

16TH SESSION OF THE PACIFIC ISLANDS CLIMATE OUTLOOK FORUM

PICOF-16

23 APRIL, 2025
ONLINE: ZOOM



SPREP
Secretary of the Pacific Regional Environment Programme



Pacific Community
Communauté du Pacifique



COSPPac
Climate Observations and Prediction in the Pacific



Australian Government
Bureau of Meteorology



CSIRO



NIWA
Taihoro Nukurangi



APCC
Asia-Pacific Climate Center



NOAA
National Oceanic and Atmospheric Administration



Meteo France

ENSO STATUS AND OUTLOOK

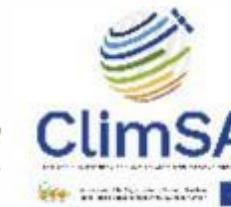
Jin Ho Yoo

Research Fellow

APEC Climate Center (APCC)



PACIFIC REGIONAL
CLIMATE CENTRE NETWORK



SPREP
Secretary of the Pacific Regional
Environment Programme



Pacific
Community
Communauté
du Pacifique



COSPPac
Climate Observing System for the Pacific



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Bureau of Meteorology



CSIRO



NIWA
Tairoro Nukurangi
APCC



NOAA
APCC CLIMATE CENTER

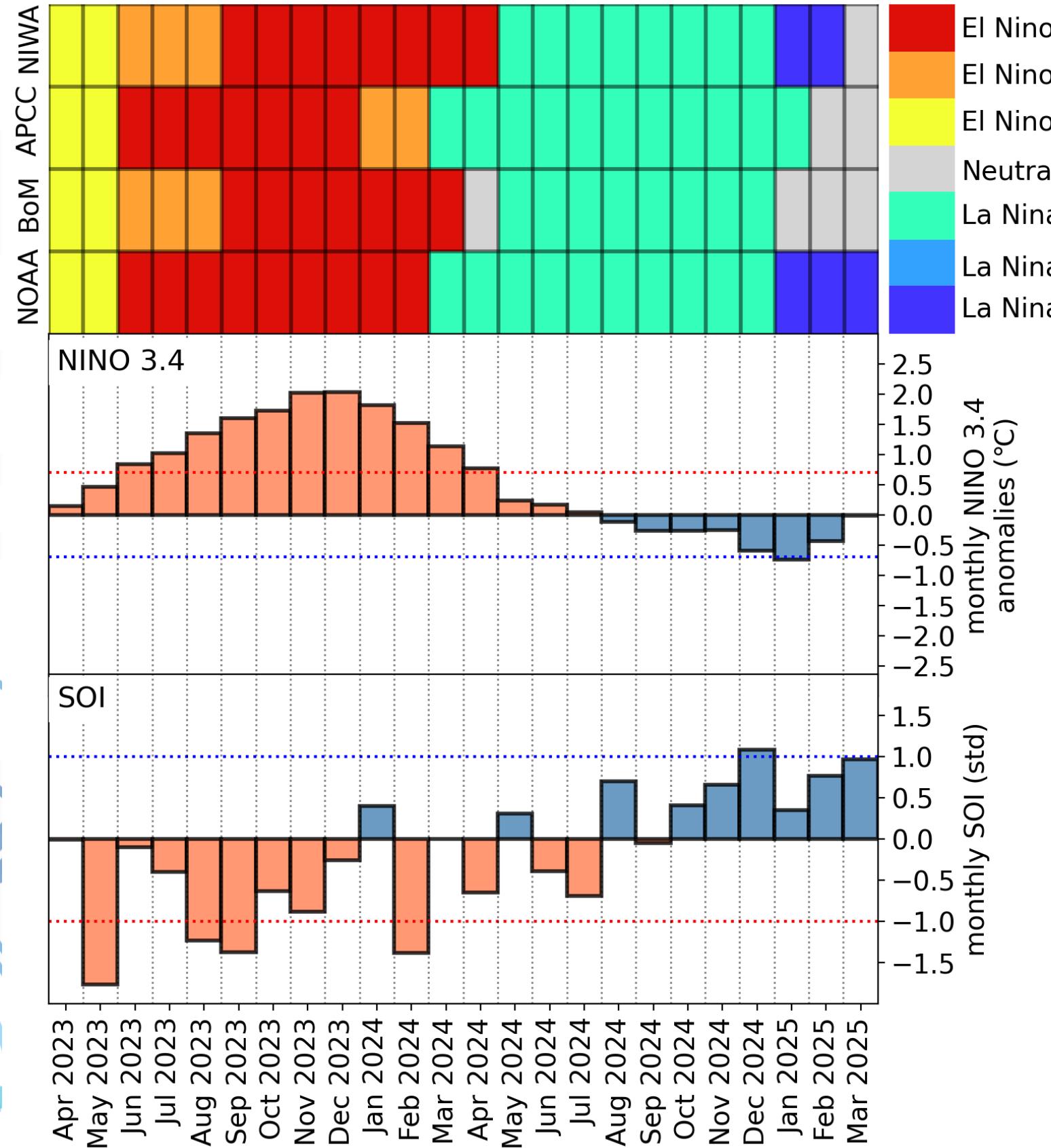


METEO
FRANCE

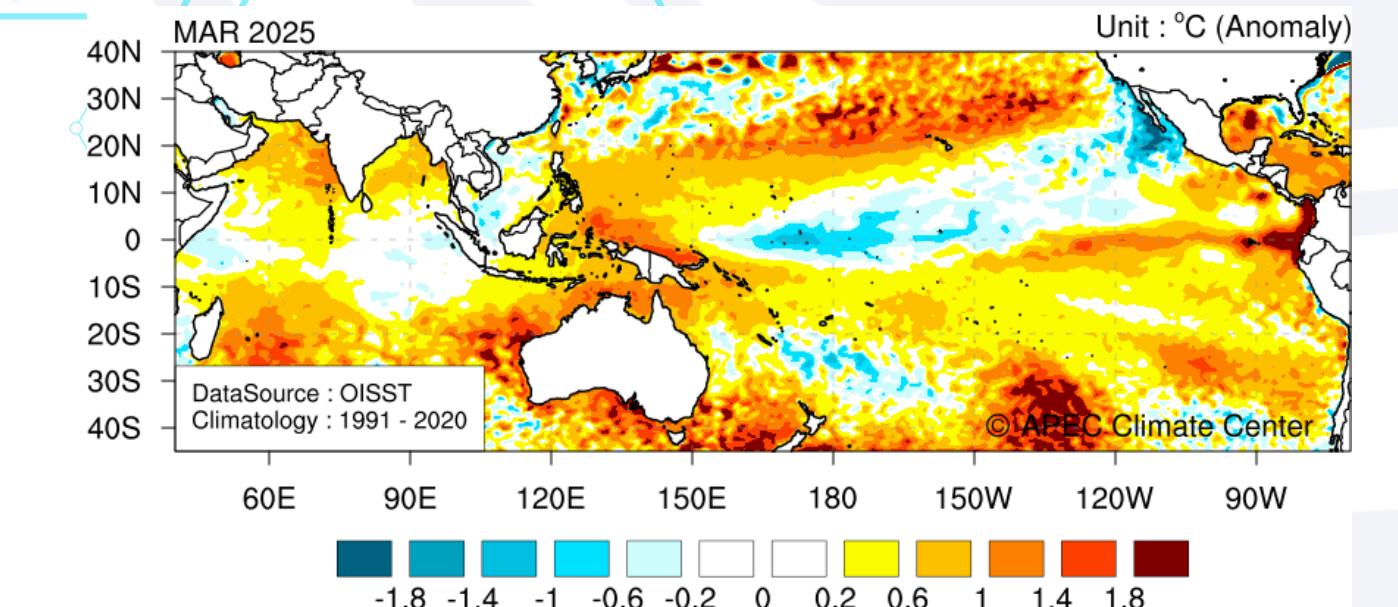
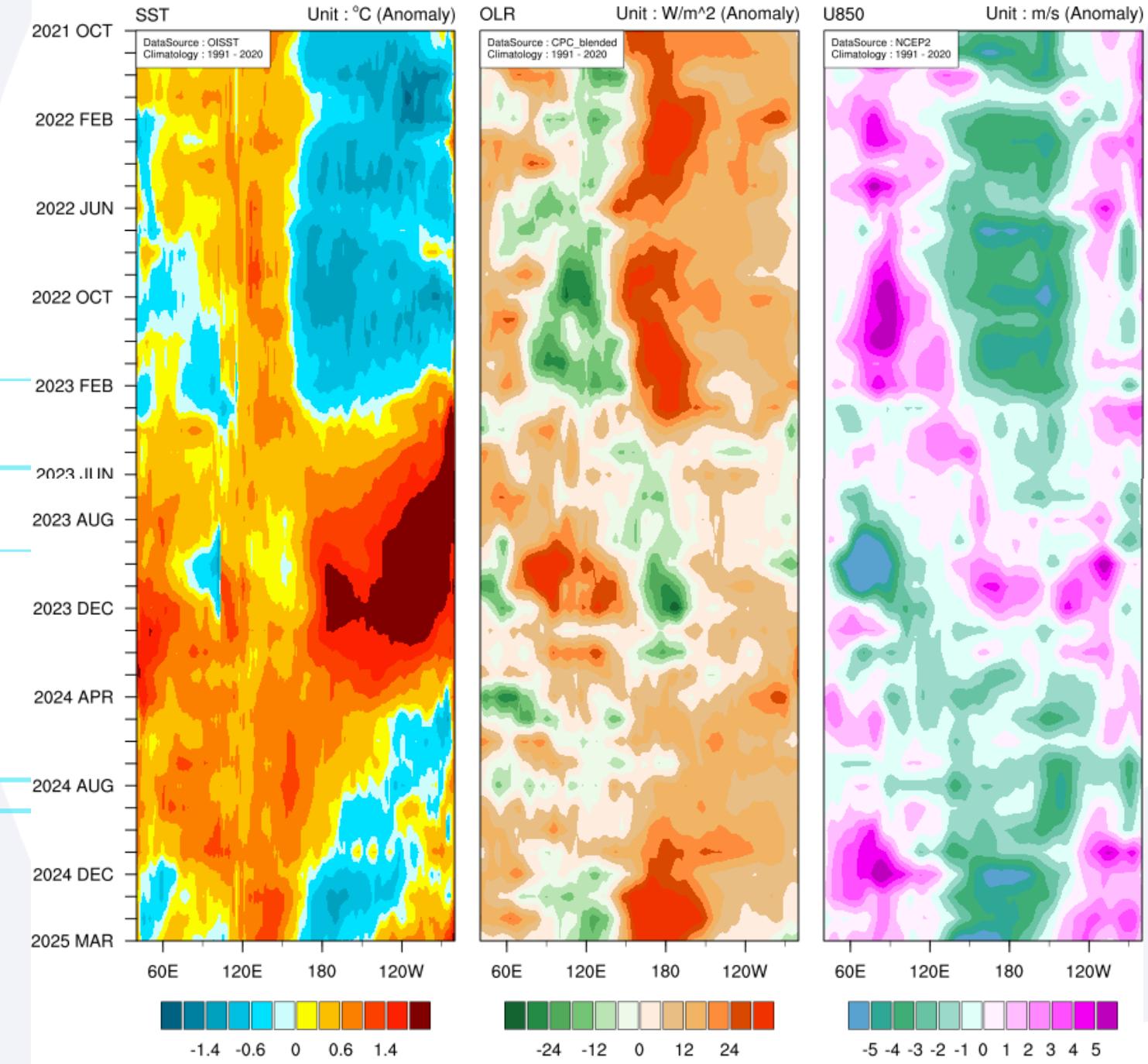
ENSO status : surface

