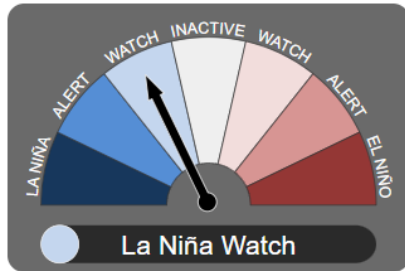


ENSO update - OCOF 206

19 November 2024

ENSO Update

ENSO remains neutral

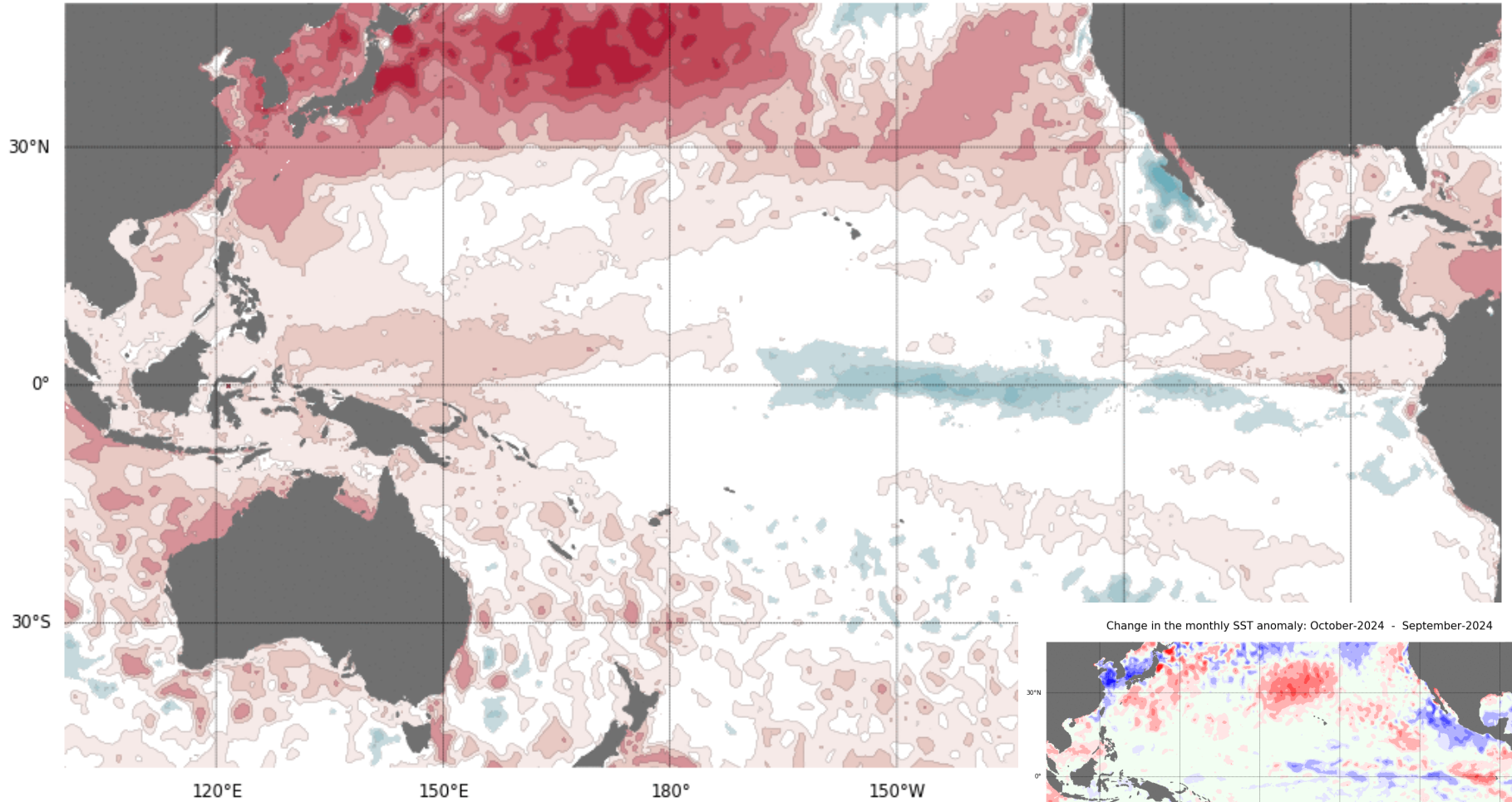


- The El Niño–Southern Oscillation (ENSO) remains neutral, with sea surface temperatures (SSTs) in the central equatorial Pacific Ocean at ENSO-neutral levels. Atmospheric indices, such as those related to patterns of surface pressure, cloud and trade winds, are broadly consistent with an ENSO-neutral state. While some have displayed La Niña-like signals over recent months, a consistent and sustained shift in the atmosphere has not been observed.
- The Bureau's model suggests SSTs are likely to remain within the ENSO-neutral thresholds (-0.8 °C to $+0.8\text{ °C}$) throughout the forecast period to February 2025.
- Of the 6 other climate models surveyed, only one model suggests SSTs in the tropical Pacific are likely to exceed the La Niña threshold (below -0.8 °C) throughout December to February, which is sufficient time to be classified as a La Niña event. All models forecast neutral ENSO values by March.

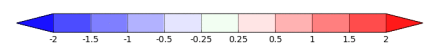
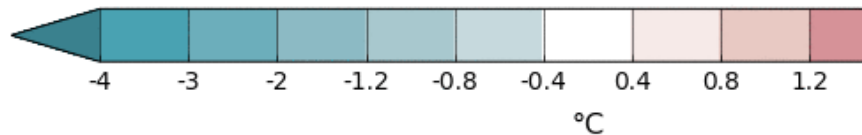
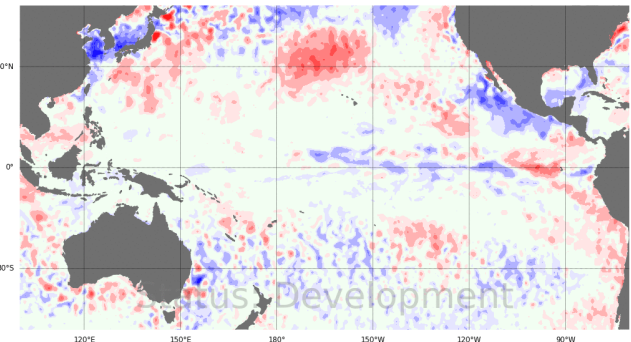
OFFICIAL

October 2024 SSTs

Sea surface temperature anomaly: 01/10/2024 to 31/10/2024



Change in the monthly SST anomaly: October-2024 - September-2024



Data: GAMSSA
Climatology baseline: 1991 to 2020
© Commonwealth of Australia 2024, Australian Bureau of Meteorology

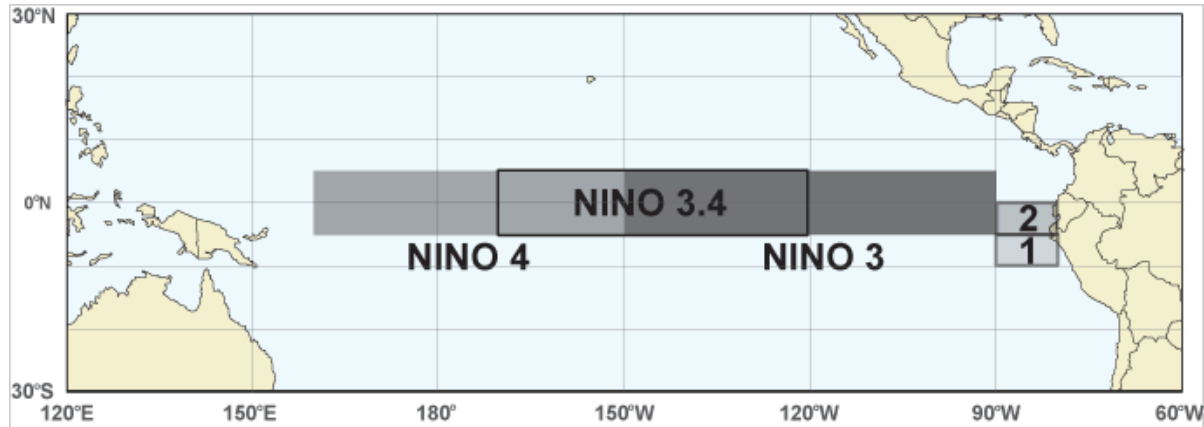
<http://www>

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

Anomaly monthly difference
Created: 14/11/2024

NINO INDICES SST anomalies (°C)

