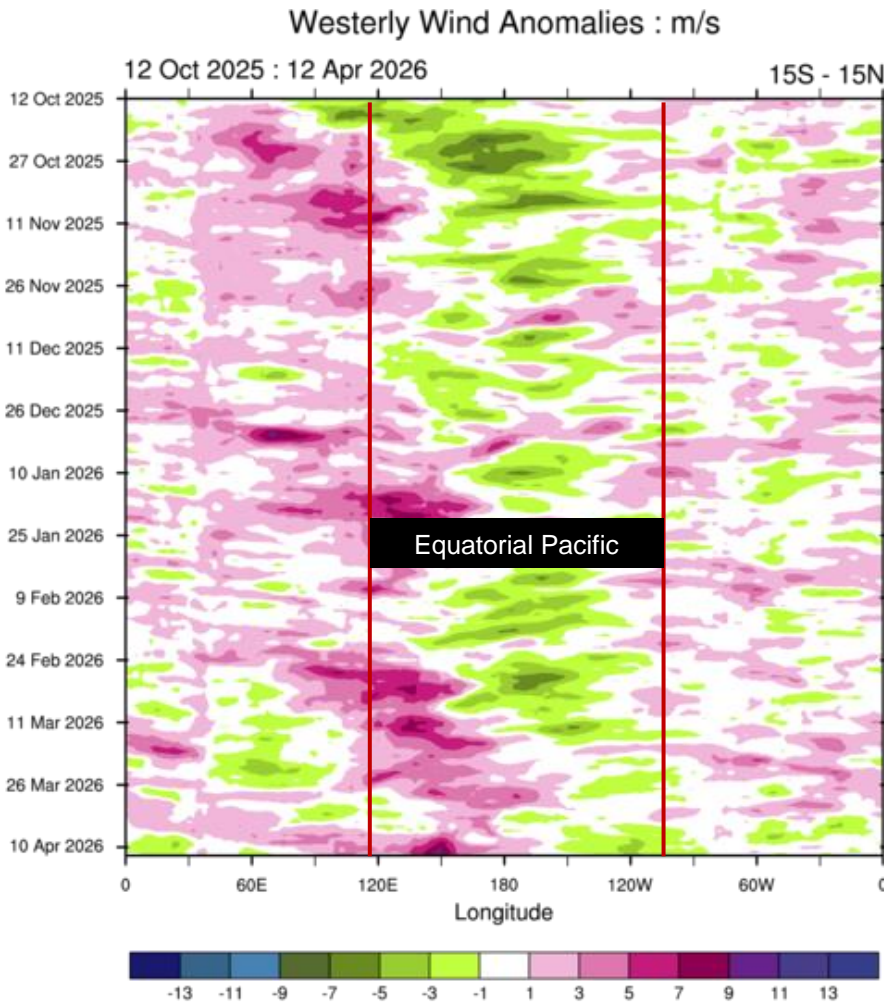
IOD positive is associated with **decreased rainfall** across the far western Pacific.

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# Atmosphere Outlook



# Wind Anomalies



Easterly (stronger trade)

Westerly (weaker trade)

Trade winds west of the Date Line have been persistently weaker than usual through 2026. The MJO moving into the Western Pacific in recent days has further weakened trade winds (Pink shading at the bottom of the plot).



Weaker trade winds (pink) allow for the development of more clouds and potential for rain.



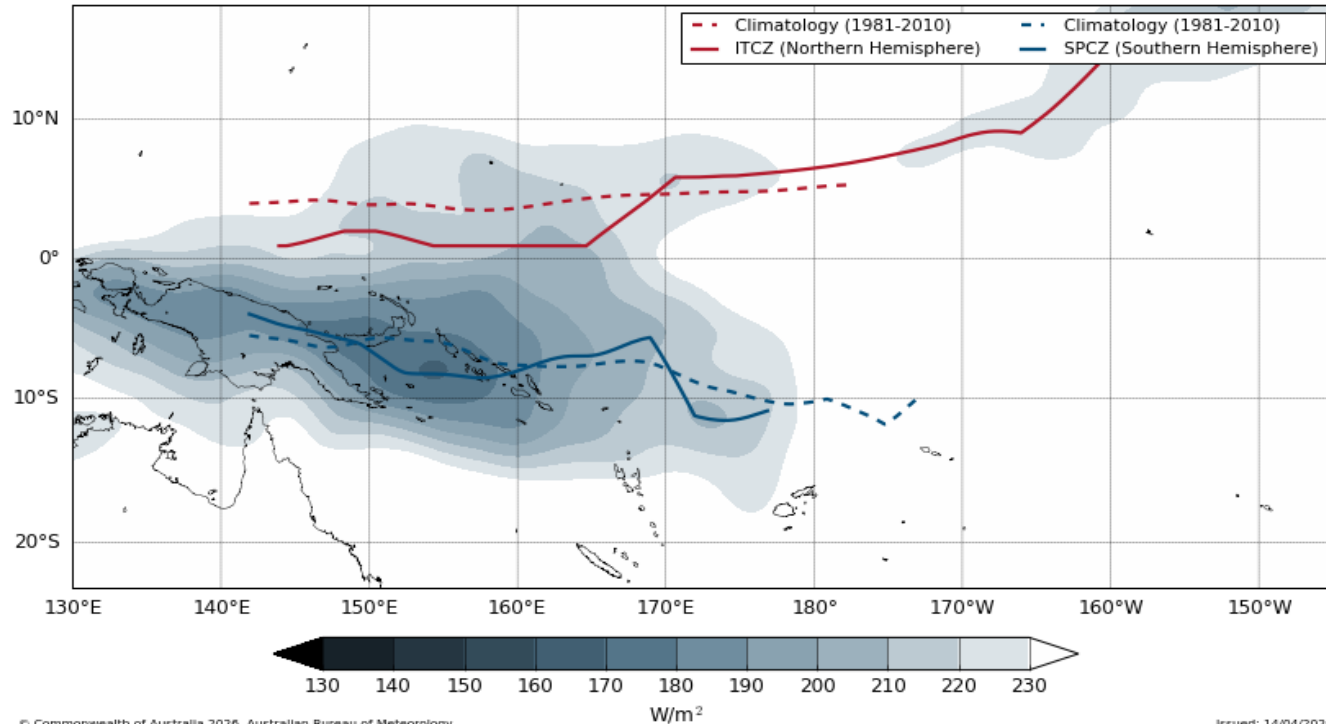
Stronger trade winds (green) hinders cloud development and the potential for rain.

