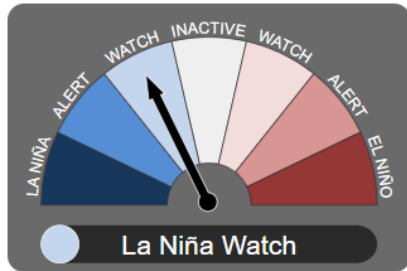


ENSO update - OCOF 201

20 June 2024

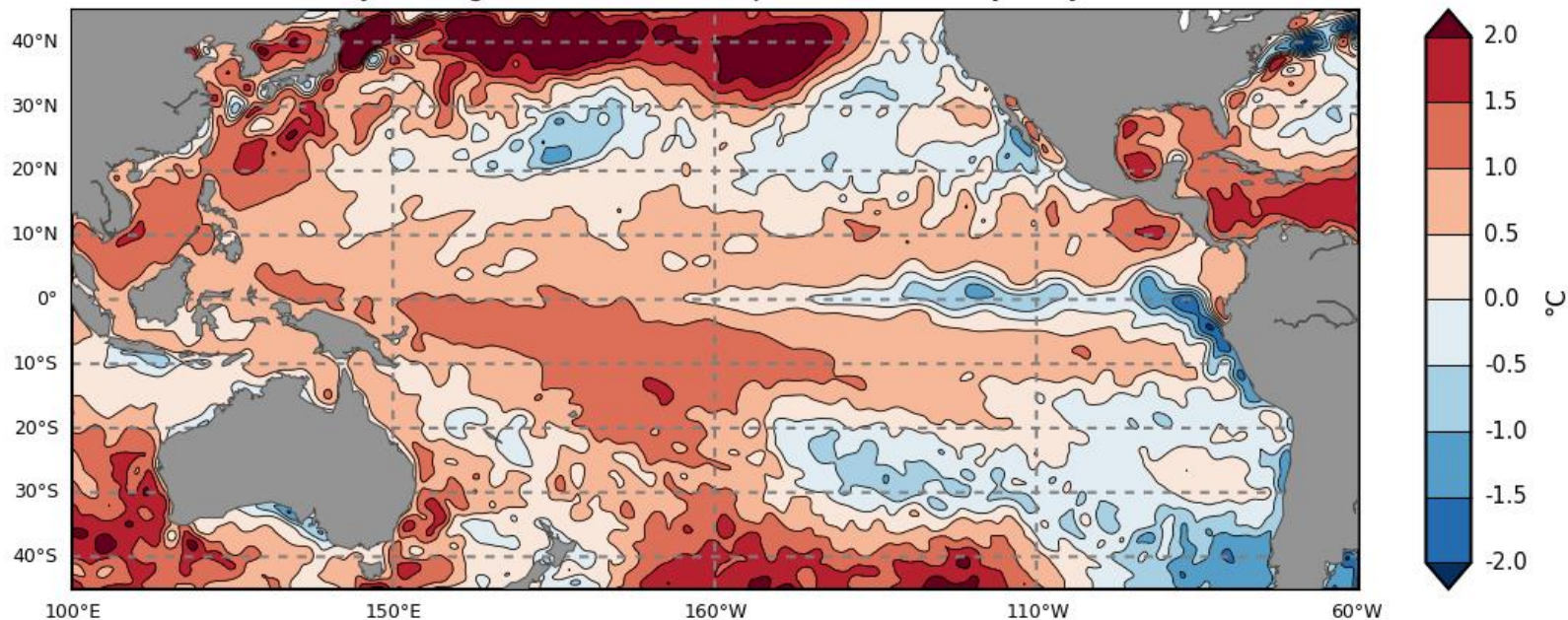
ENSO Update

Neutral ENSO and IOD



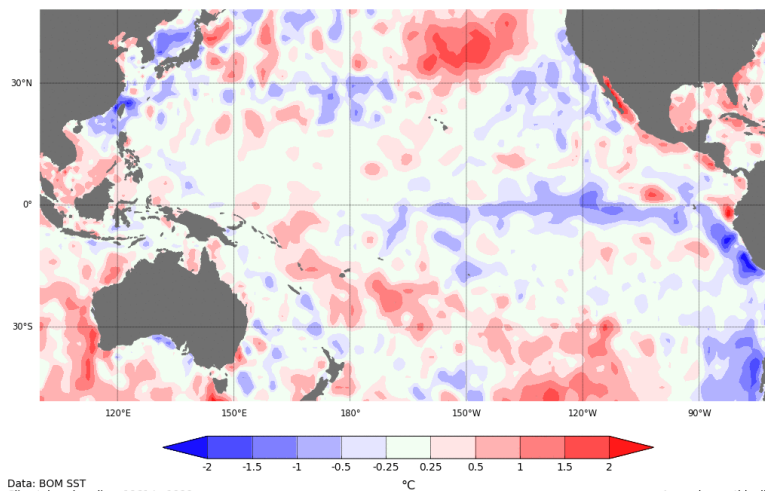
- The El Niño–Southern Oscillation (ENSO) is currently neutral. Sea surface temperatures (SSTs) in the central Pacific have been steadily cooling since December 2023. This surface cooling is supported by below average sub-surface temperatures in the central and eastern Pacific. Recent cloud and surface pressure patterns are ENSO-neutral.
- Climate models suggest that SSTs in the central tropical Pacific are likely to continue to cool over the coming months. Four of 7 models suggest SSTs are likely to remain at neutral ENSO levels, with the remaining 3 models showing the possibility of SSTs cooling to La Niña levels from August.
- The Bureau's ENSO Outlook is at La Niña Watch due to early signs that an event may form in the Pacific Ocean later in 2024. The chance is about 50%.

Pacific Ocean Monthly Average Sea Surface Temperature Anomaly: May 2024



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Australian Bureau of Meteorology, COSPPac

Change in the monthly SST anomaly: May-2024 - April-2024

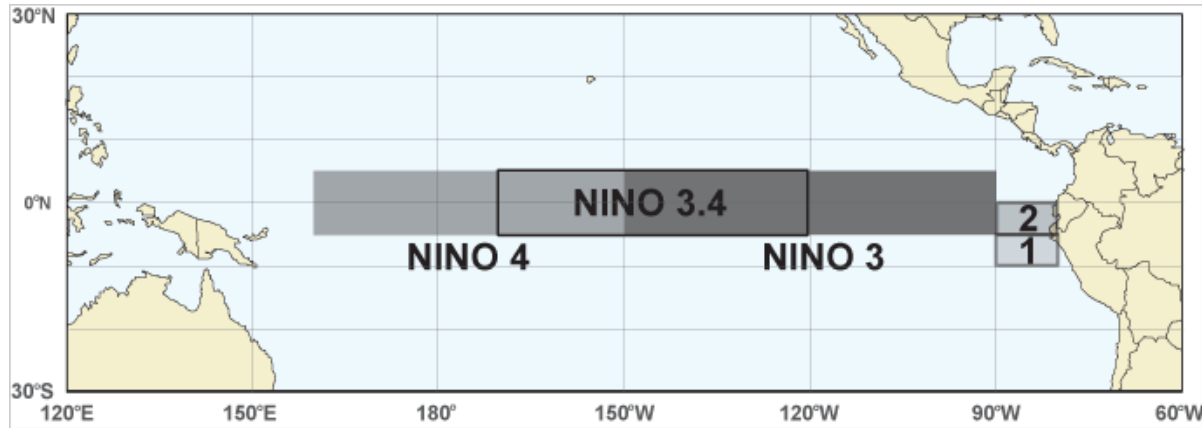


Data: BOM SST
Climatology baseline: 1961 to 1990
© Commonwealth of Australia 2024, Australian Bureau of Meteorology

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

Anomaly monthly difference
Created: 10/06/2024

NINO INDICES SST anomalies (°C)