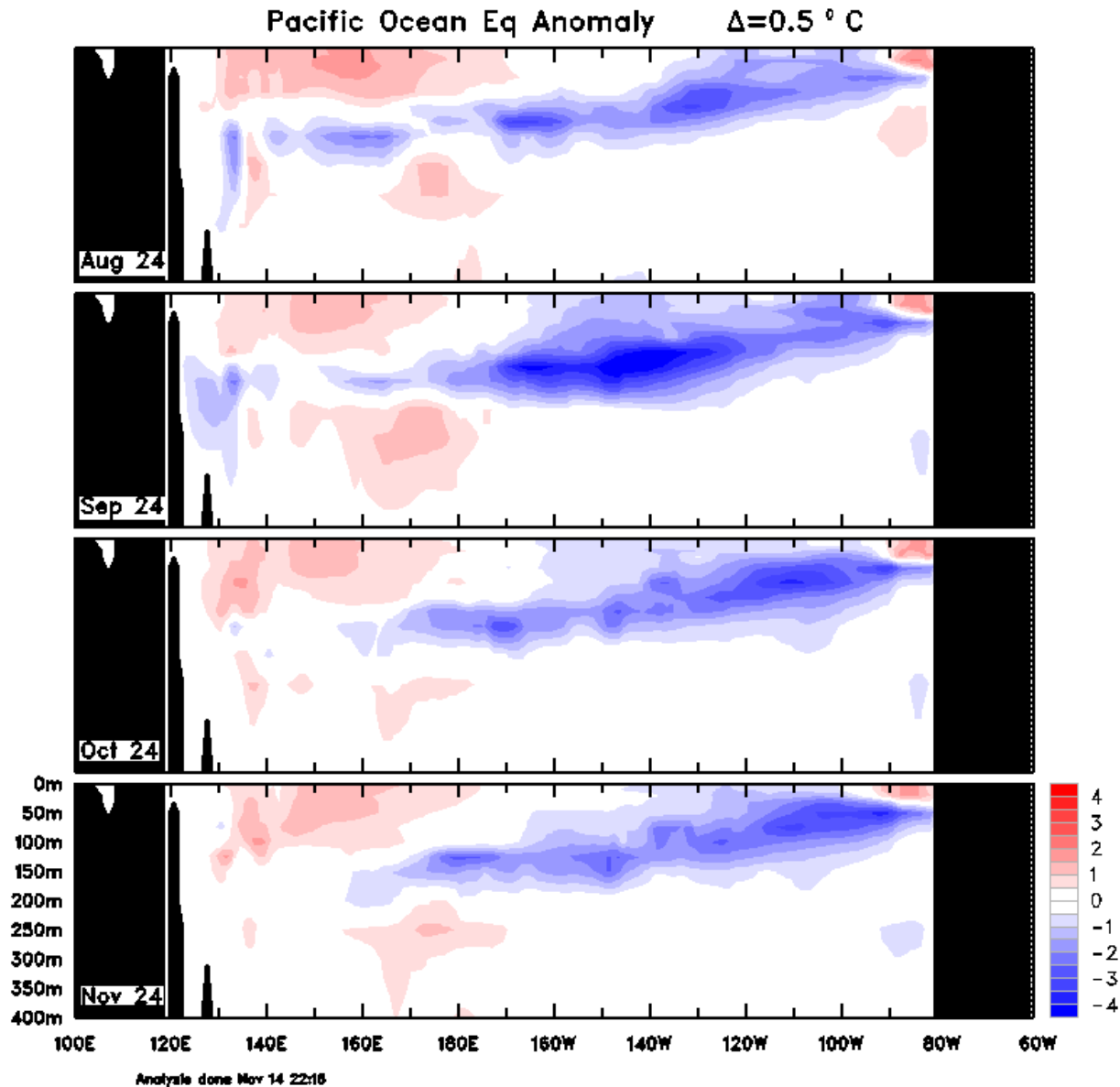


Index	Sep 2024	Oct 2024	Latest weekly
NINO3	0.0	-0.1	0.0
NINO3.4	-0.2	-0.3	0.0
NINO4	+0.4	+0.3	+0.5

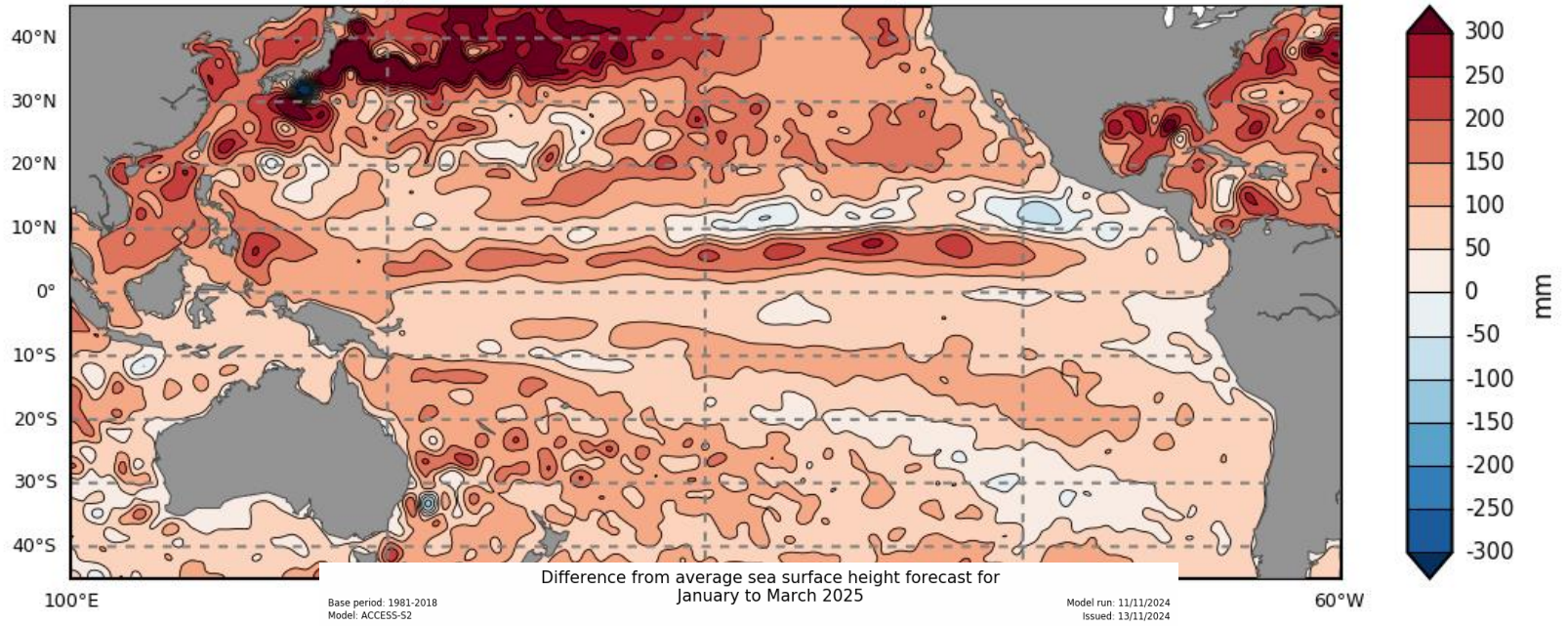
Weekly data for the week ending 10/11/2024