Source: PRCC ENSO tracker, APCC

Pacific Regional Climate Centre ENSO tracker

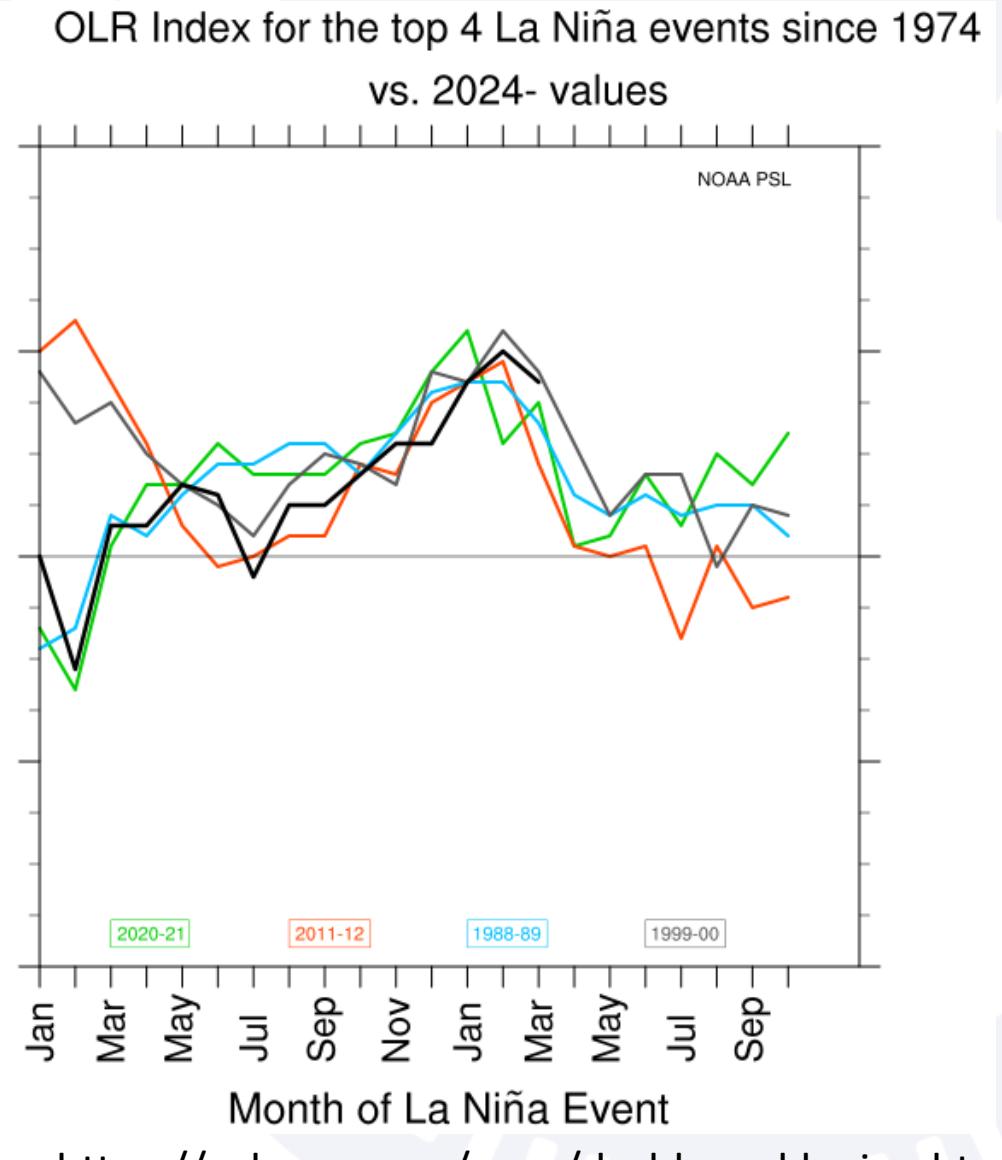
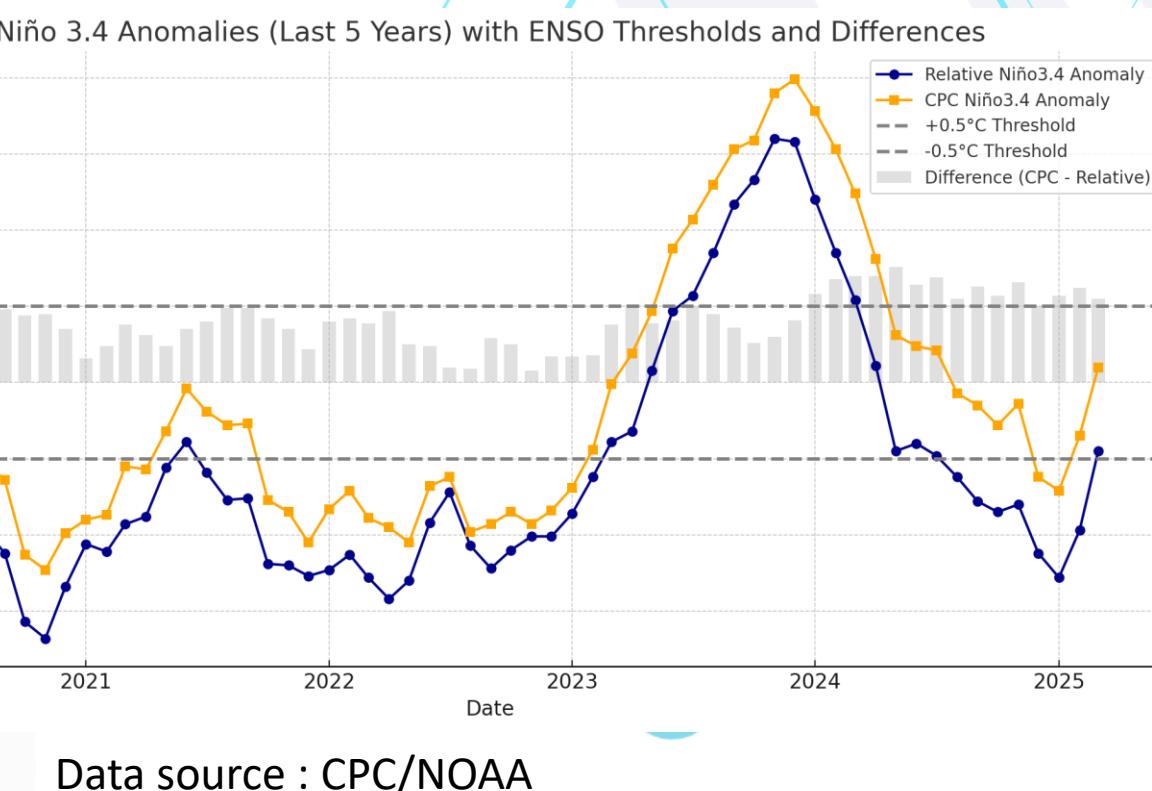