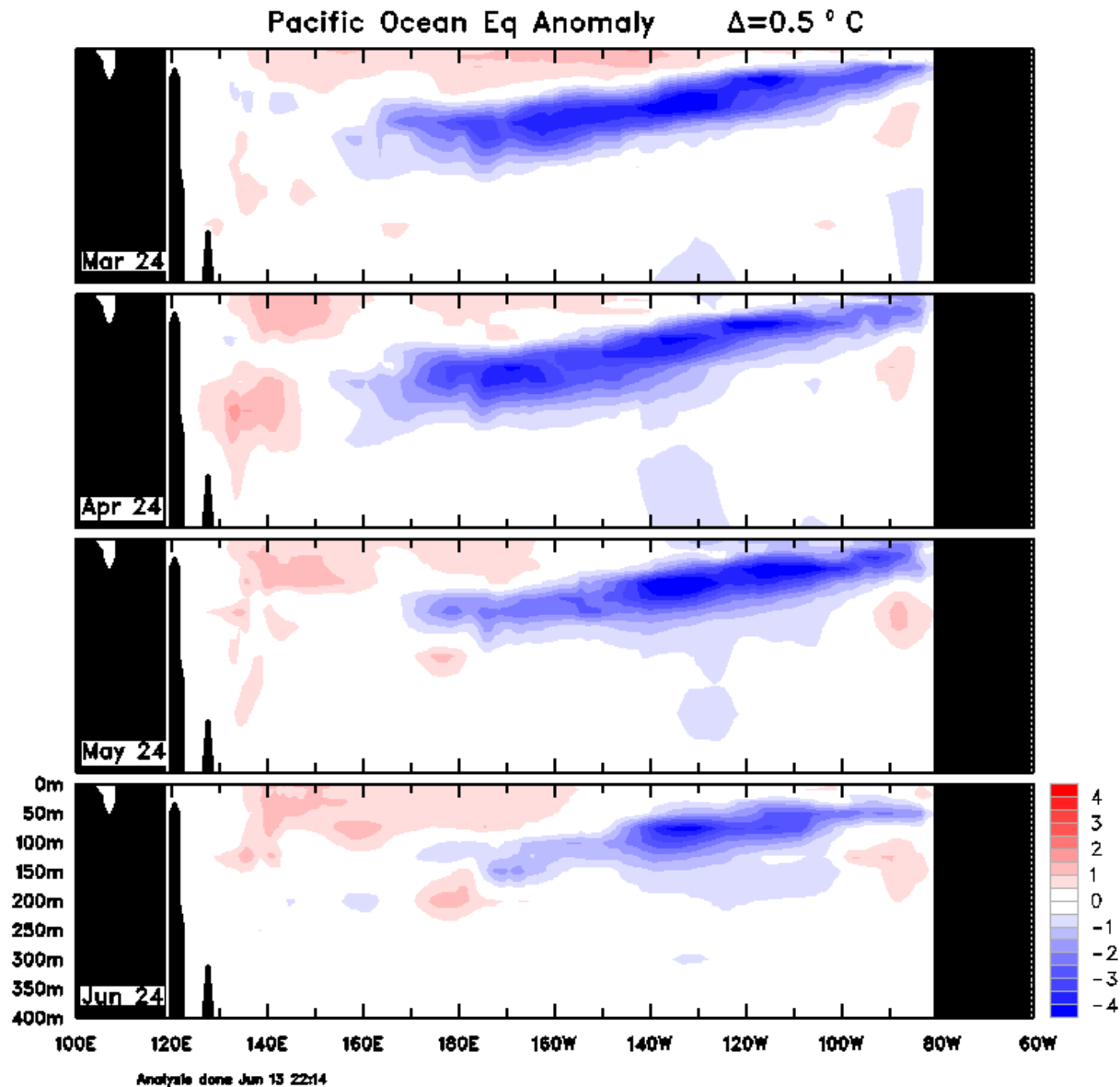


Index	April 2024	May 2024	Latest weekly
NINO3	+0.5	0.0	+0.2
NINO3.4	+0.8	+0.4	+0.3
NINO4	+0.8	+0.7	+0.7

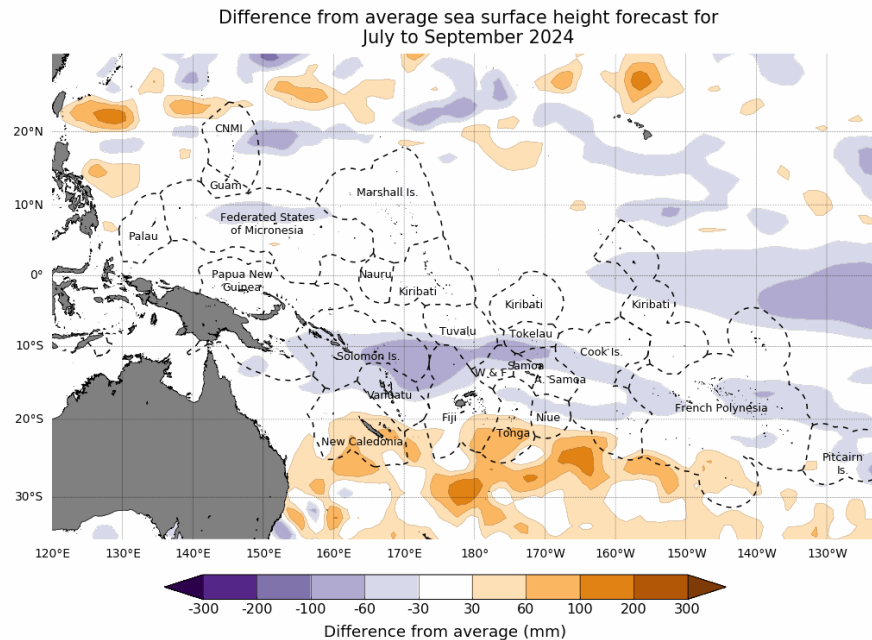
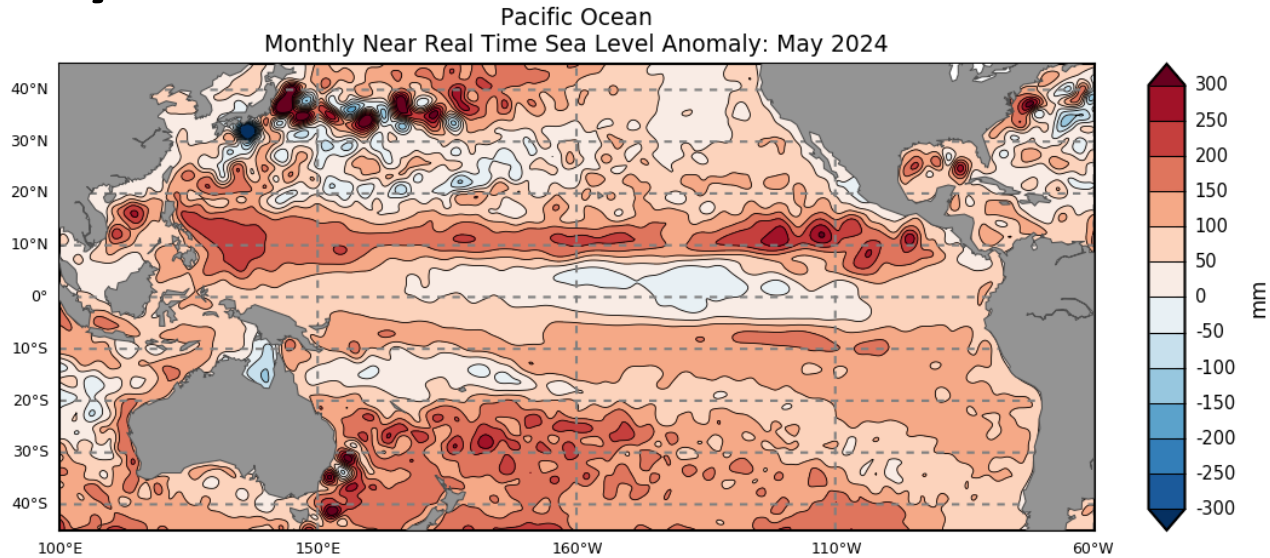
Weekly data for the week ending 16/06/2024