# ITCZ and SPCZ

The ITCZ is located south of its usual position for this time of year over FSM and western RMI.

The SPCZ is located close to its climatological position.

30 Day Average Outgoing Longwave Radiation (OLR) minimum to 2026-04-11



More  
clouds

Less  
clouds

# Madden – Julian Oscillation



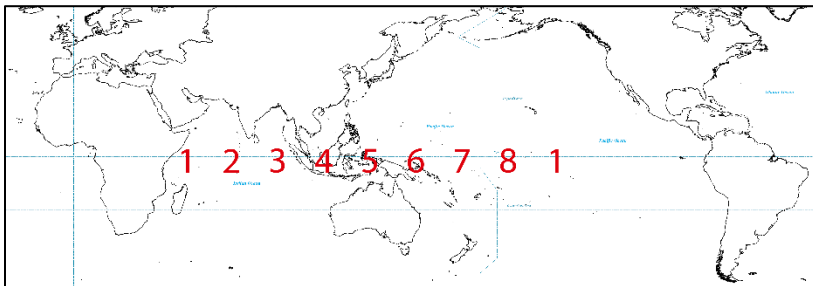
The **MJO** is in **Phase 6/7** over the Pacific Ocean. The forecast indicates the MJO will move eastwards and out of the Western Pacific over the coming weeks.



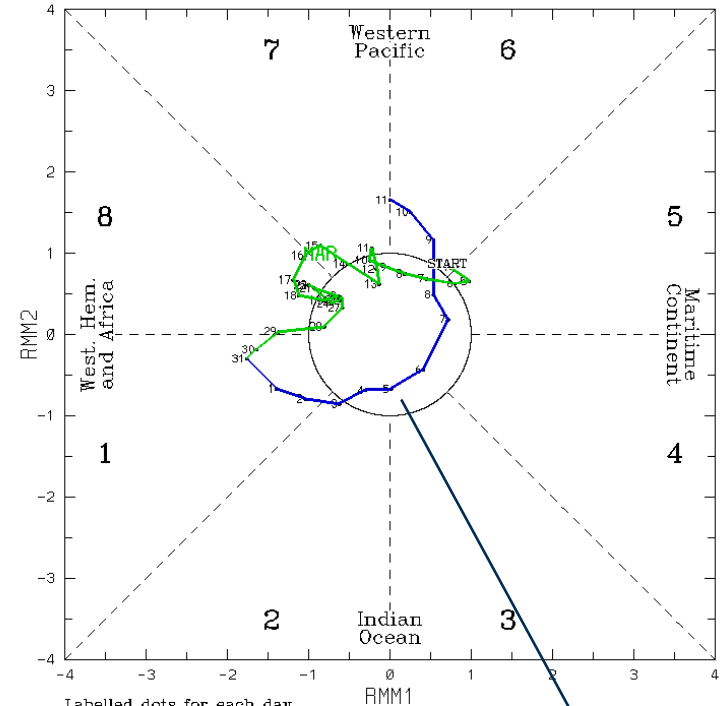
Phases **6, 7 and 8** are typically associated with **increased rainfall** across the Pacific.