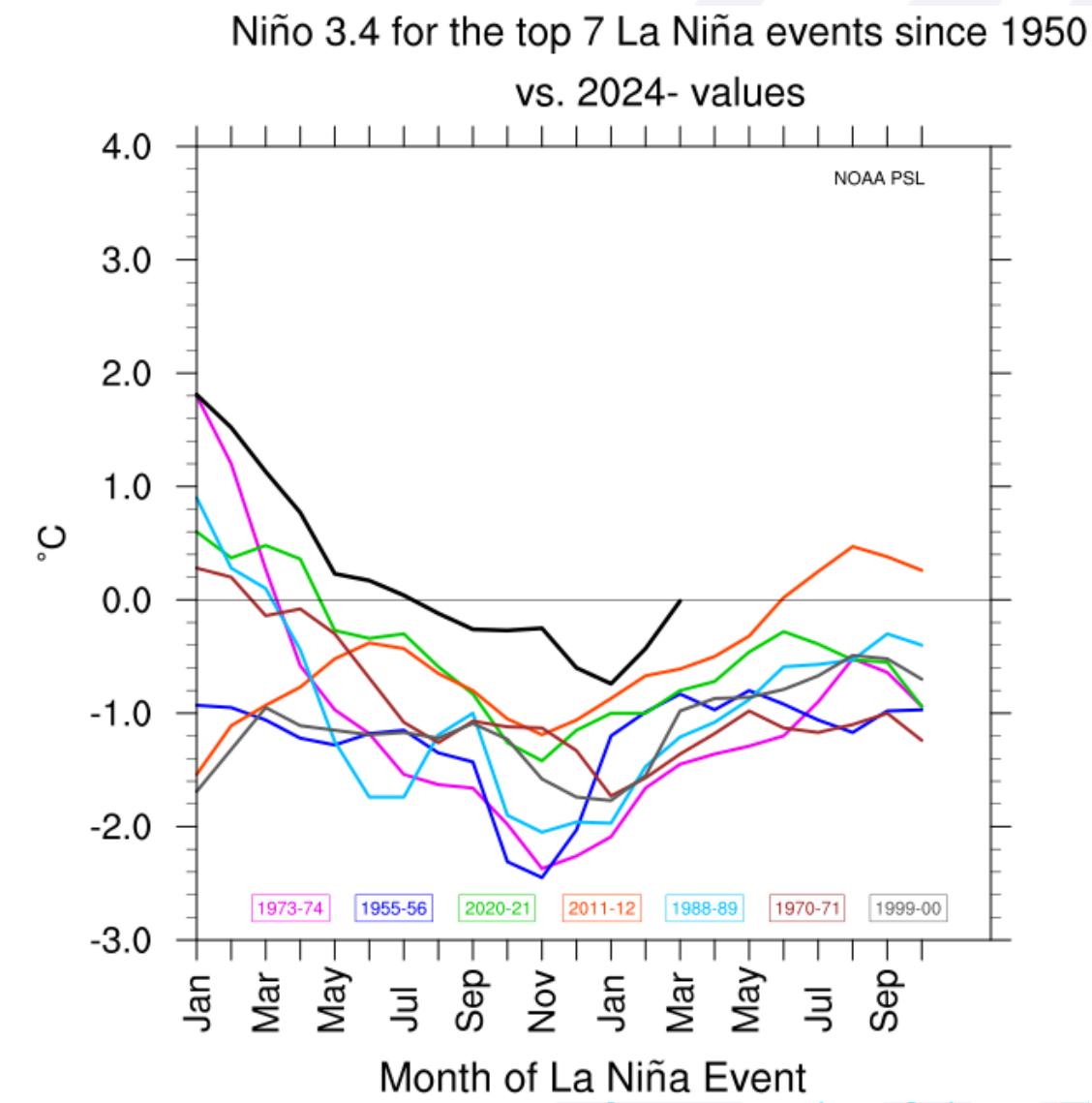