Equatorial Pacific sub-surface profile

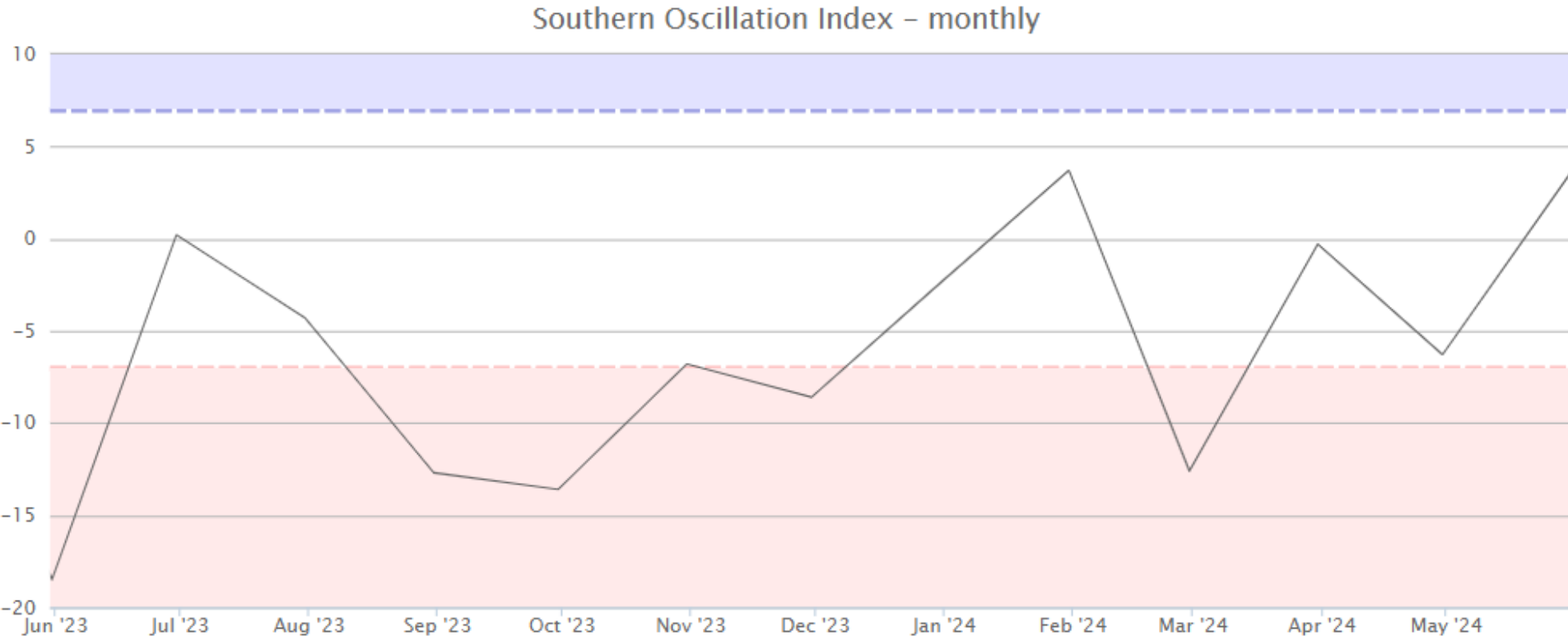
Bureau of Meteorology



May 2024 Sea Level Anomaly



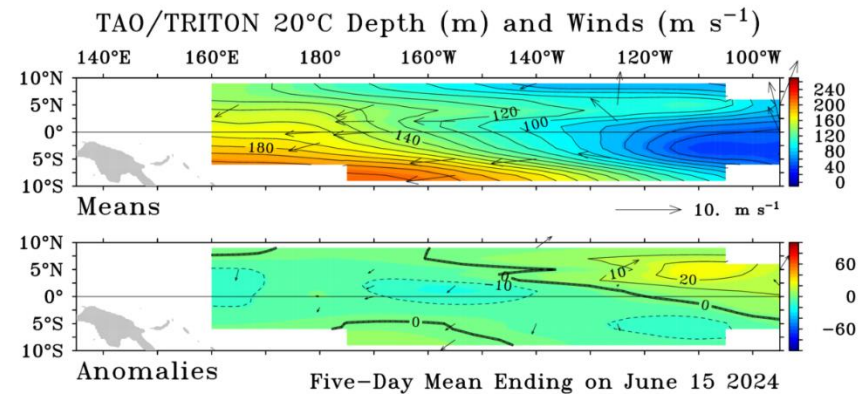
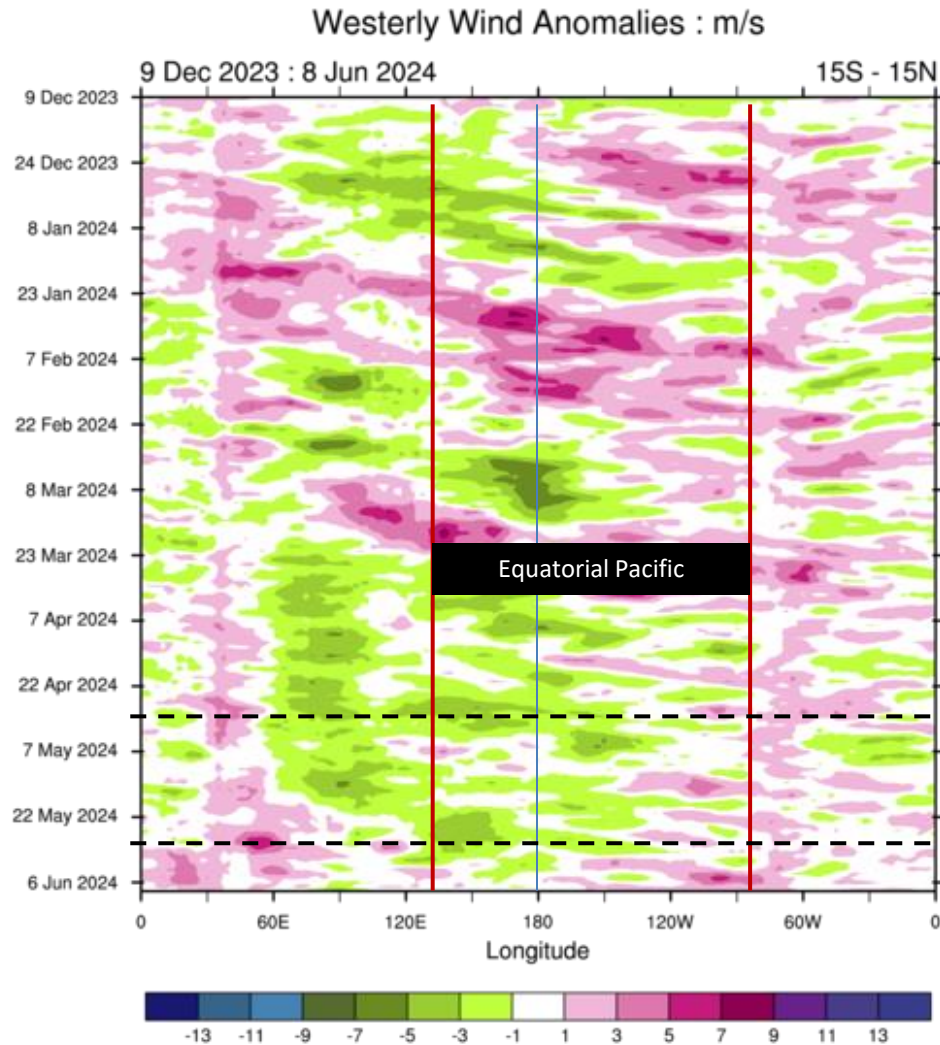
Southern Oscillation Index



Southern Oscillation Index monthly data												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2024	+3.7	-12.6	-0.3	-6.3	+3.6	-	-	-	-	-	-	-
2023	+11.8	+10.5	-2.0	+0.3	-18.5	+0.2	-4.3	-12.7	-13.6	-6.8	-8.6	-2.4

At 17 June 2024: 30-day SOI = -4; 90-day SOI = -3

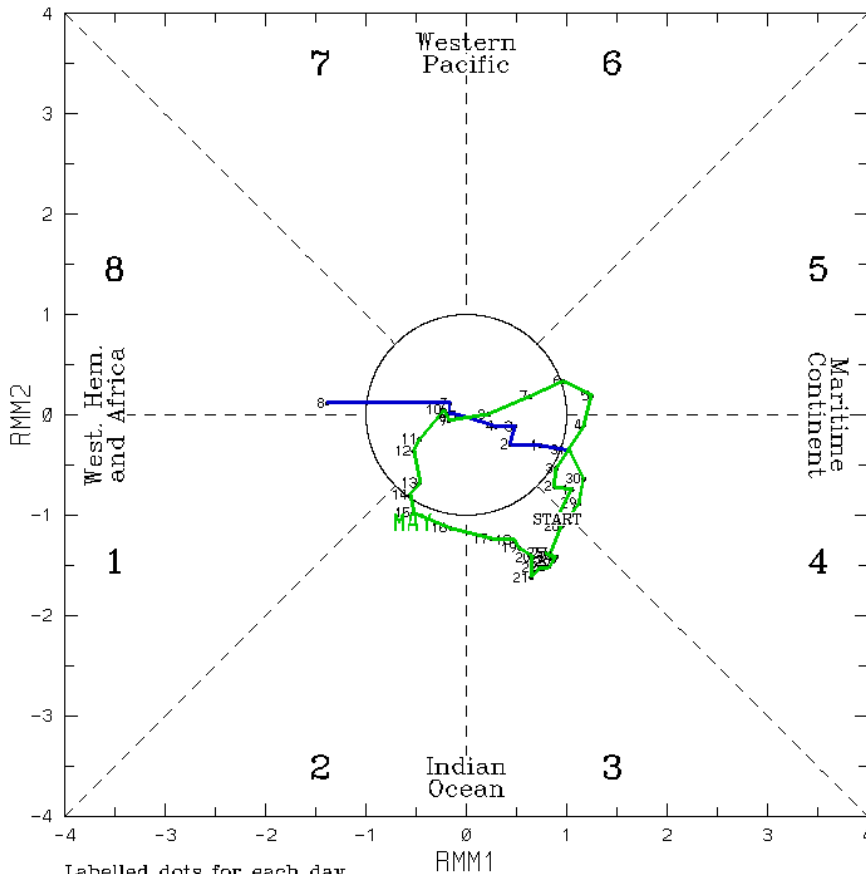
Equatorial Trade Winds



Global Tropical Moored Buoy Array Program Office, NOAA/PMEL

Madden-Julian Oscillation

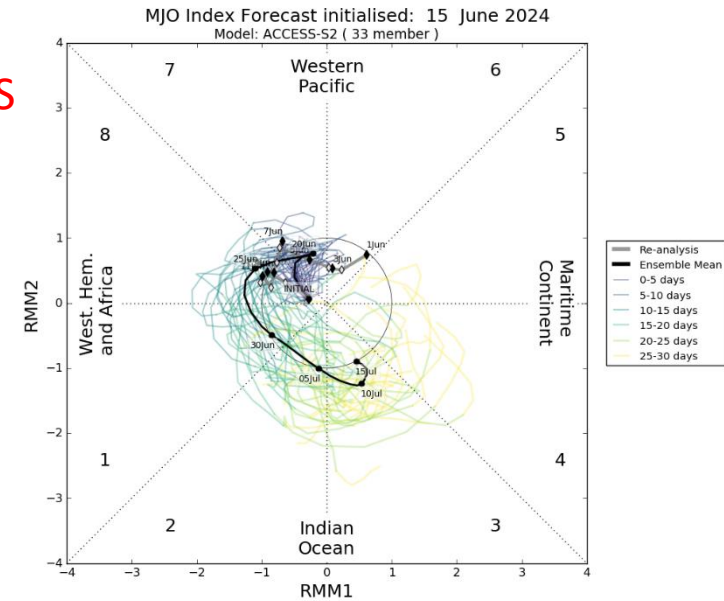
(RMM1,RMM2) phase space for 30-Apr-2024 to 8-Jun-2024



Labelled dots for each day.