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



(RMM1,RMM2) phase space for 3-Mar-2026 to 11-Apr-2026



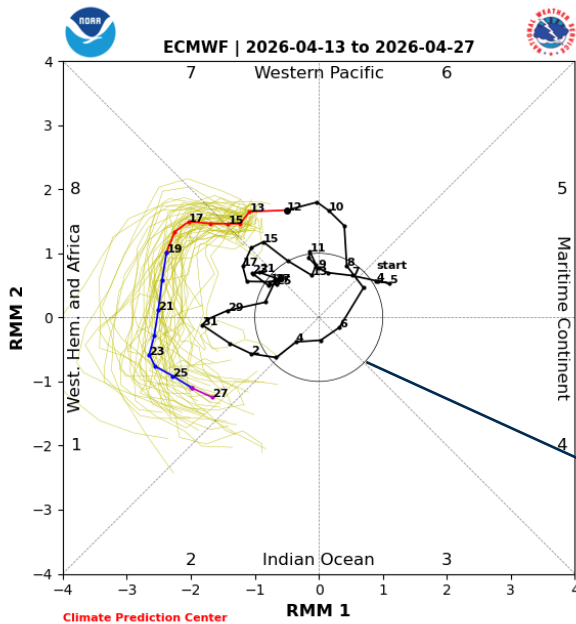
Labelled dots for each day.  
Blue line is for Apr, green line is for Mar, red line is for Feb.

(C) Copyright Commonwealth of Australia Bureau of Meteorology

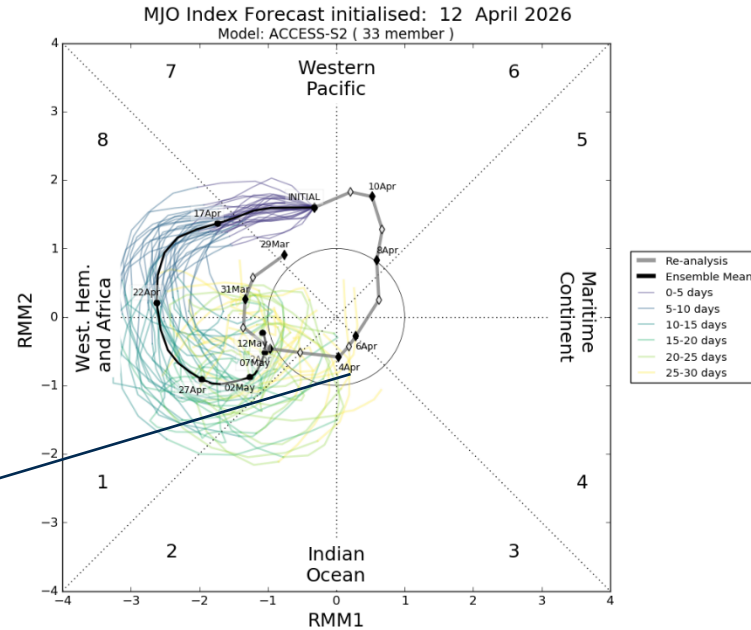
**Unit circle:**  
If inside the unit circle the MJO signal is weak

# Madden – Julian Oscillation

The MJO is currently located over the Western Pacific and is forecast to propagate eastwards and out of the region in the coming week.



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



# Observed Rainfall – March 2026

Observed

Percentile

1-month total rainfall ending March 2026

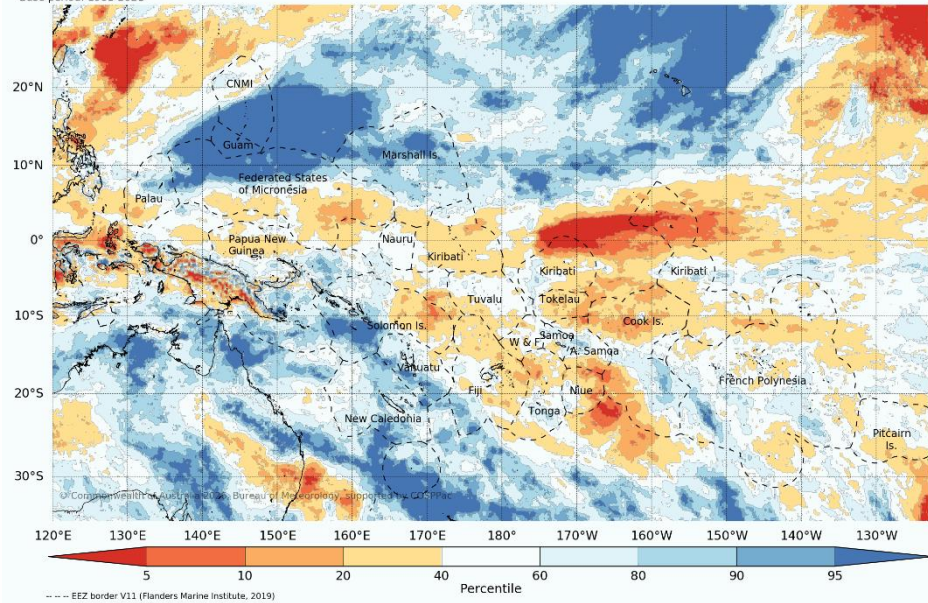
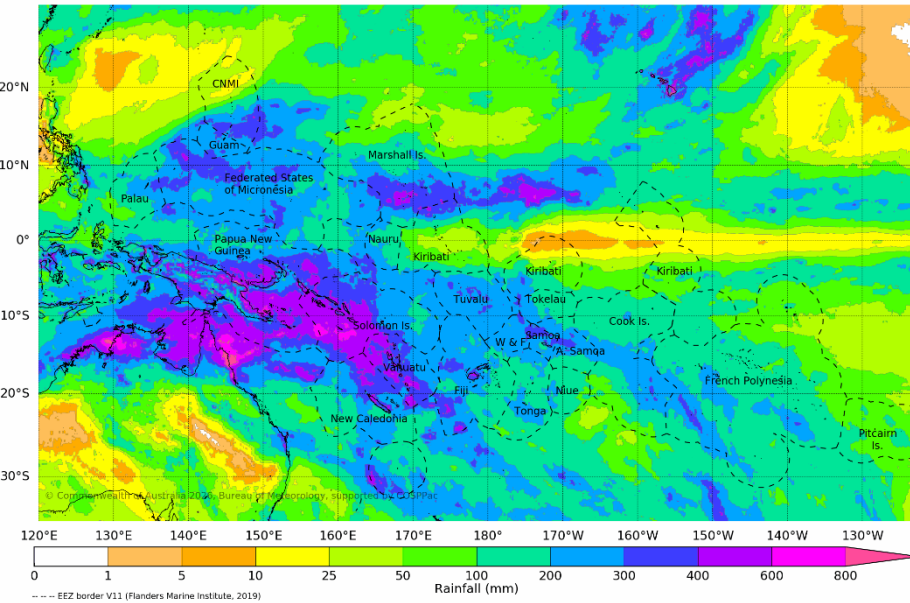
1-month Percentile to end of March 2026