Equatorial Pacific sub-surface profile

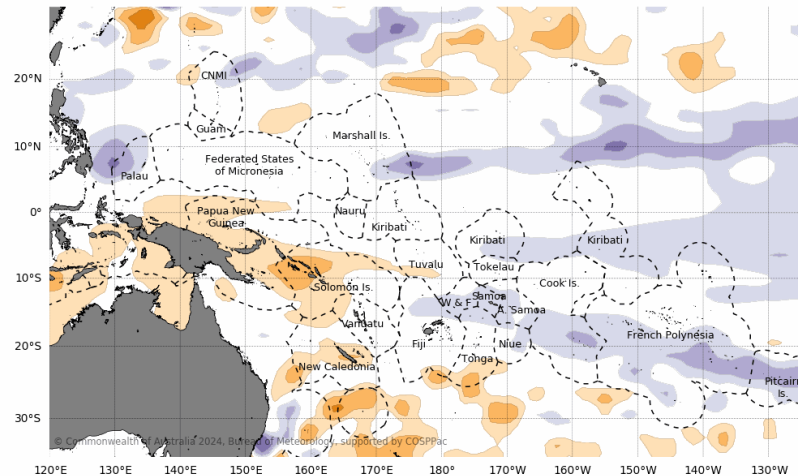
Bureau of Meteorology



October 2024 Sea Level Anomaly

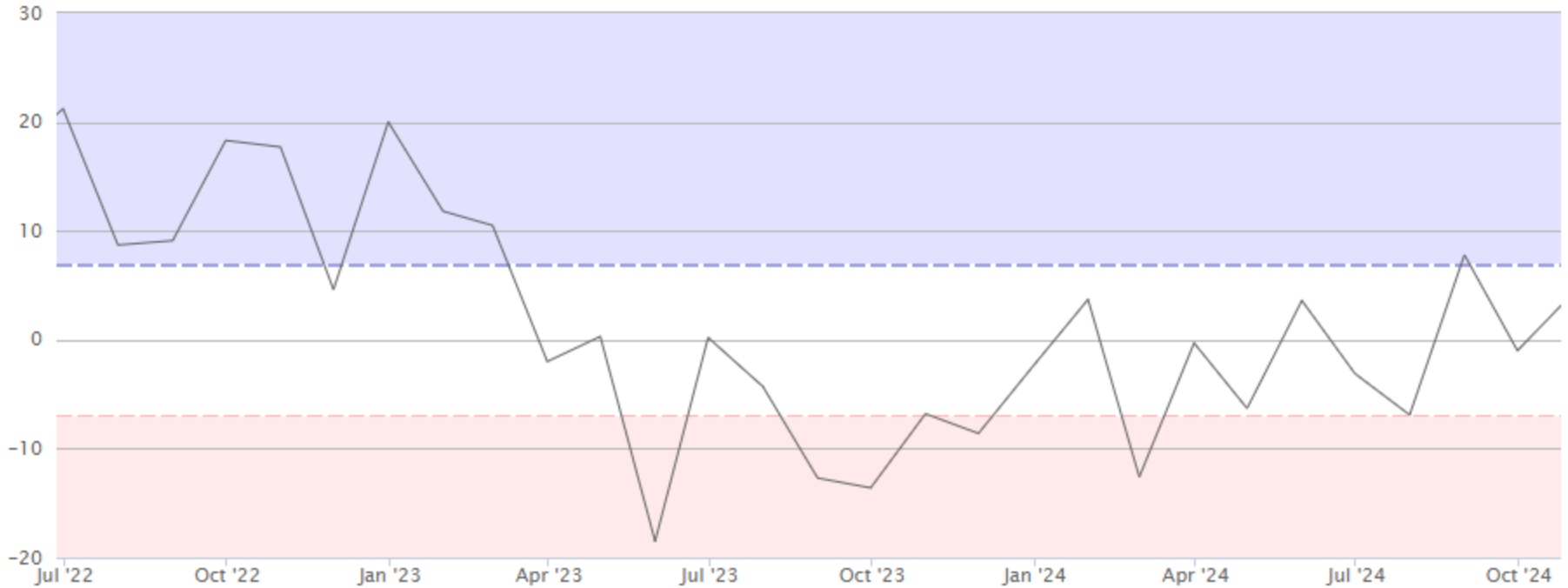


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Australian Bureau of Meteorology, CO



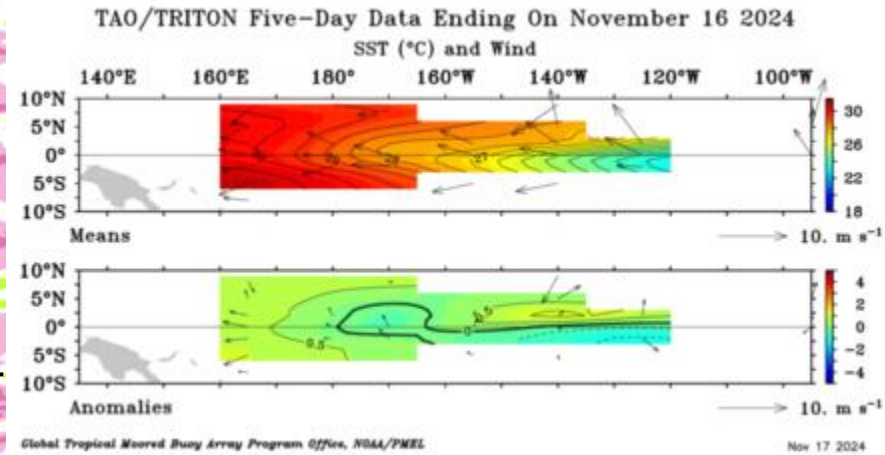
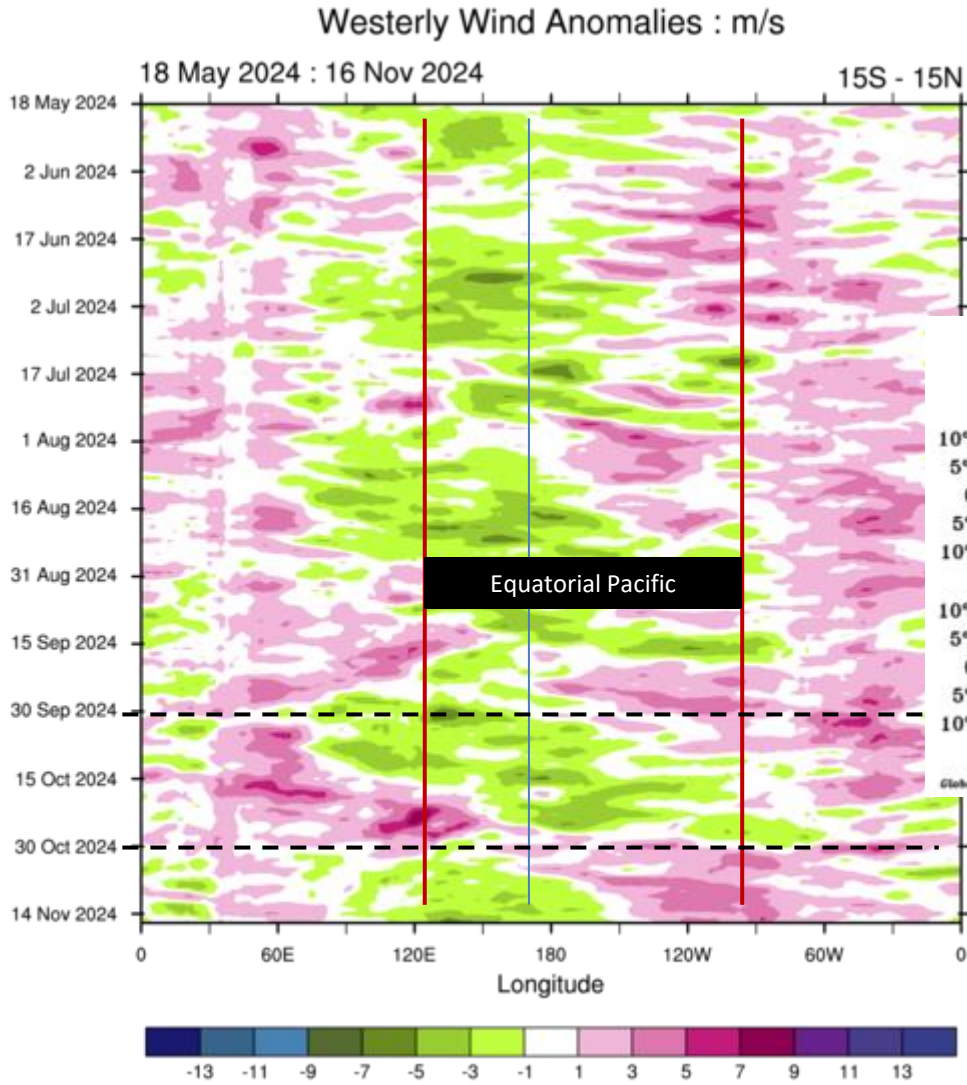
Southern Oscillation Index