Blue line is for Jun, green line is for May, red line is for Apr.

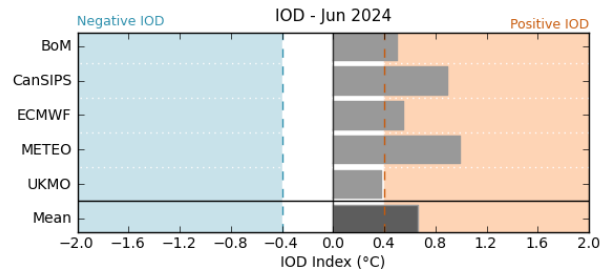
ACCESS



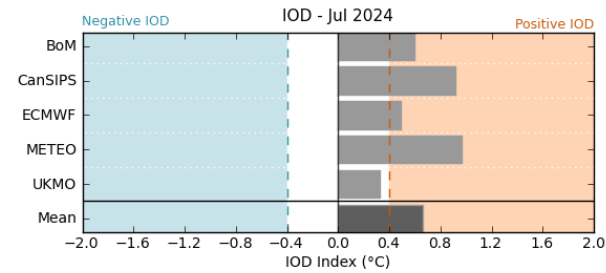
ECMWF

Not available

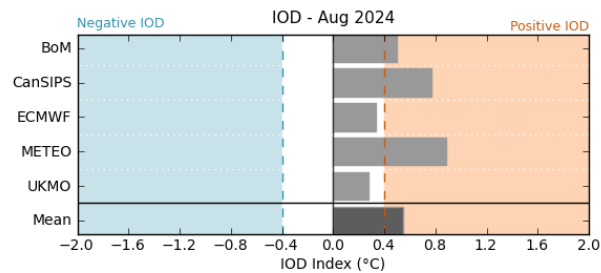
Indian Ocean Dipole (IOD)



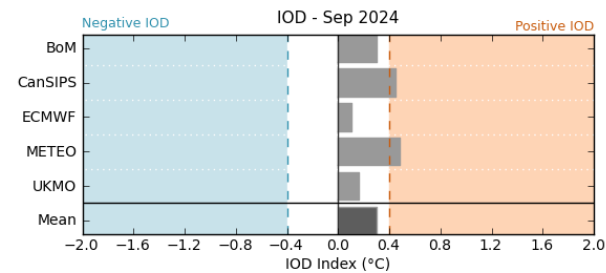
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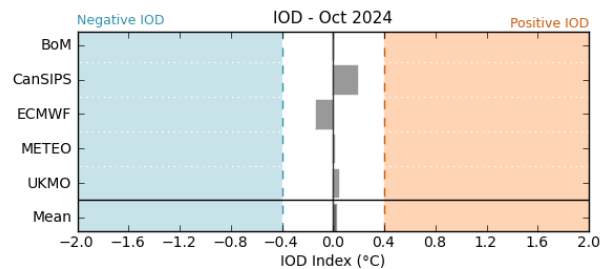
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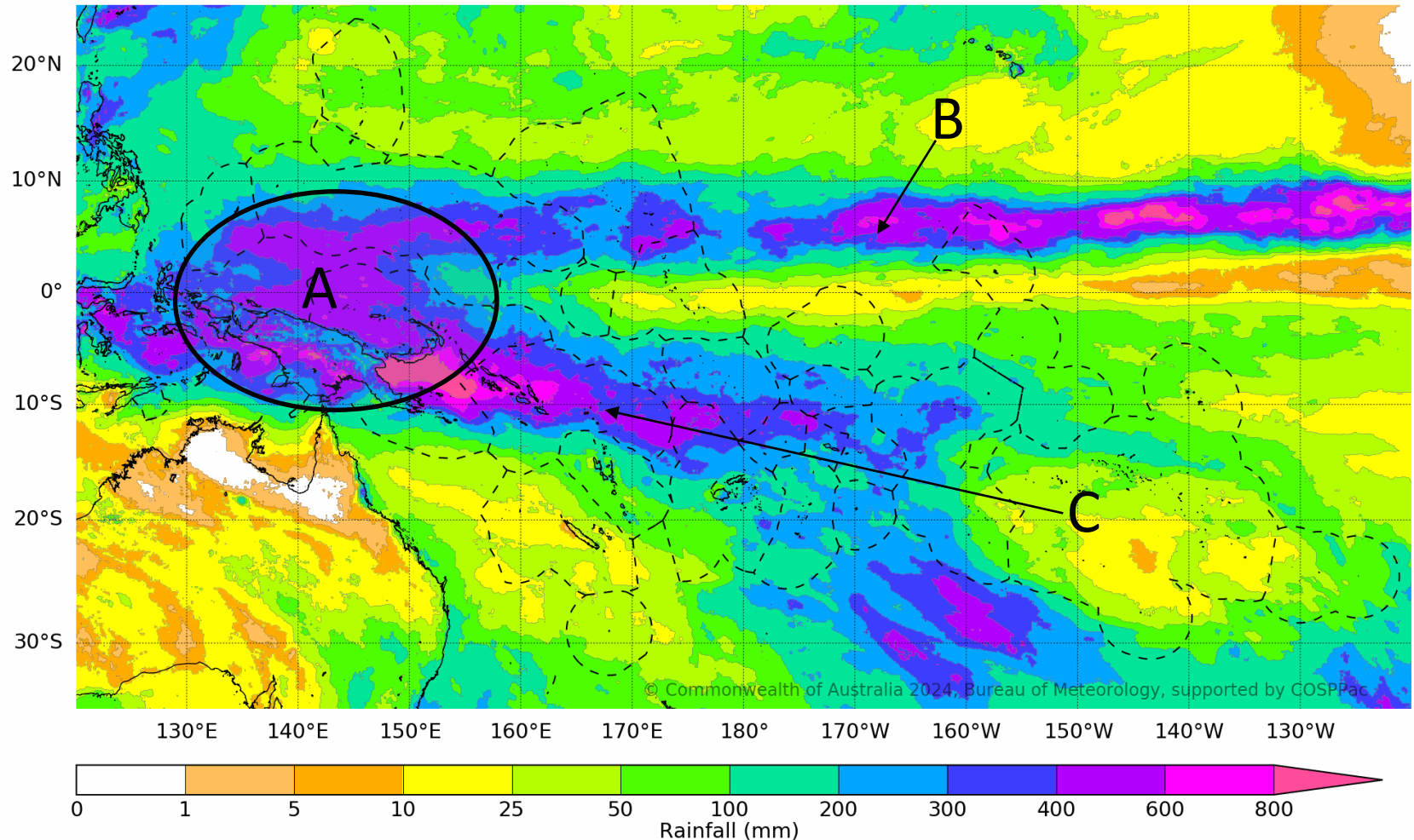
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Satellite Rainfall May 2024

1-month total rainfall ending May 2024

Data source: MSWEP

Issued: 07/06/2024



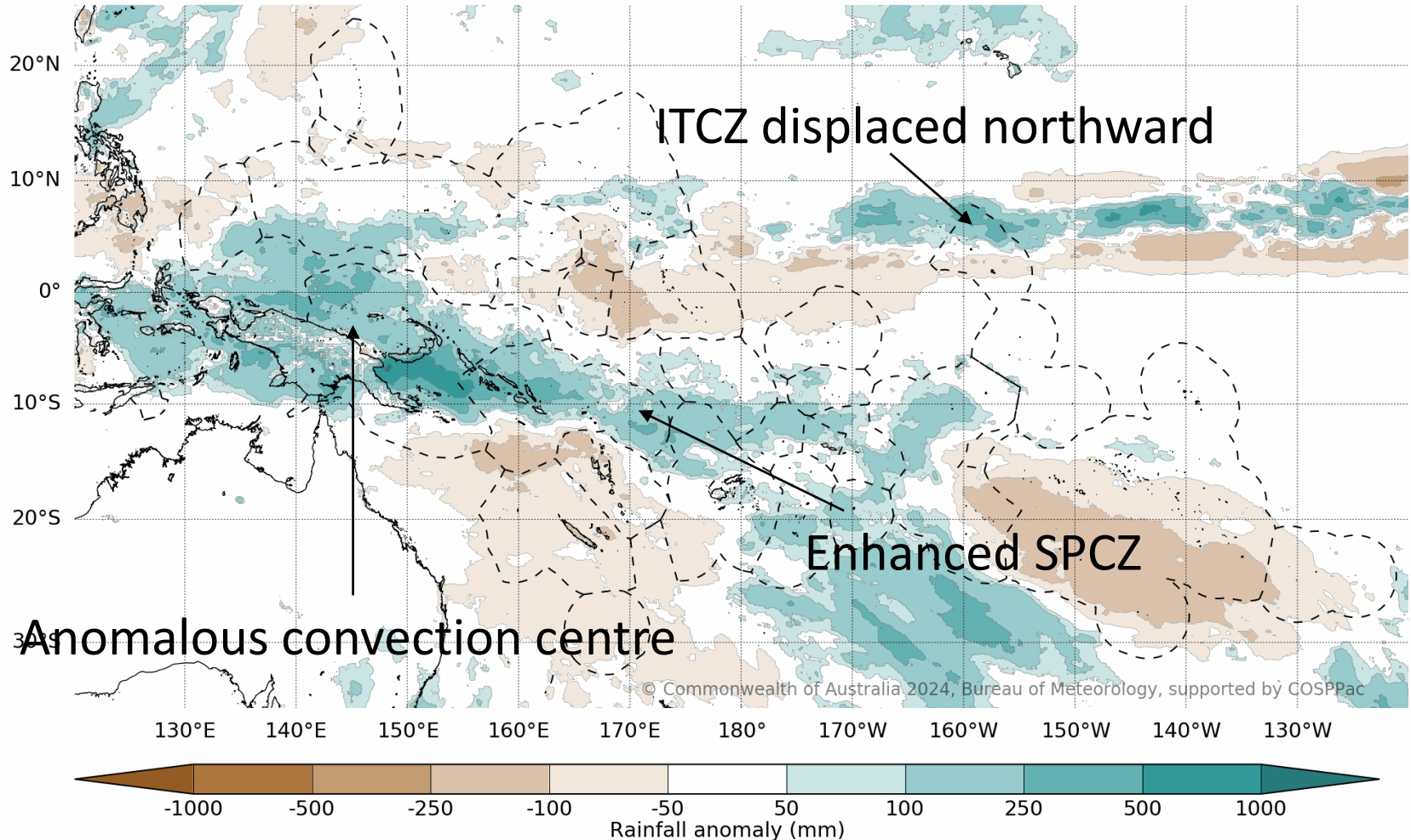
Dashed EEZ shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <http://www.marineregions.org/>.