Data source: MSWEP

Issued: 07/04/2026

Data source: MSWEP  
Base period: 1961-2021

Issued: 07/04/2026



Rainfall totals above 400 mm were recorded in March over parts of PNG, the Solomon Is., Vanuatu, New Caledonia, central RMI and far western FSM.

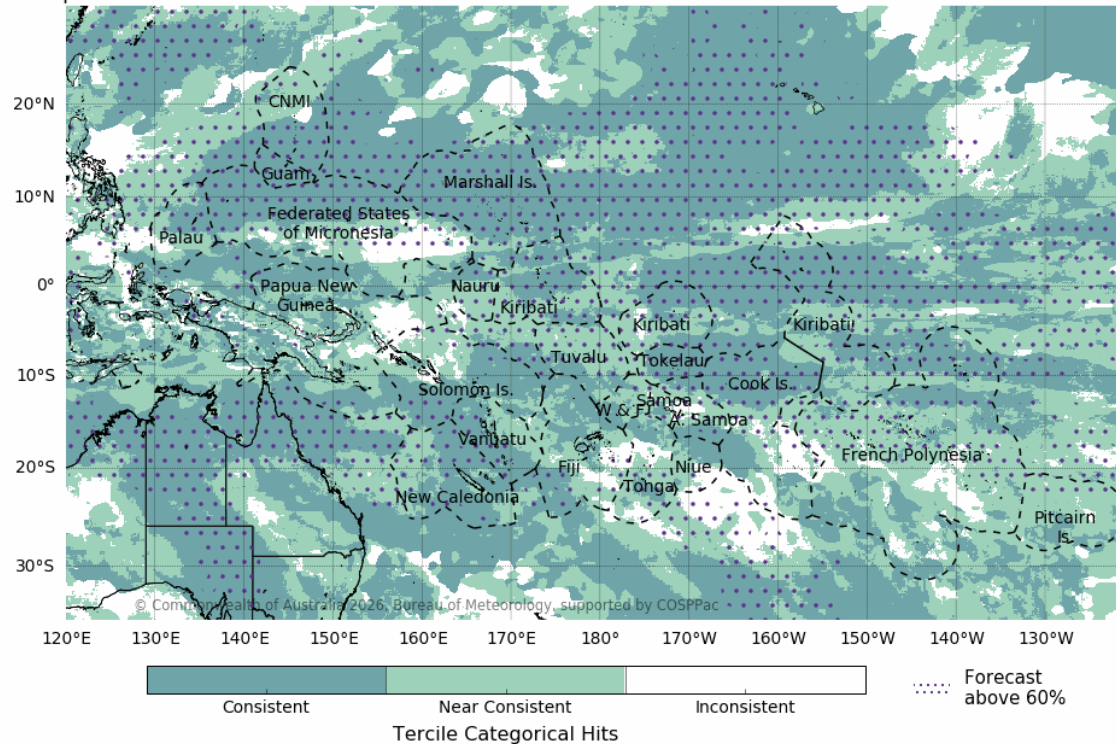
Rainfall totals were significantly higher than usual over Guam, southern CNMI, northern FSM, northern RMI, southern Solomon Is., parts of Vanuatu and New Caledonia.