Southern Oscillation Index - monthly



At 16 November 2024: 30-day SOI = +4; 90-day SOI = +4

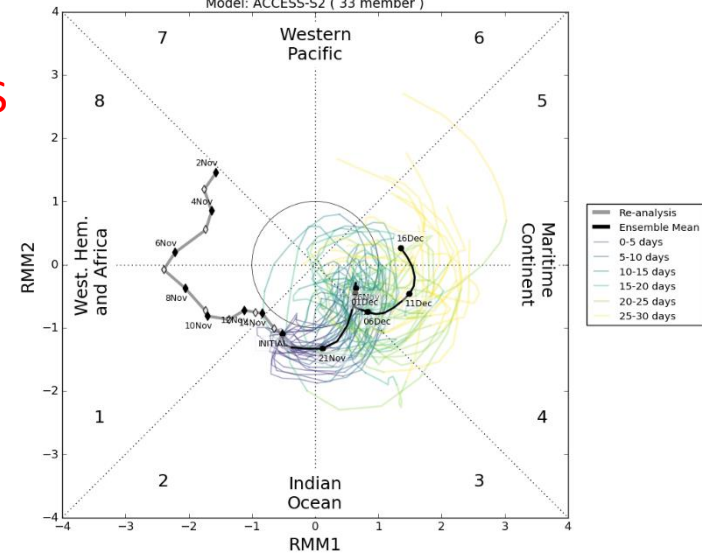
Equatorial Trade Winds



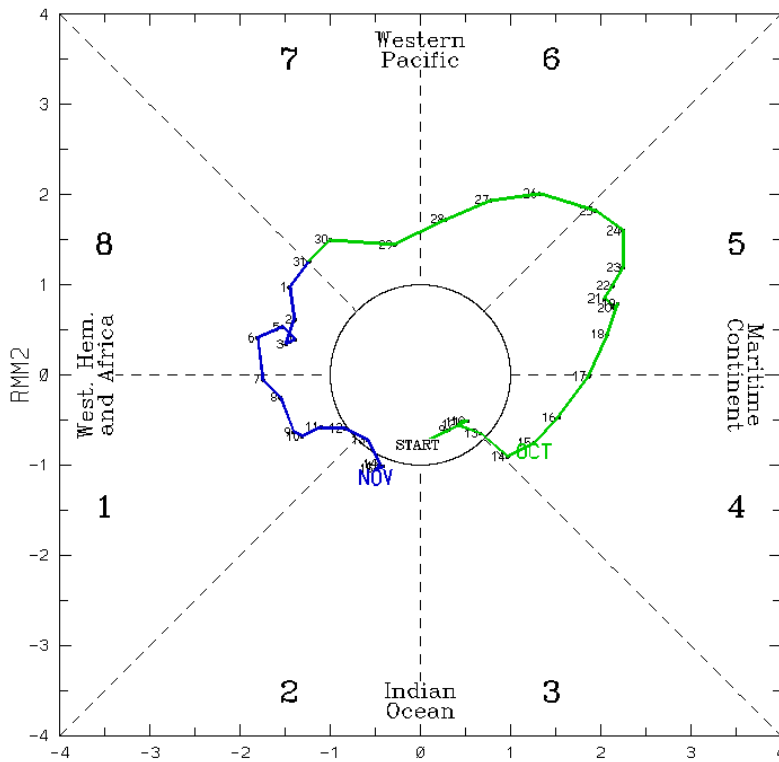
Madden-Julian Oscillation

ACCESS

MJO Index Forecast initialised: 16 November 2024
Model: ACCESS-S2 (33 member)



(RMM1,RMM2) phase space for 8-Oct-2024 to 16-Nov-2024

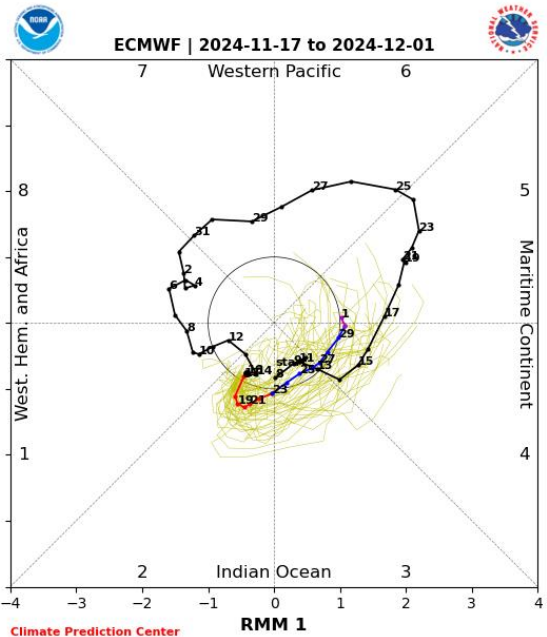


Labelled dots for each day.

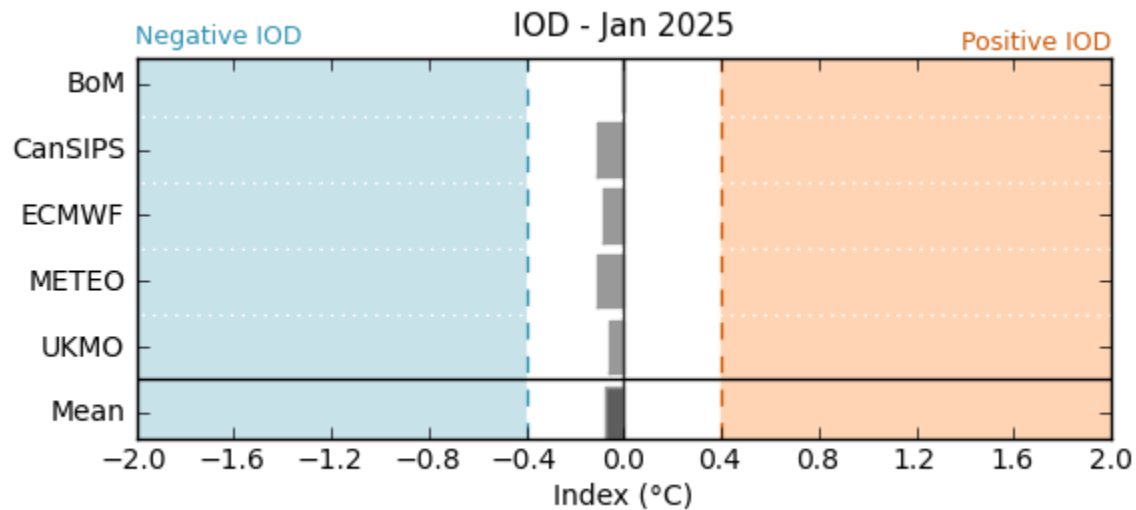
Blue line is for Nov, green line is for Oct, red line is for Sep.

(C) Copyright Commonwealth of Australia Bureau of Meteorology

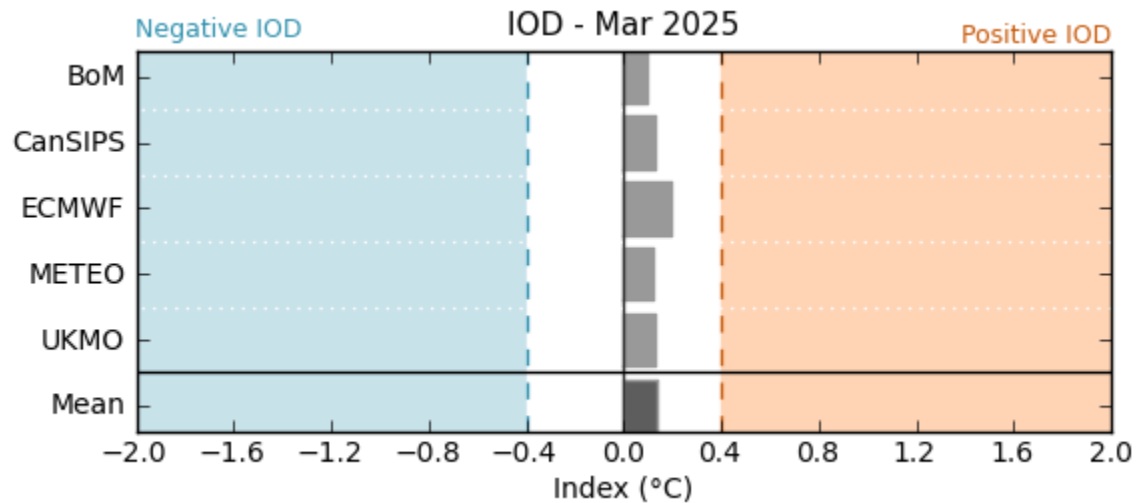
ECMWF



Indian Ocean Dipole (IOD)