Satellite Rainfall Anomaly May 2024

Base period: 1980-2021
Data source: MSWEP

1-month total rainfall anomaly ending May 2024

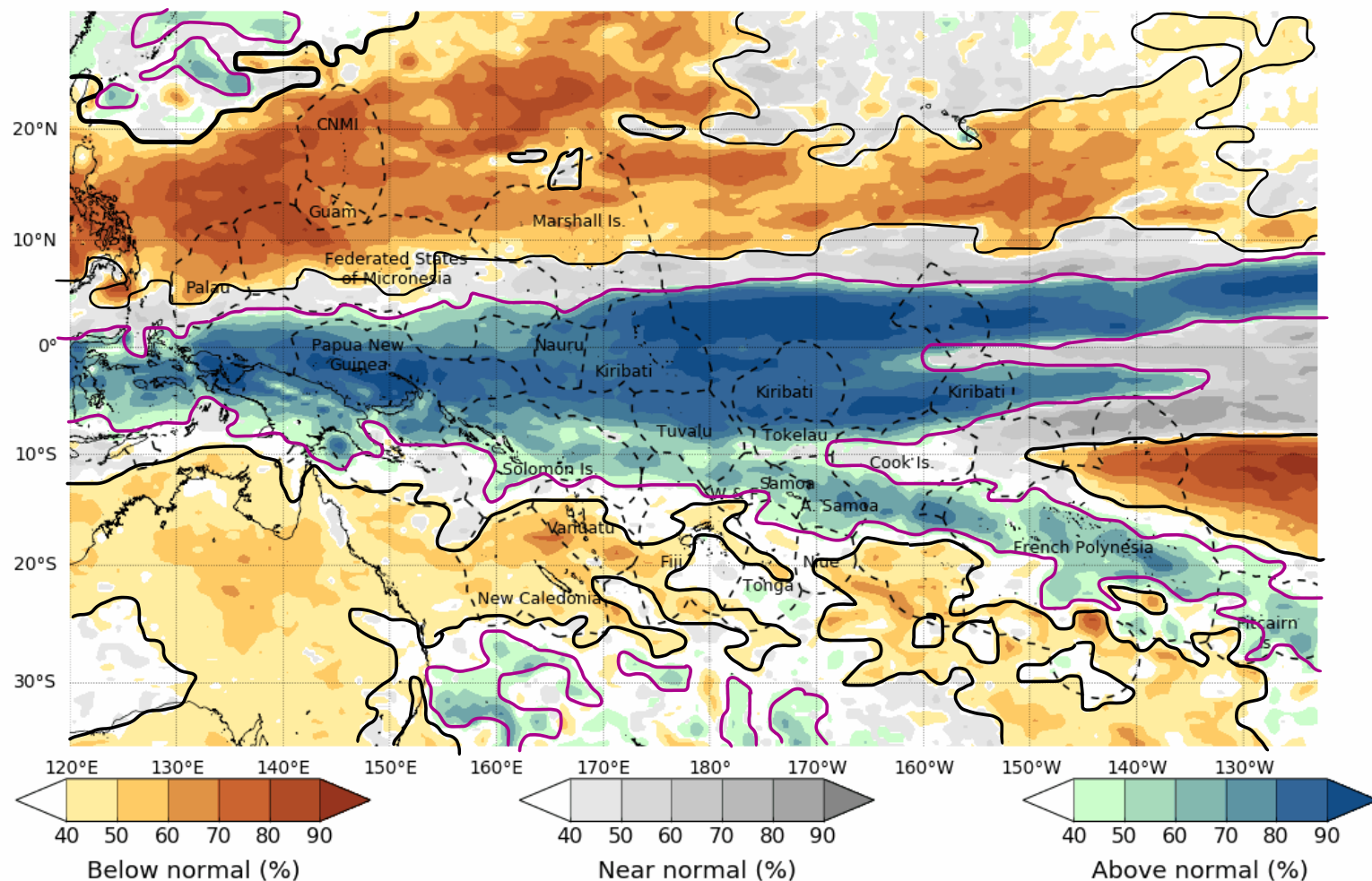
Issued: 07/06/2024



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: Mar-May

Tercile rainfall probabilities for
March to May 2024



Base period: 1981-2018

Model: ACCESS-S2

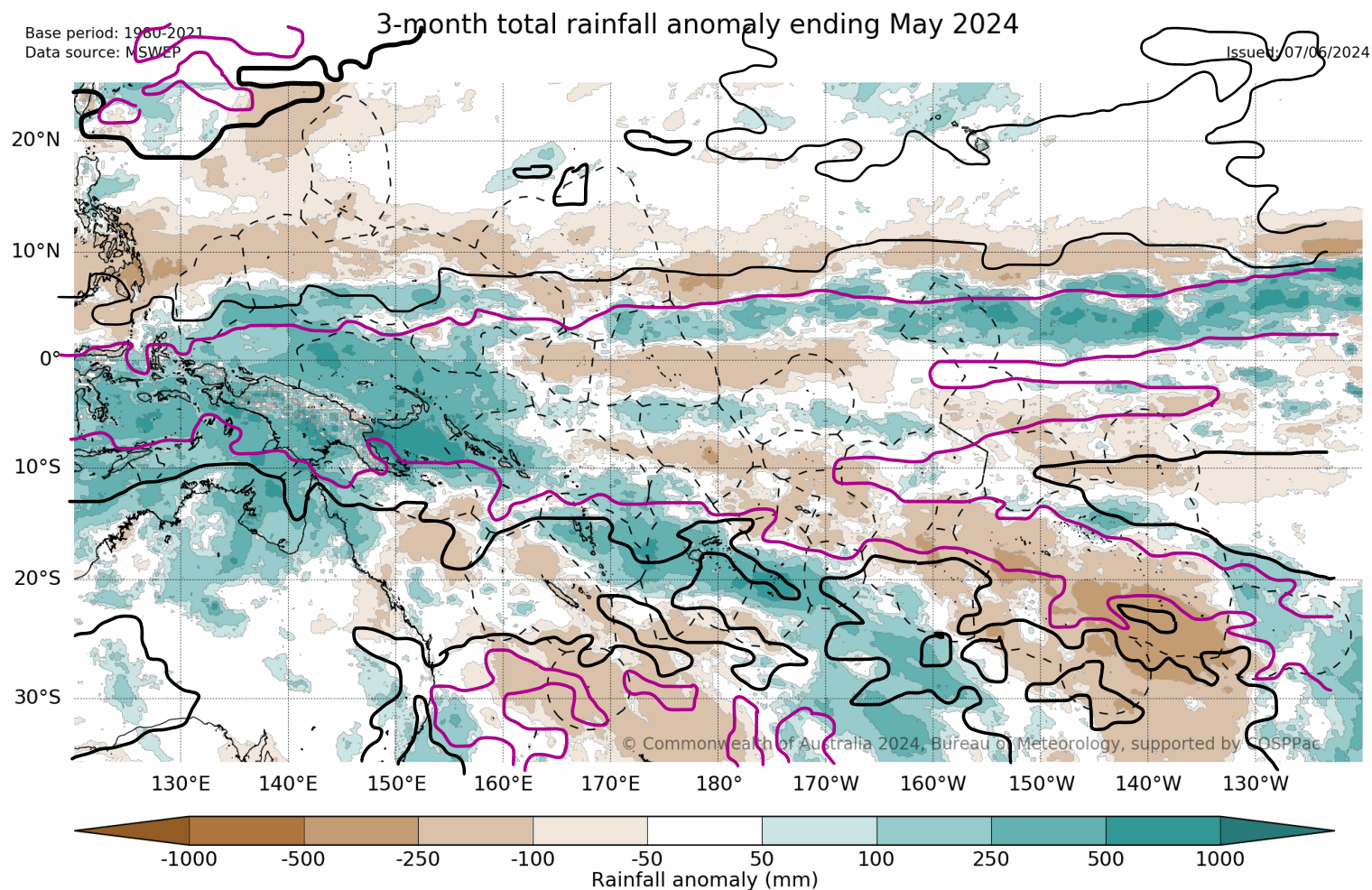
© Commonwealth of Australia 2024, Australian Bureau of Meteorology