# Forecast Verification – March

Near real-time tercile verification hit rate: rainfall March 2026

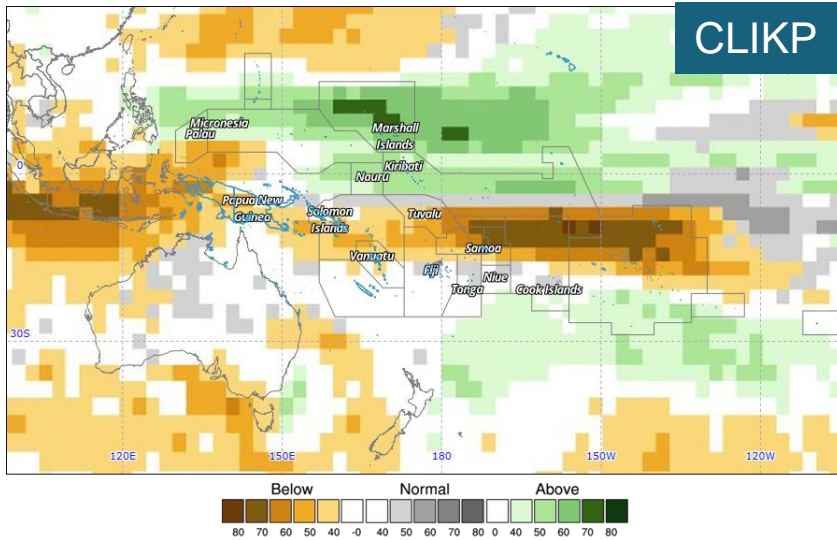
Data source: ACCESS-S2  
 Observations: MSWEP  
 Base period: 1981-2018

Model Run: 01/03/2026  
 Issued: 07/04/2026



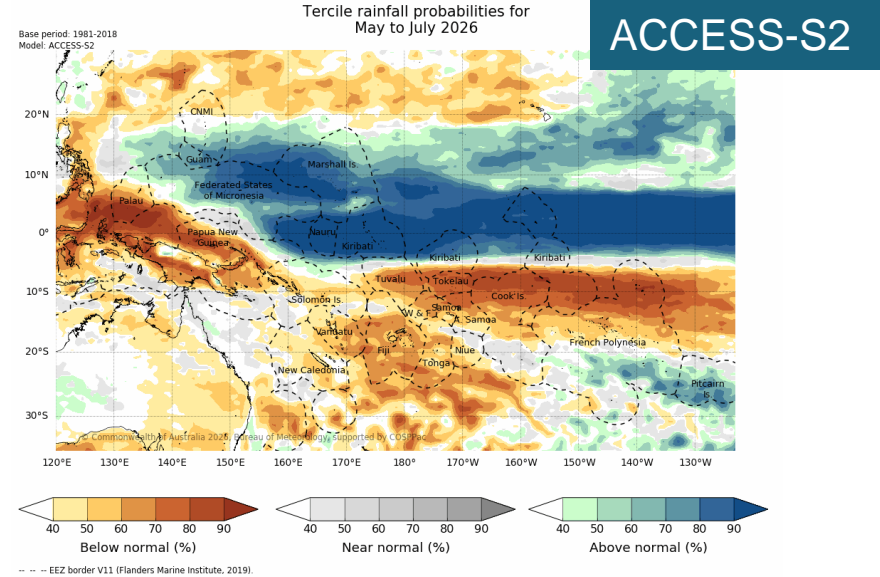
The ACCESS-S2 rainfall forecast for March when compared with MSWEP had a consistent tercile category over most of Palau, Guam, southern CNMI, northern FSM, RMI, most of Kiribati, northern Cook Is., Tokelau, southern American Samoa, northern Niue, parts of Fiji, most of New Caledonia, western Vanuatu, southern Solomon Is., and northern PNG. Elsewhere the forecast was either near consistent or inconsistent with observations.

# Model Rainfall Predictions (XXX)



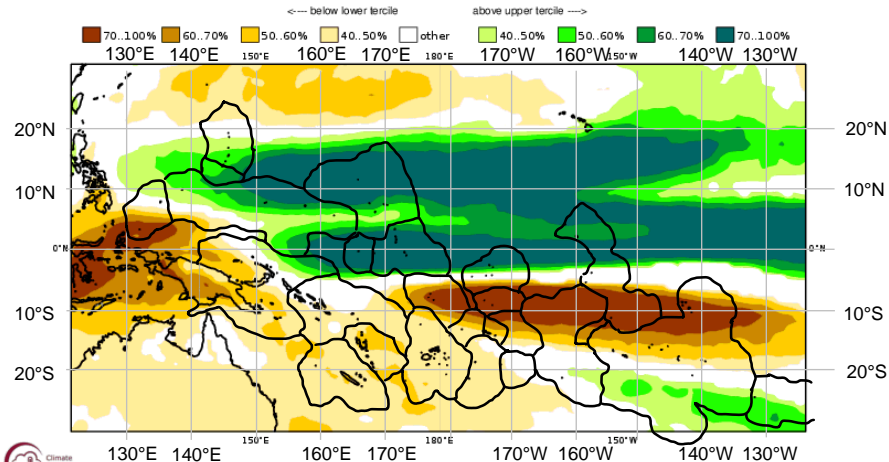
Year: 2026, Season: AMJ, Lead Month: 3, Method: GAUS  
 Model: APCC, BOM, CMCC, CWA, ECCS, NASA, NCEP, PNU  
 Generated using CLIKP® (2026-4-14)

© APEC Climate Center



C3S multi-system seasonal forecast ECMWF/Met Office/Météo-France/CMCC/DWD/NCEP/JMA/ECCS/BOM  
 Prob(most likely category of precipitation) MJJ 2026  
 Nominal forecast start: 01/04/26  
 Unweighted mean