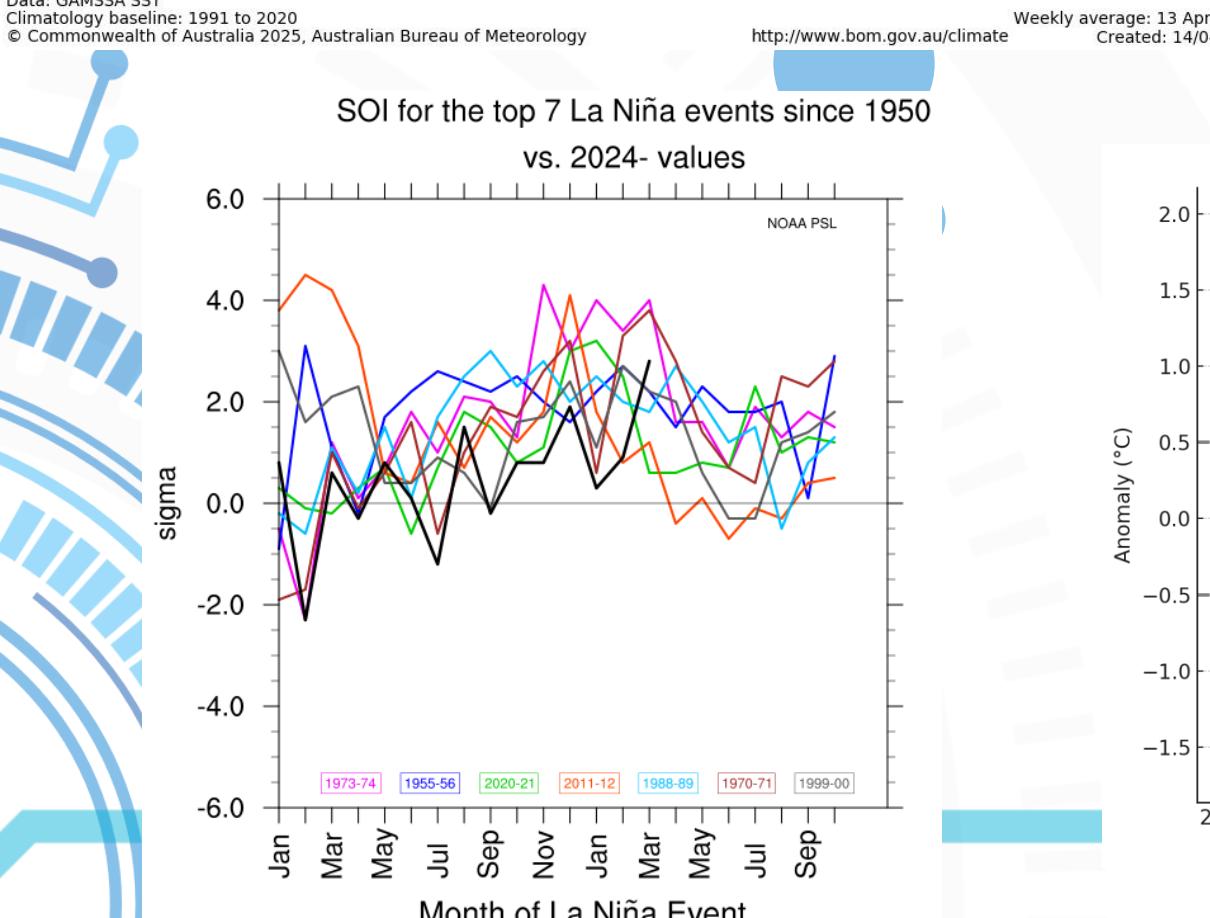
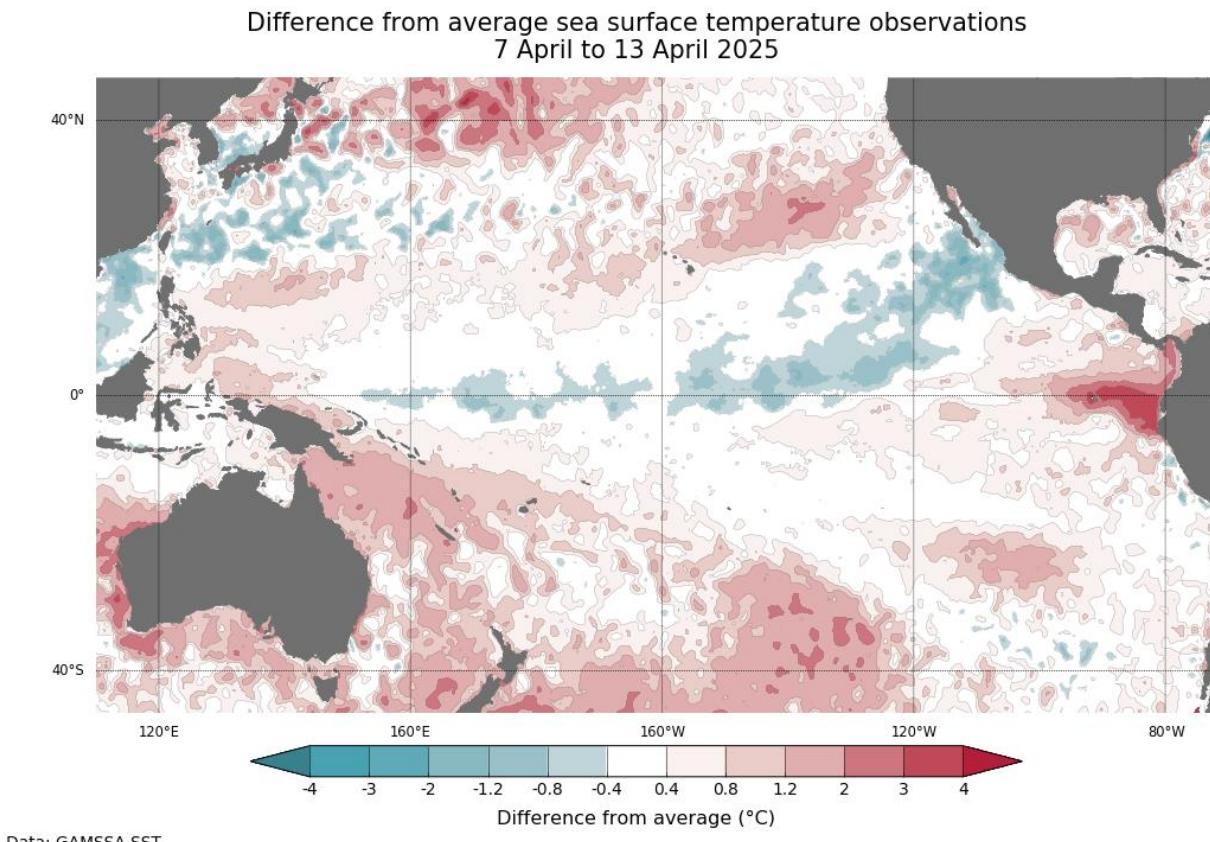