Model run: 26/02/2024

Issued: 28/02/2024

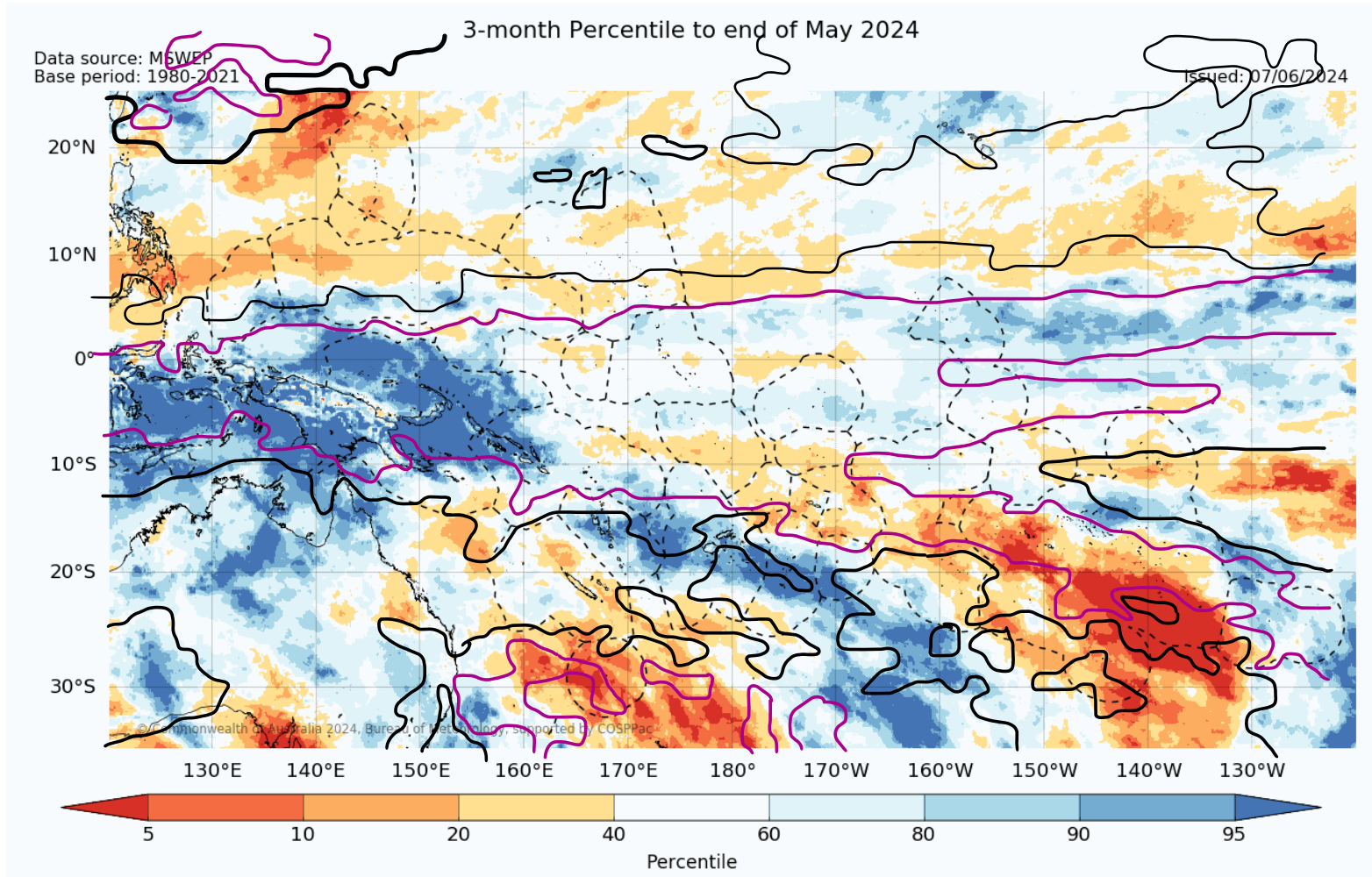
Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <http://www.marineregions.org/>.

Forecast Verification: Mar-May



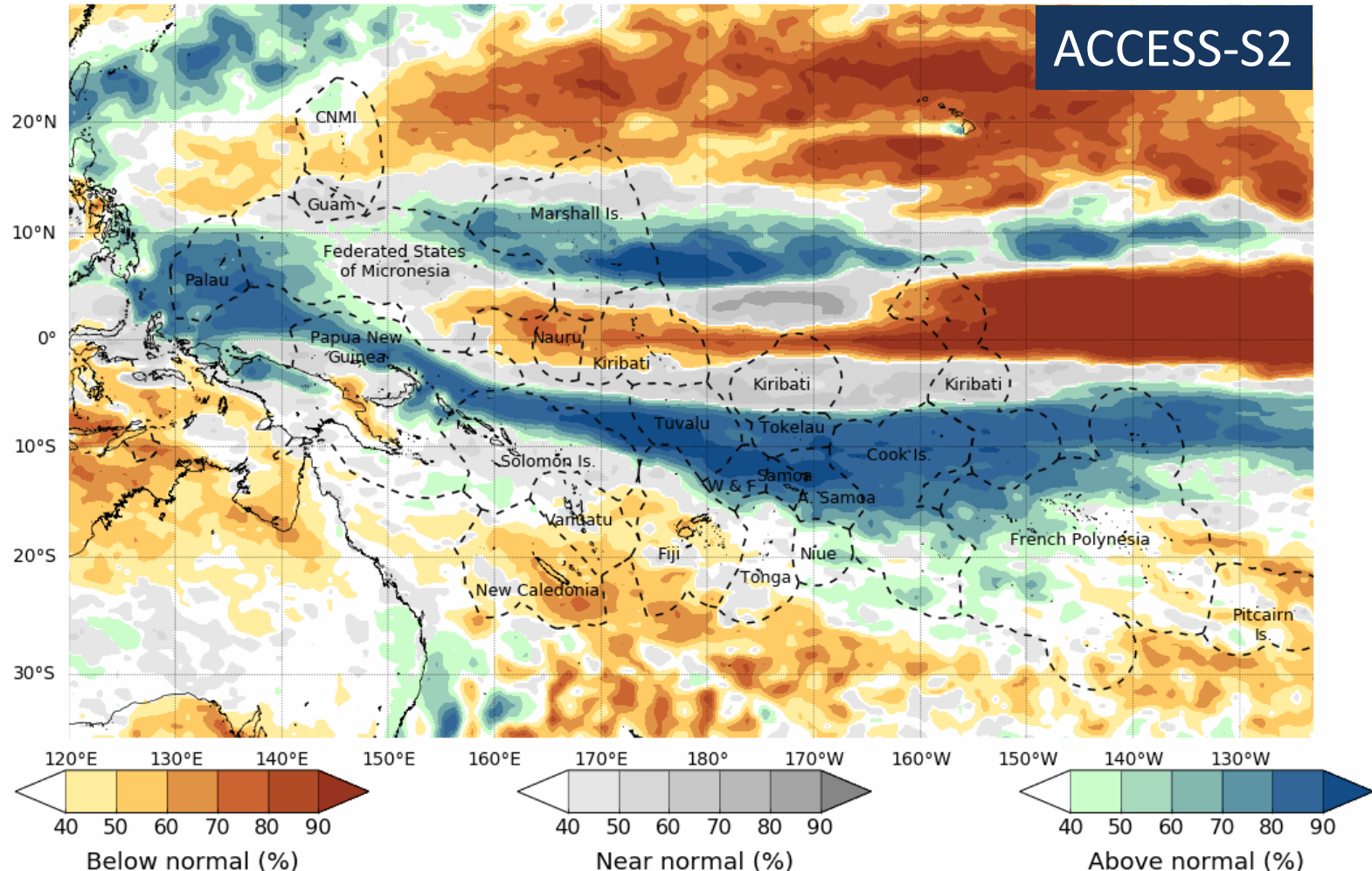
Dashed EEZ shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <http://www.marineregions.org/>.