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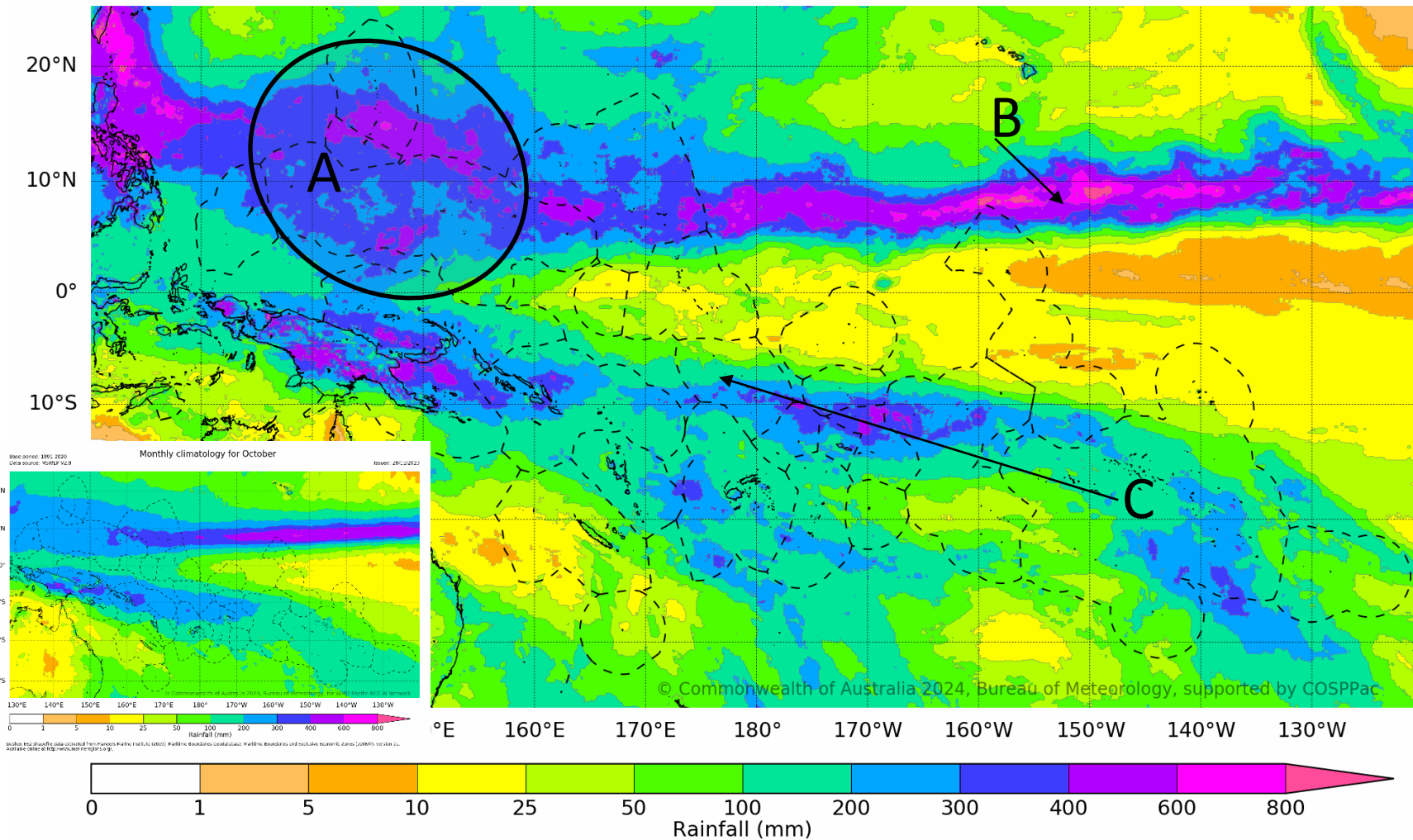
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Satellite Rainfall October 2024

1-month total rainfall ending October 2024

Data source: MSWEP

Issued: 07/11/2024



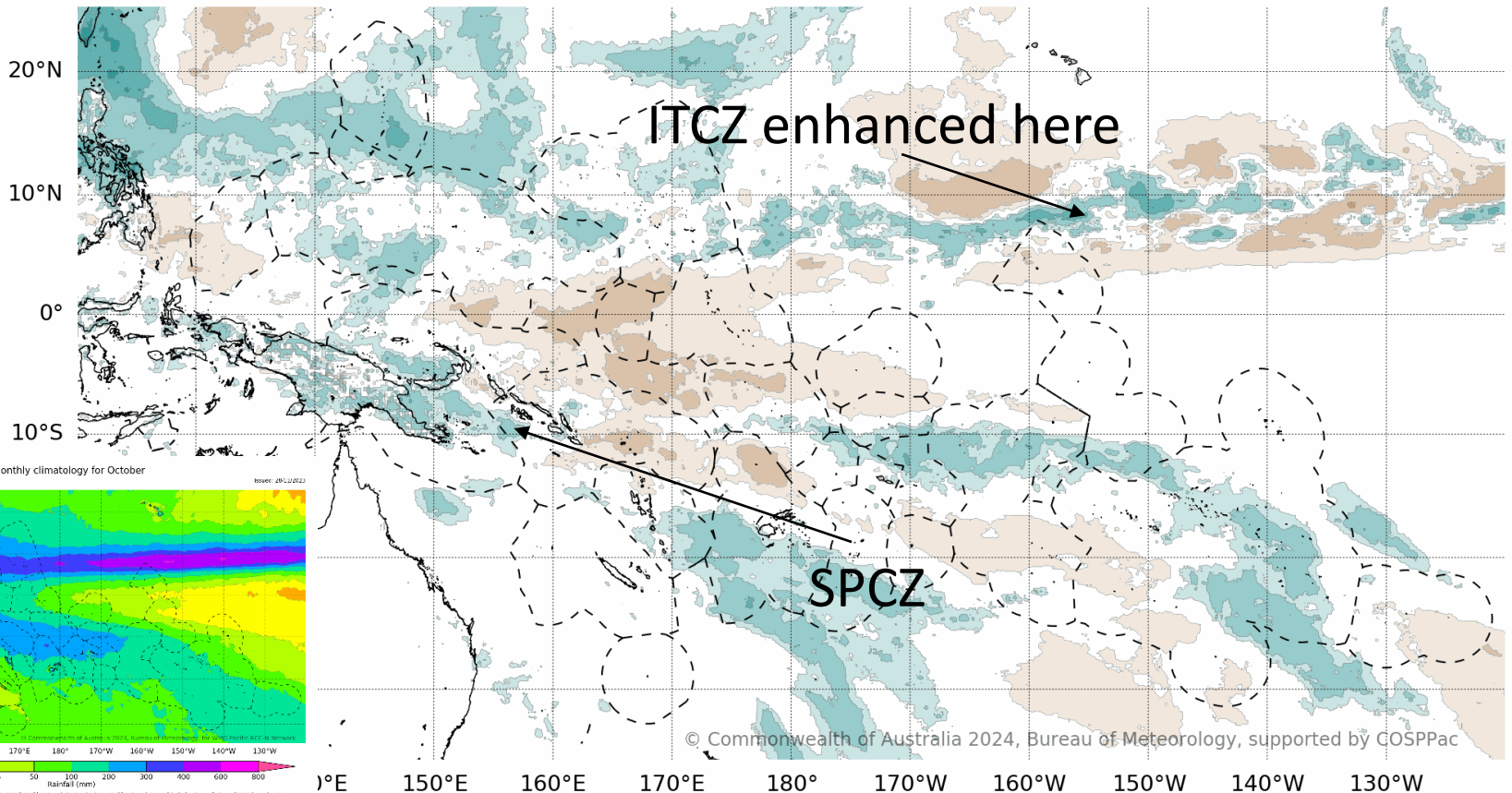
Dashed EEZ shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <http://www.marineregions.org/>.

Satellite Rainfall Anomaly October 2024

Base period: 1980-2021
Data source: MSWEP

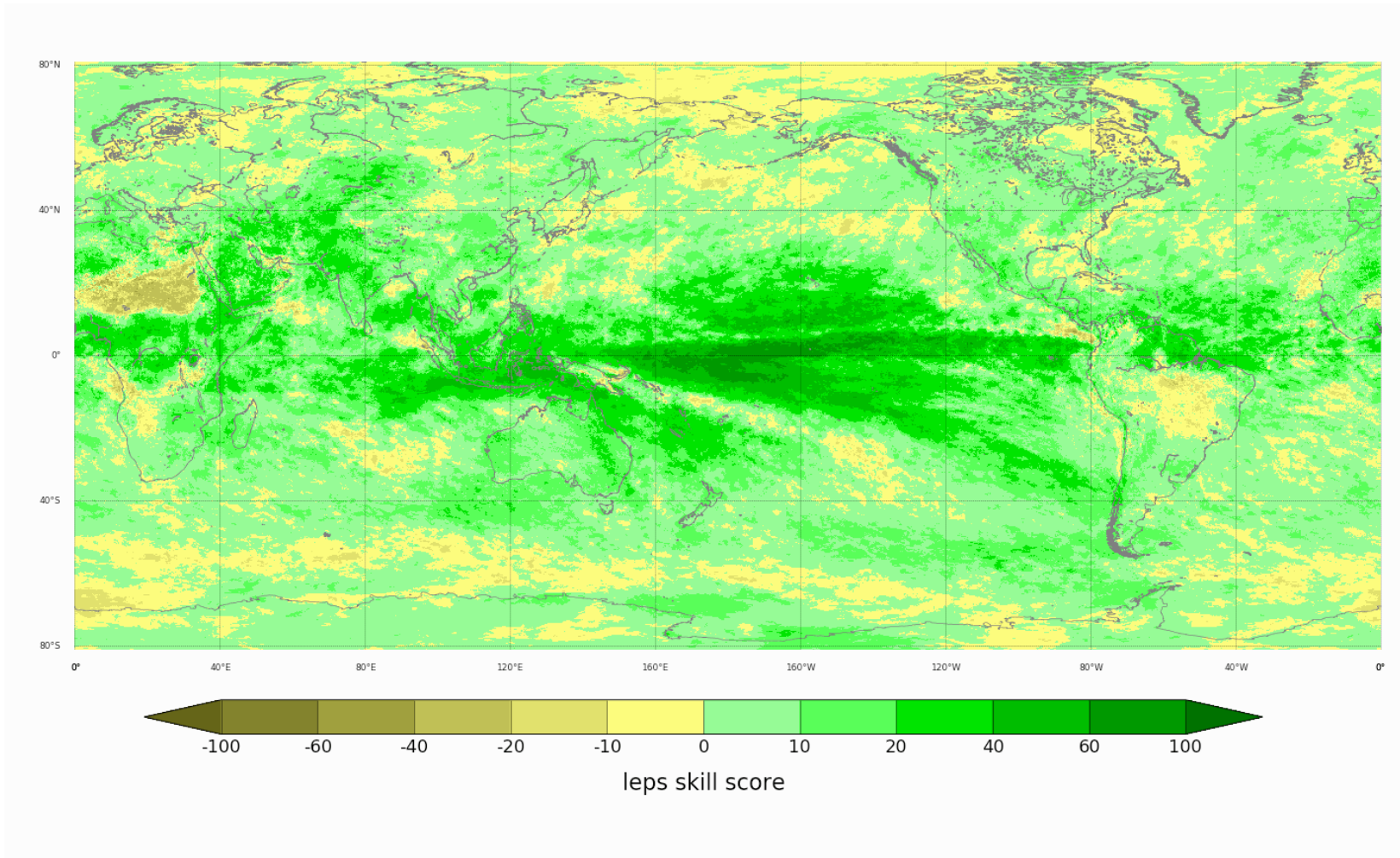
1-month total rainfall anomaly ending October 2024