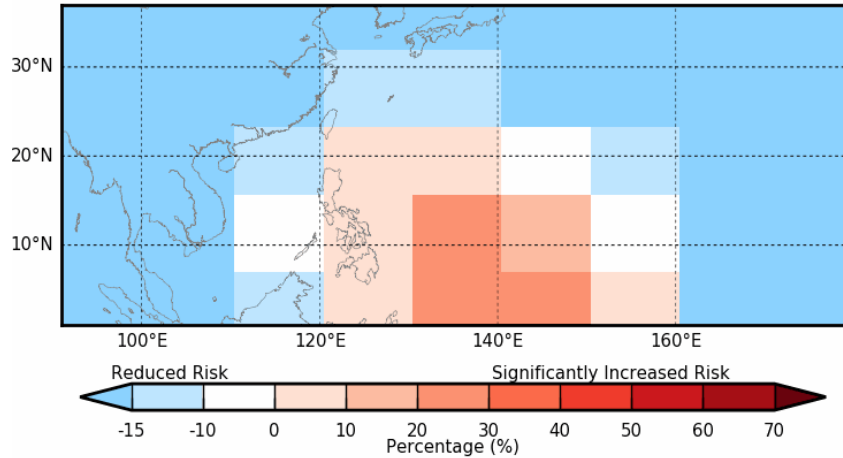
**C3S**



# TC Outlooks

## North Pacific

Difference from normal chance of Tropical Cyclone's in the Northern Pacific  
Forecast period: 03/05/2026 - 09/05/2026

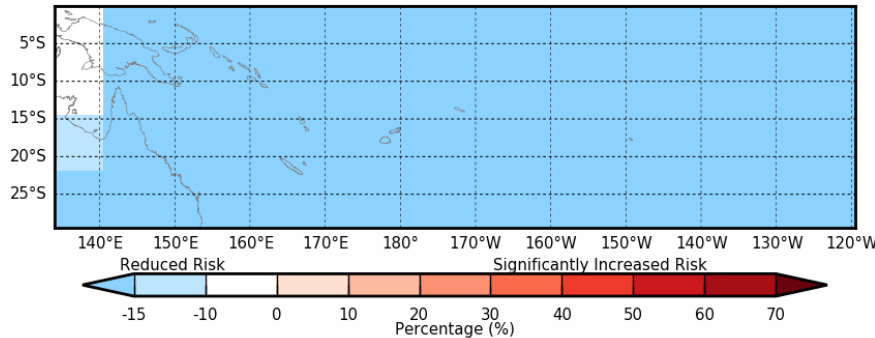


Calibrated Model anomaly probability in overlapping 15 x 20 degree boxes  
© Commonwealth of Australia 2026, Australian Bureau of Meteorology Model: ACCESS\_S2 Model Run: 11/04/2026 Issued: 13/04/2026

The **TC outlook** for the NW Pacific shows increased risk of TC formation for the week of 3-9 May 2026.

## South Pacific

Difference from normal chance of Tropical Cyclone's in the South Pacific  
Forecast period: 19/04/2026 - 25/04/2026