Forecast Verification: Mar-May



Model Rainfall Predictions (JJA)

Tercile rainfall probabilities for
June to August 2024



Base period: 1981-2018

Model: ACCESS-S2

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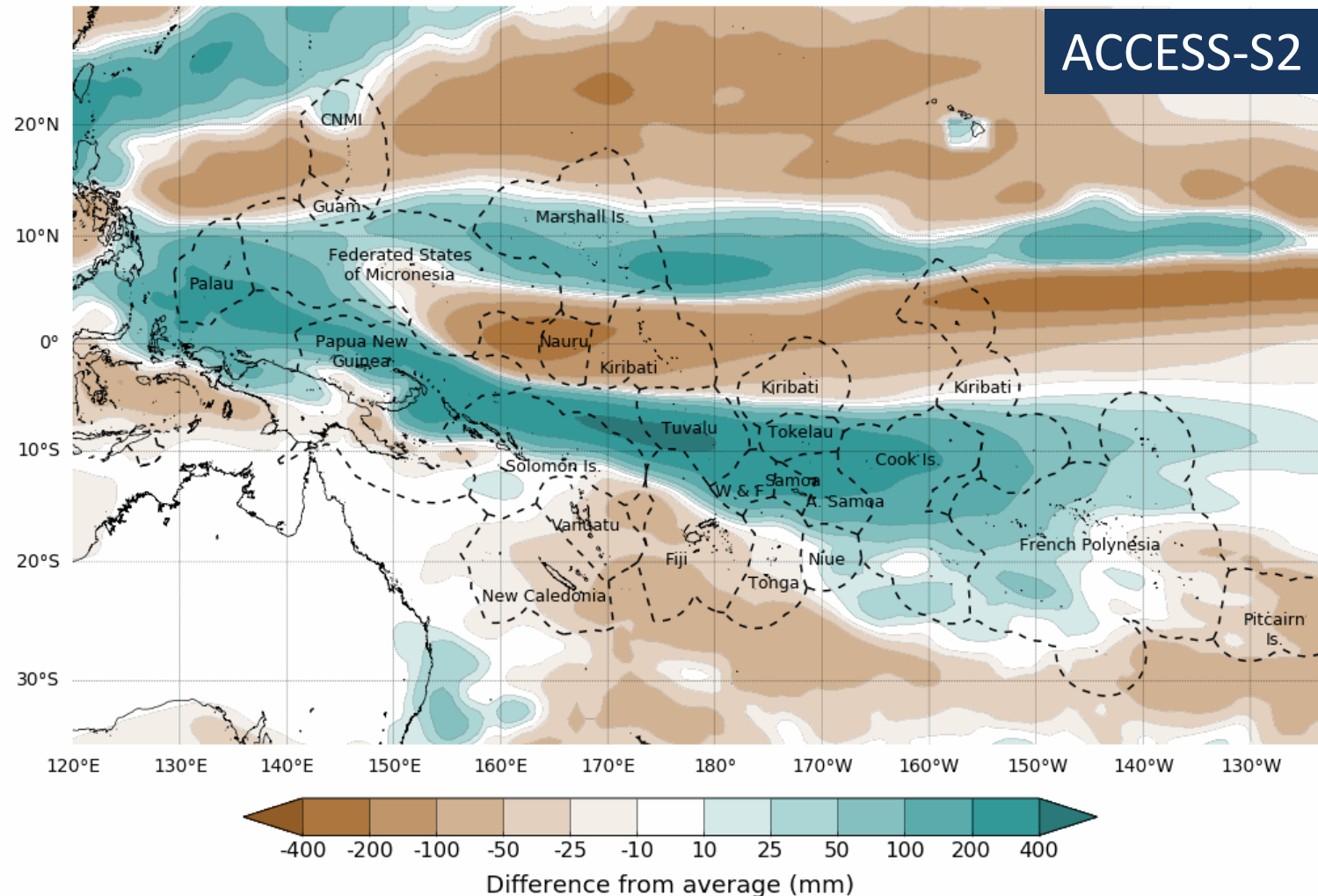
Model run: 01/06/2024

Issued: 03/06/2024

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/>.

Difference from Average (JJA)

Difference from average rainfall forecast for
June to August 2024



Base period: 1981-2018

Model: ACCESS-S2

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Model run: 01/06/2024

Issued: 03/06/2024

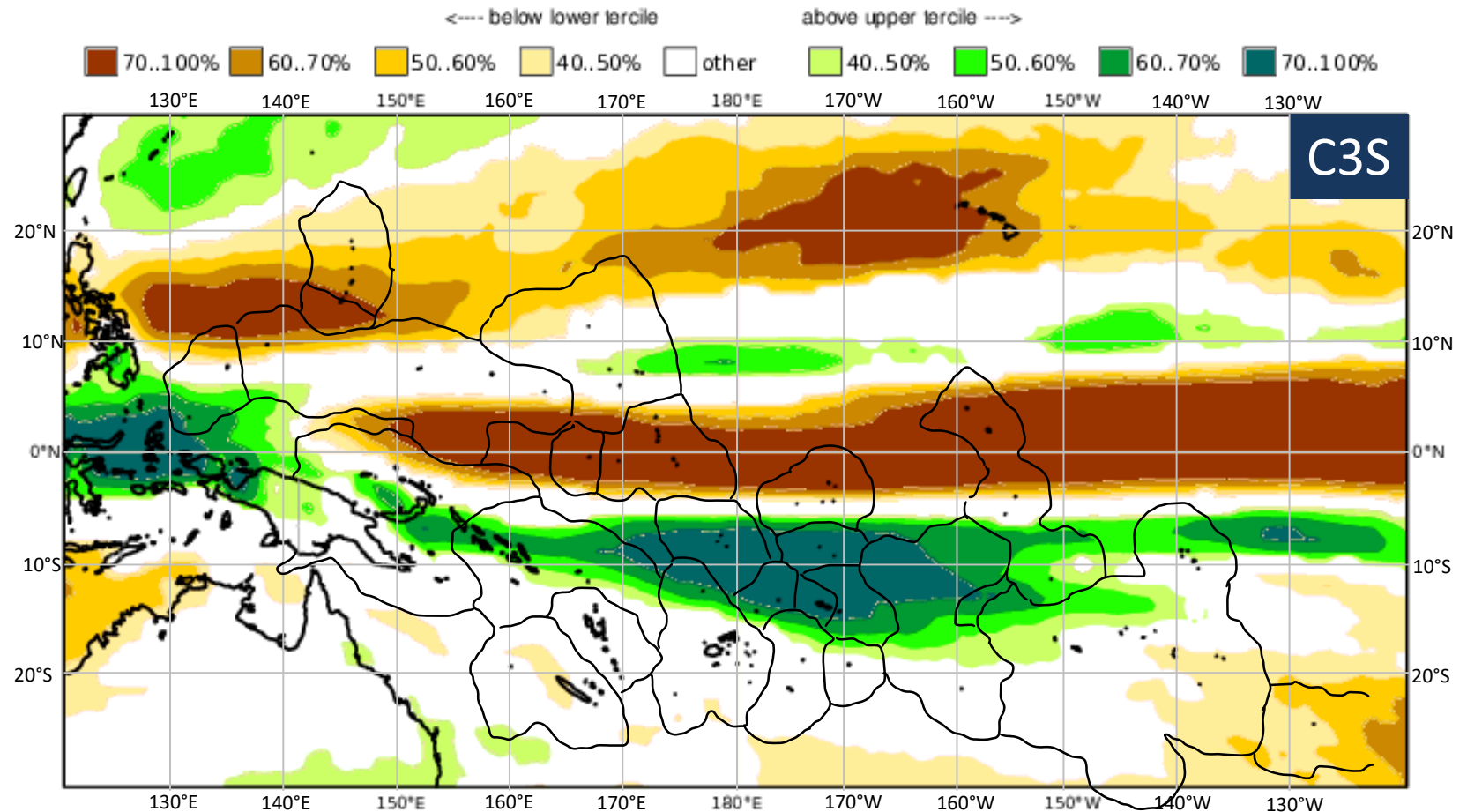
Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <http://www.marineregions.org/>.

Model Rainfall Predictions (JJA)