Issued: 07/11/2024

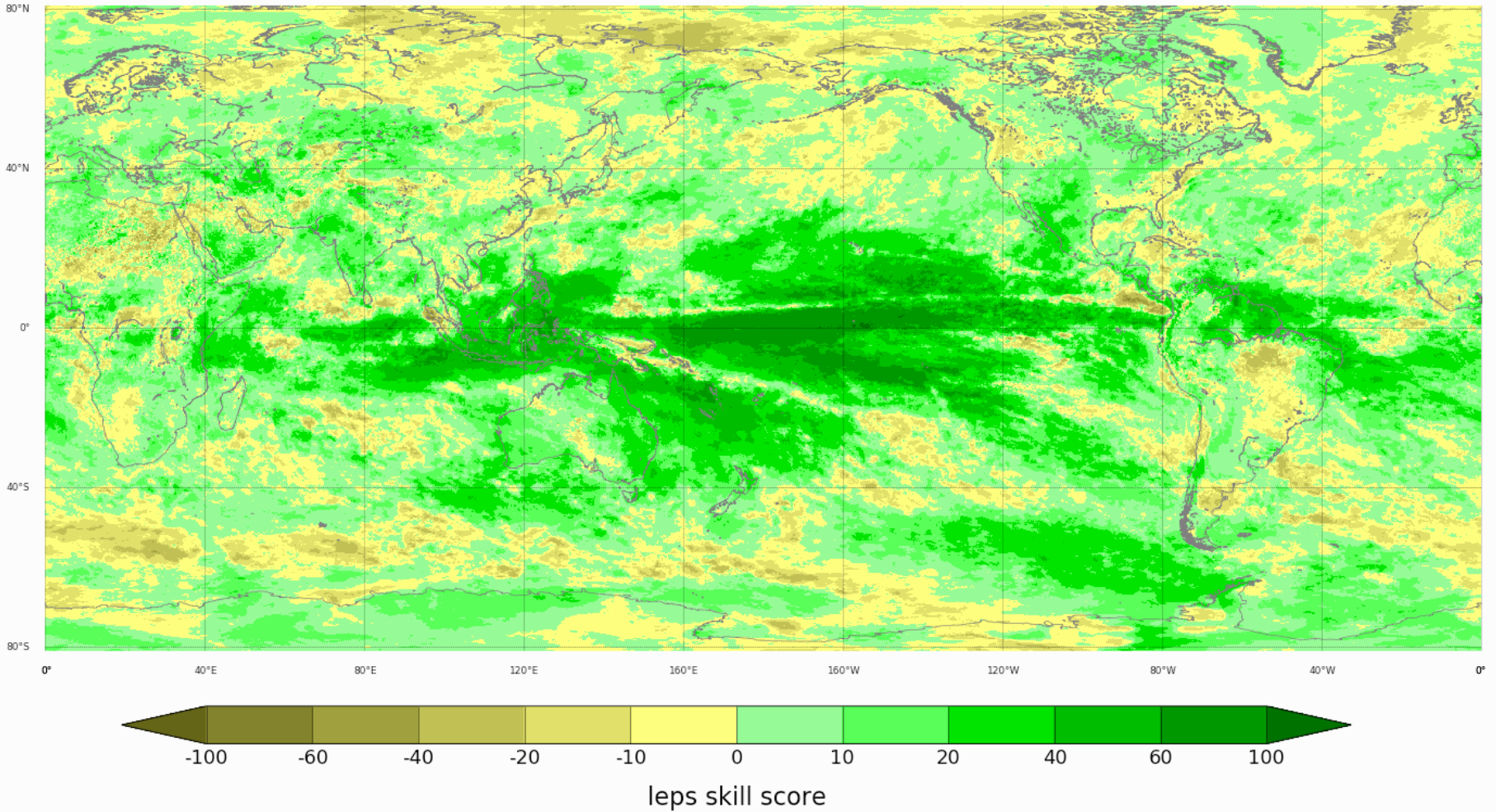


Dashed EEZ shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <http://www.marineregions.org/>.

Forecast Verification: August



Forecast Verification: Aug-Oct

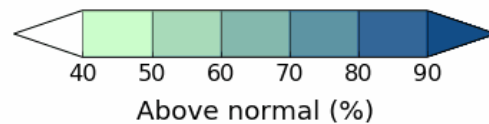
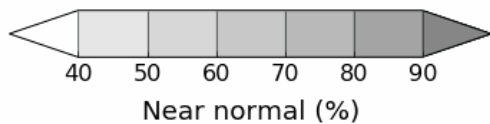
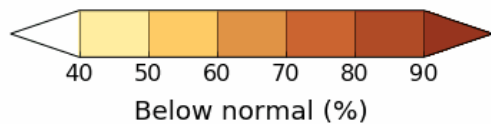
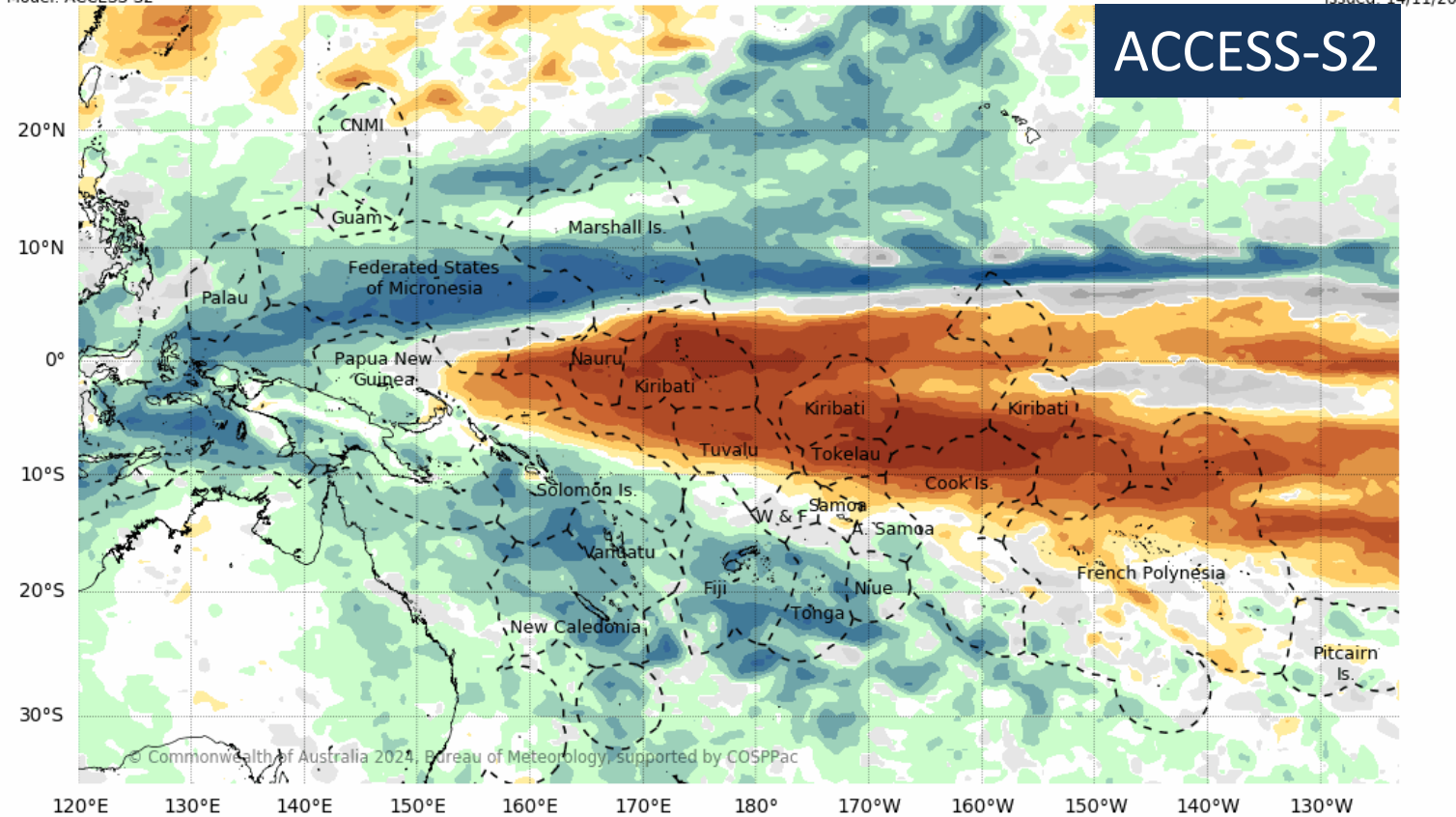