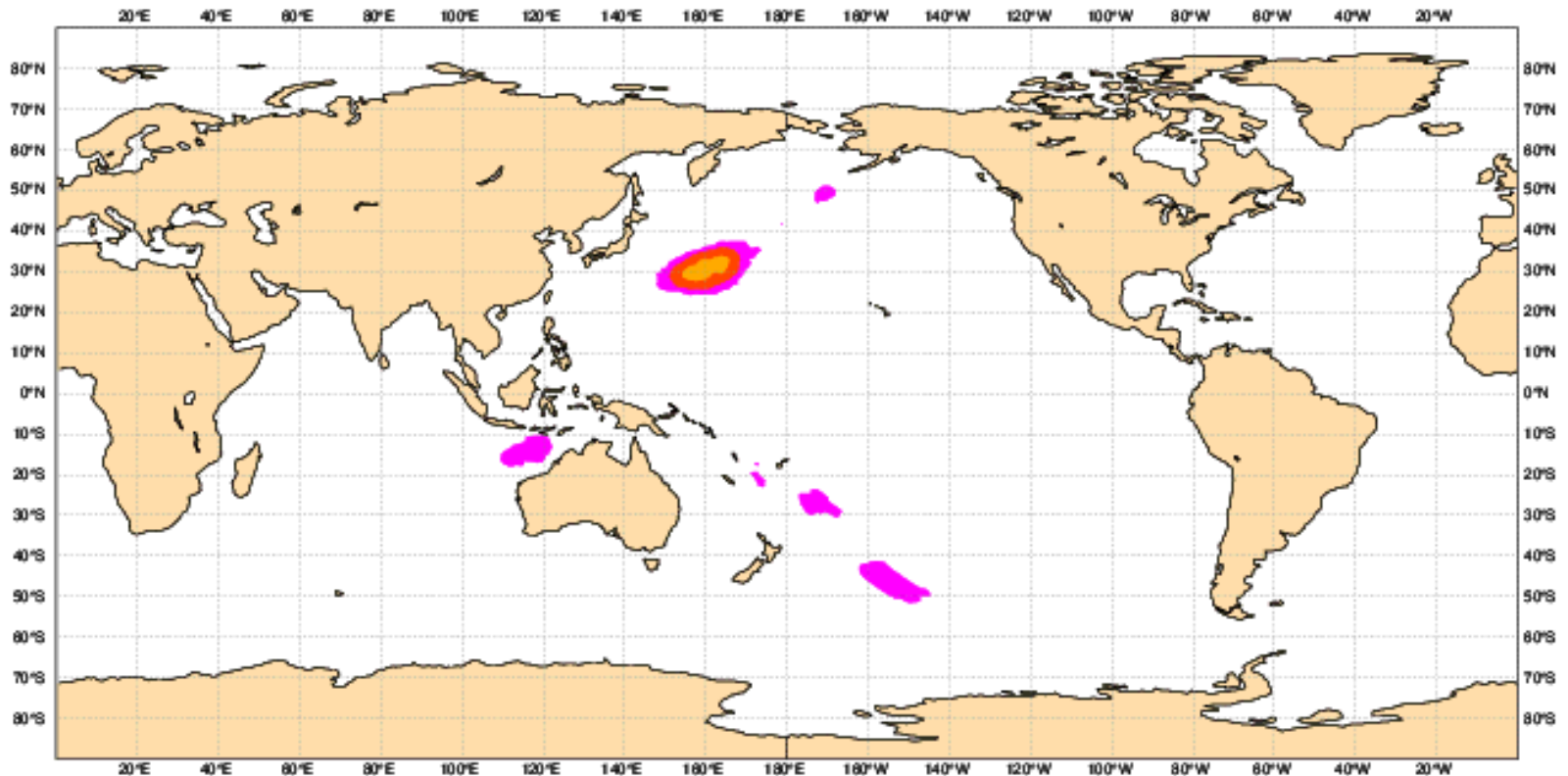


Calibrated Model anomaly probability in overlapping 15 x 20 degree boxes  
© Commonwealth of Australia 2026, Australian Bureau of Meteorology Model: ACCESS\_S2 Model Run: 11/04/2026 Issued: 13/04/2026

The **TC outlook** for the South Pacific shows near normal or reduced risk of TC formation for the week of 19-25 April 2026.

# Weekly ECMWF TC Forecast: 20-27 April 2026

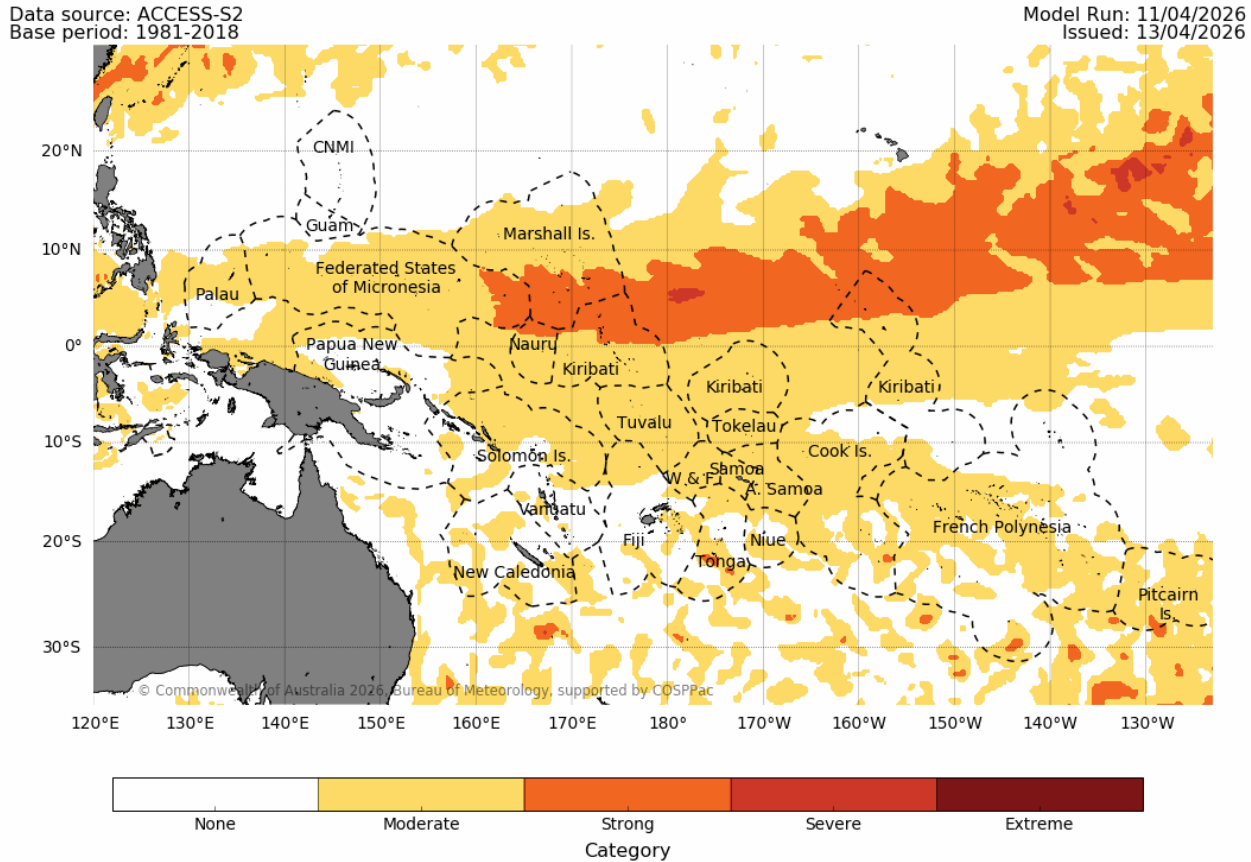
Weekly mean Tropical Storm Strike Probability. Date: 20260413 0 UTC t+(168-336)  
Probability of a TS passing within 300km radius