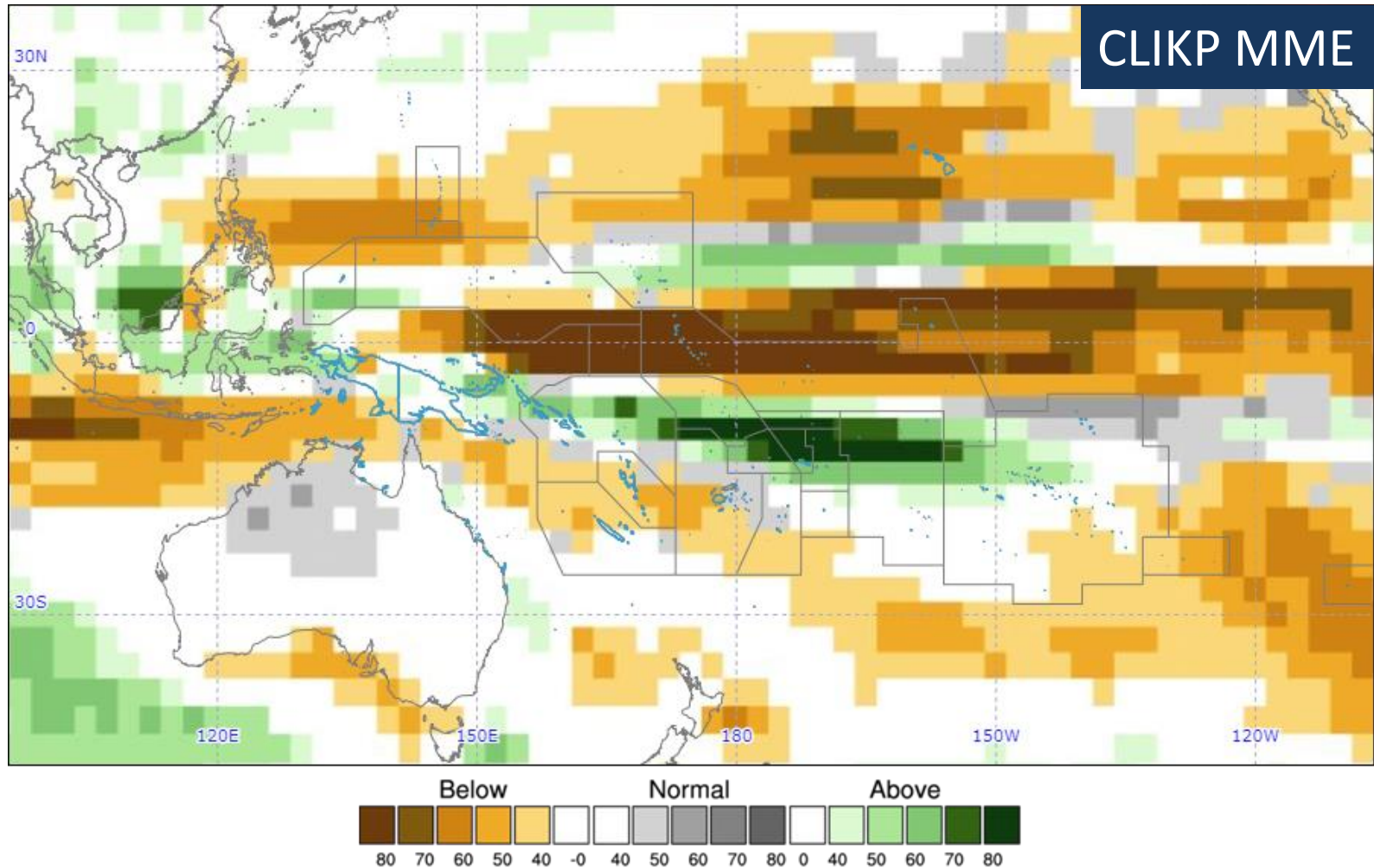
C3S multi-system seasonal forecast ECMWF/Met Office/Météo-France/CMCC/DWD/NCEP/JMA/ECCC
Prob(most likely category of precipitation) JJA 2024

Nominal forecast start: 01/05/24

Unweighted mean



Model Rainfall Predictions (JJA)



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

Model: APCC, CMCC, MSC, NASA, PNU

Generated using CLIK® (2024-6-7)

© APEC Climate Center

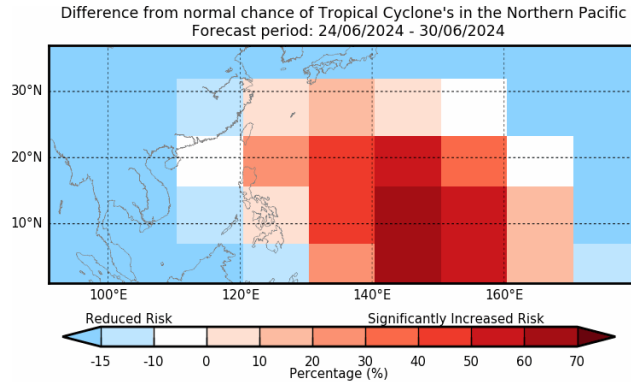
Model Rainfall Predictions (JJA)

June to August 2024			
	ACCESS-S	C3S	CLIKP
Cook Is North			
Cook Is South			
Fiji West			
Fiji Central			
Fiji East			
Fiji North			
Fiji Rotuma			
FSM West			
FSM Central			
FSM East			
Kiribati West			
Kiribati Central			
Kiribati East			
RMI North			
RMI Central			
RMI South			
Nauru			
Niue			
Palau			
PNG Momase			
PNG Is			
PNG South			
PNG Highlands			
Samoa			
Solomon Is West			
Solomon Is Central			
Solomon Is East			
Tonga North			
Tonga Central			
Tonga South			
Tuvalu North			
Tuvalu Central			
Tuvalu South			
Vanuatu North			
Vanuatu South			

	41-50%	51-60%	61-70%	71-80%	81-90%	>90%
Below normal						
Near-normal						
Above normal						

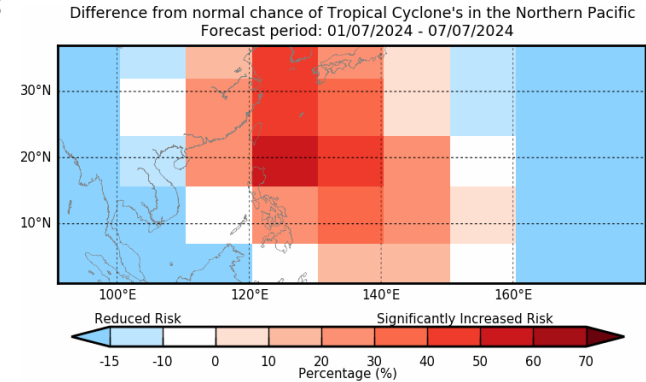
TC Outlooks

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: 16/06/2024 Issued: 18/06/2024



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

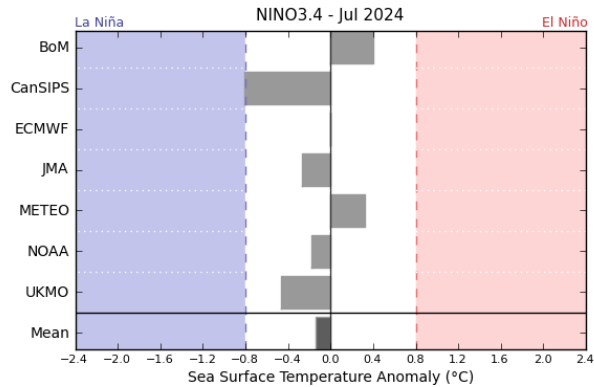
Model: ACCESS_S2 Model Run: 16/06/2024 Issued: 18/06/2024

South Pacific

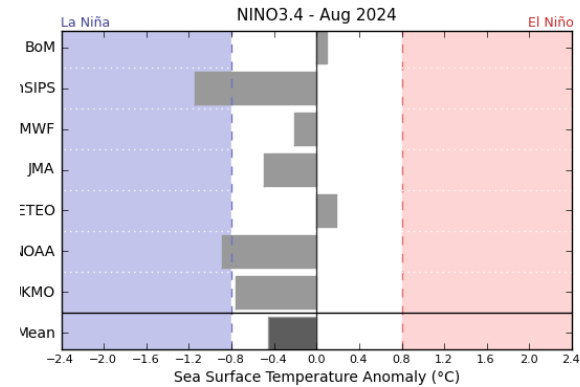
OUT OF SEASON

Calibrated Tropical Cyclone outlooks
are for November to April

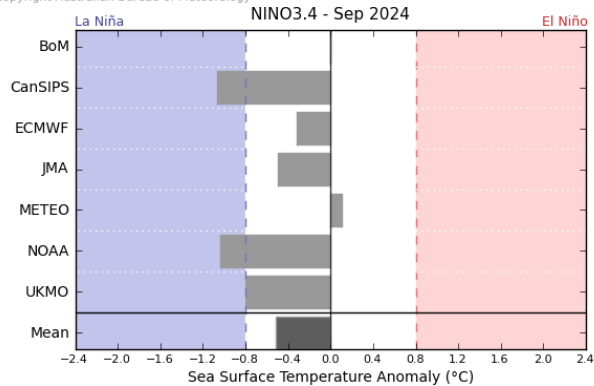
Climate Model Summary



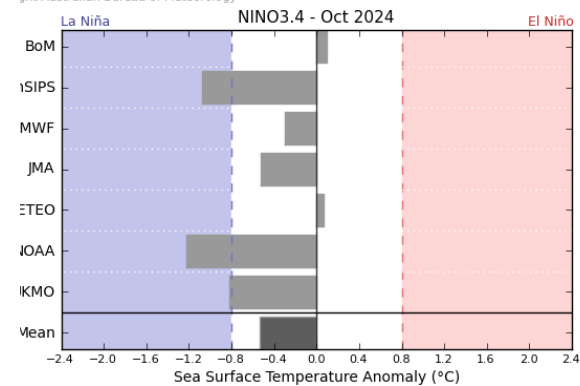
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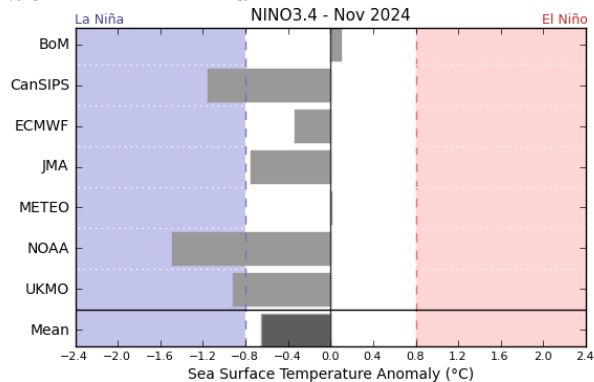
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IRI Climate Model Summary