Model Rainfall Predictions (DJF)

Tercile rainfall probabilities for
December 2024 to February 2025

Base period: 1981-2018
Model: ACCESS-S2

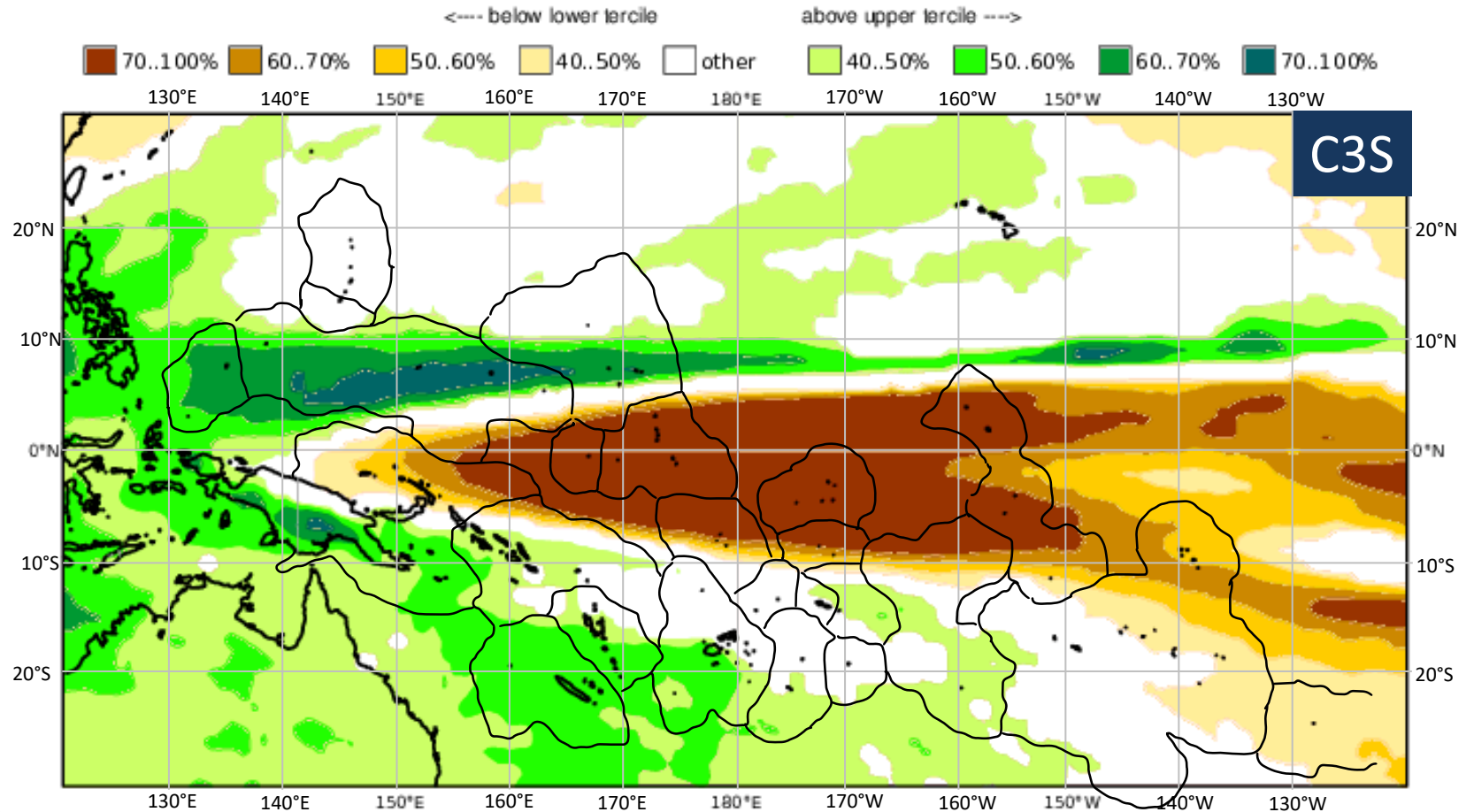
Model run: 11/11/2024
Issued: 14/11/2024



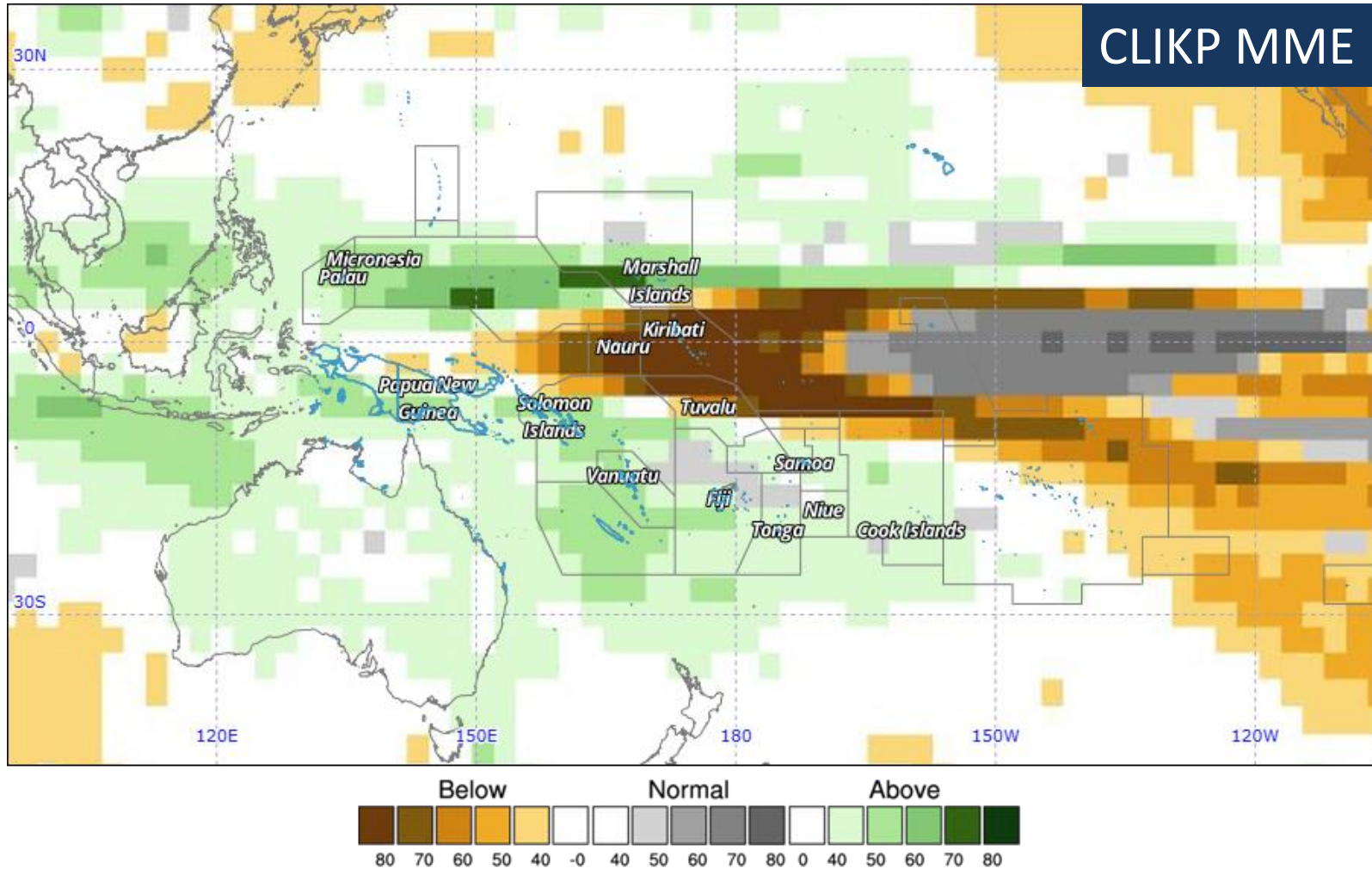
-- -- EEZ border V11 (Flanders Marine Institute, 2019).