# Marine Heatwaves

The Marine heatwave forecast for May 2026 is in the Strong category for eastern FSM southern RMI, northern Nauru and northern Gilbert and Line Is. (Kiribati).

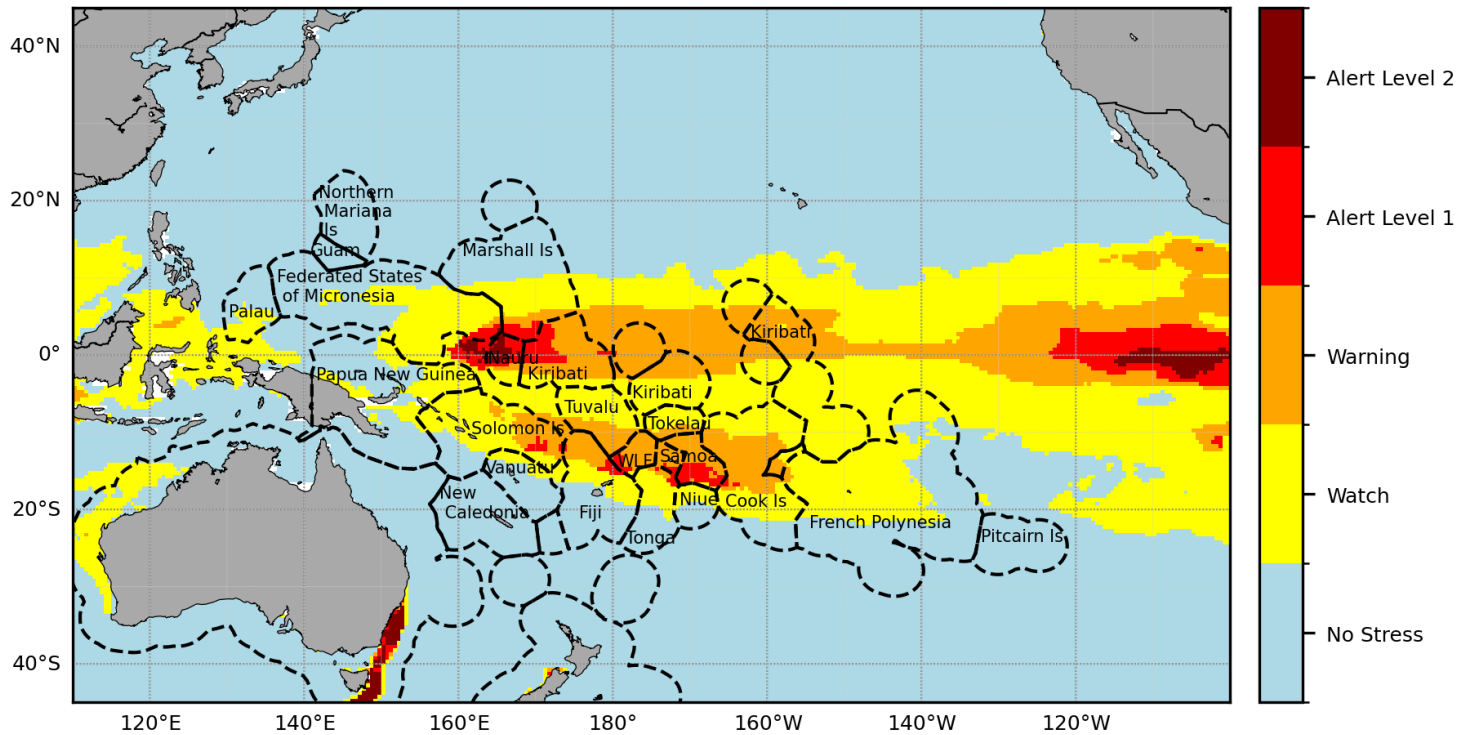
Marine heatwave category forecast for May 2026



# Coral Bleaching

The Coral Bleaching forecast for the 4 weeks to 27 April 2026 is for Alert level over Nauru, western Gilbert Is. (Kiribati), southeastern Solomon Is., far northern Fiji, and southern American Samoa.

Pacific Islands  
4 Week Coral Bleaching Outlook: 27 April 2026



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# Thank you

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