Model Rainfall Predictions (DJF)

C3S multi-system seasonal forecast ECMWF/Met Office/Météo-France/CMCC/DWD/NCEP/JMA/ECCC
 Prob(most likely category of precipitation) NDJ 2024/25
 Nominal forecast start: 01/10/24
 Unweighted mean



Model Rainfall Predictions (DJF)



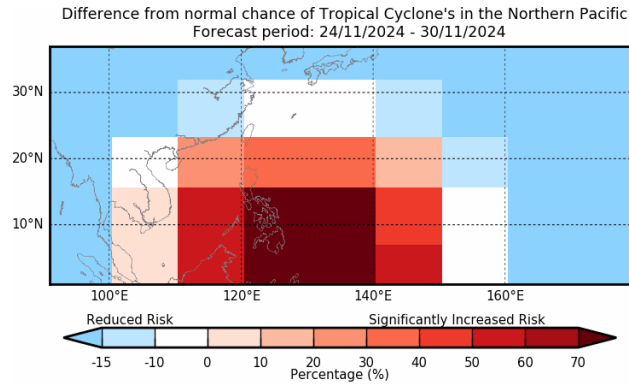
Year: 2024, Season: NDJ, Lead Month: 3, Method: GAUS

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

Generated using CLIK® (2024-11-19)

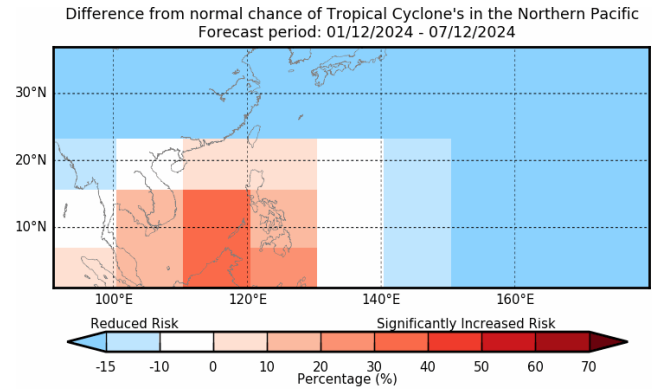
TC Outlooks

Northwest Pacific



Calibrated Model anomaly probability in overlapping 15 x 20 degree boxes
© Commonwealth of Australia 2024, Australian Bureau of Meteorology

Model: ACCESS_S2 Model Run: 16/11/2024 Issued: 18/11/2024

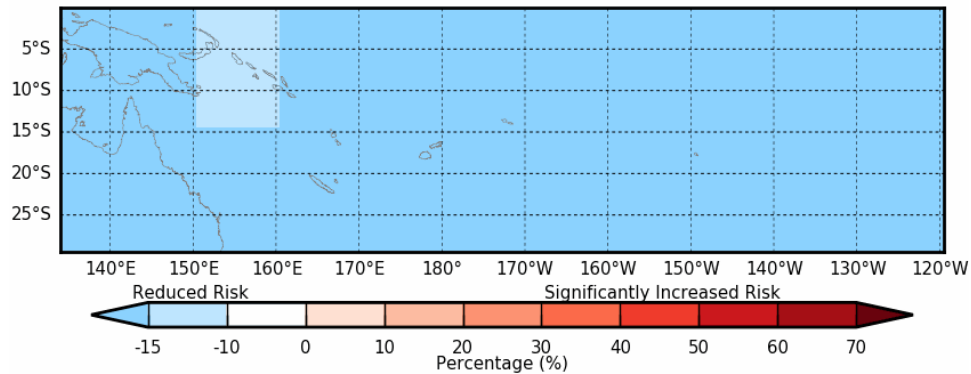


Calibrated Model anomaly probability in overlapping 15 x 20 degree boxes
© Commonwealth of Australia 2024, Australian Bureau of Meteorology

Model: ACCESS_S2 Model Run: 16/11/2024 Issued: 18/11/2024

South Pacific

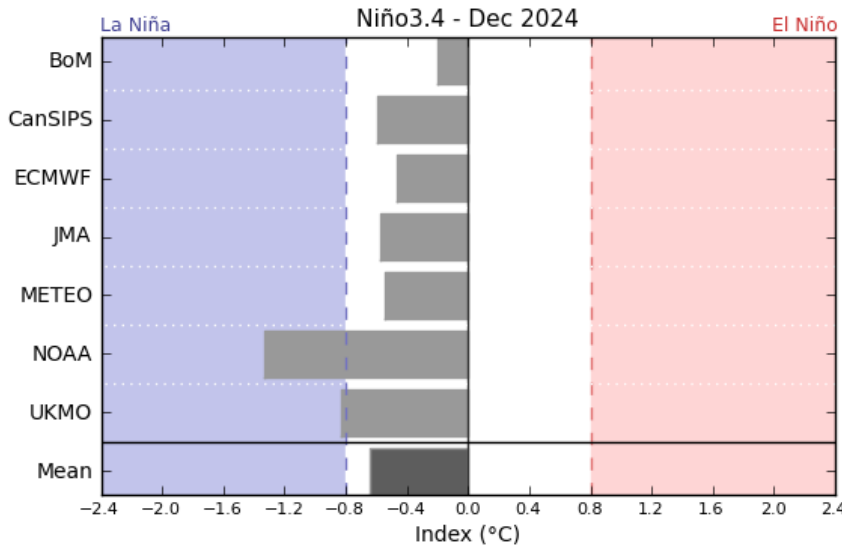
Difference from normal chance of Tropical Cyclone's in the South Pacific
Forecast period: 24/11/2024 - 30/11/2024



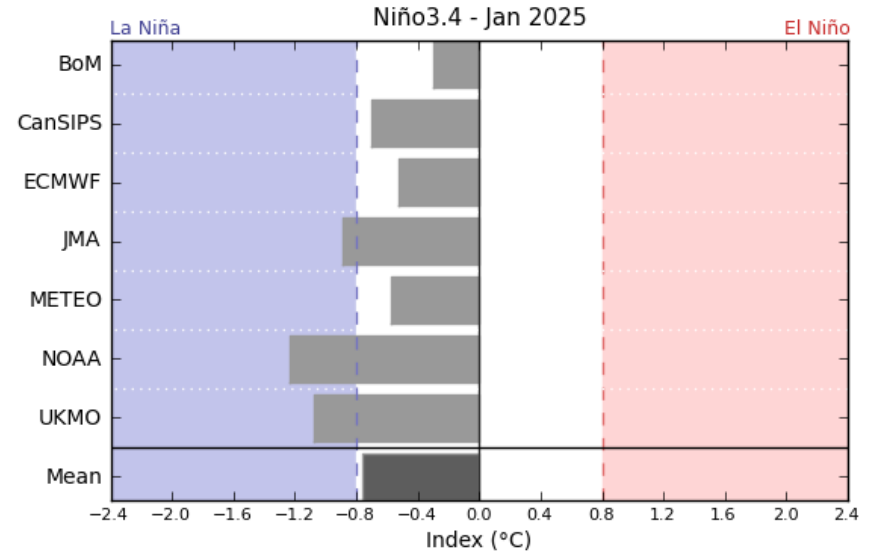
Calibrated Model anomaly probability in overlapping 15 x 20 degree boxes
© Commonwealth of Australia 2024, Australian Bureau of Meteorology

Model: ACCESS_S2 Model Run: 16/11/2024 Issued: 18/11/2024

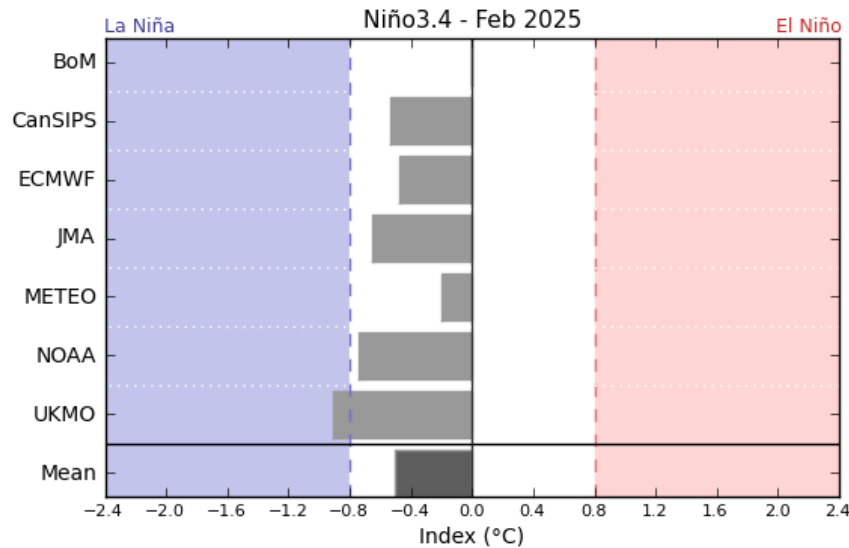
Climate Model Summary



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IRI Climate Model Summary

Model Predictions of ENSO from Oct 2024