Sea Surface Temperature / Outgoing Longwave Radiation / U-wind at 850hPa



ENSO status : surface

Source: BoM, PSL/NOAA, CPC/NOAA

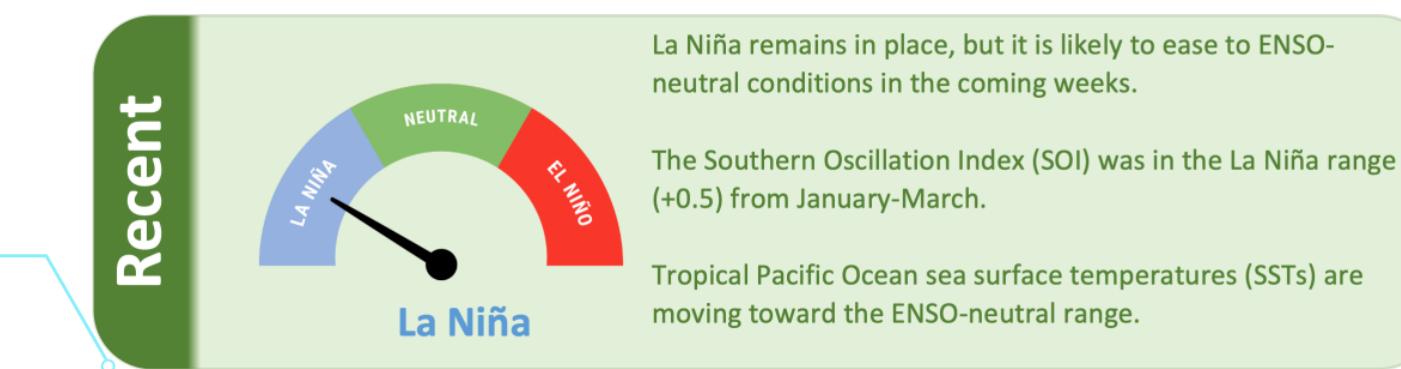
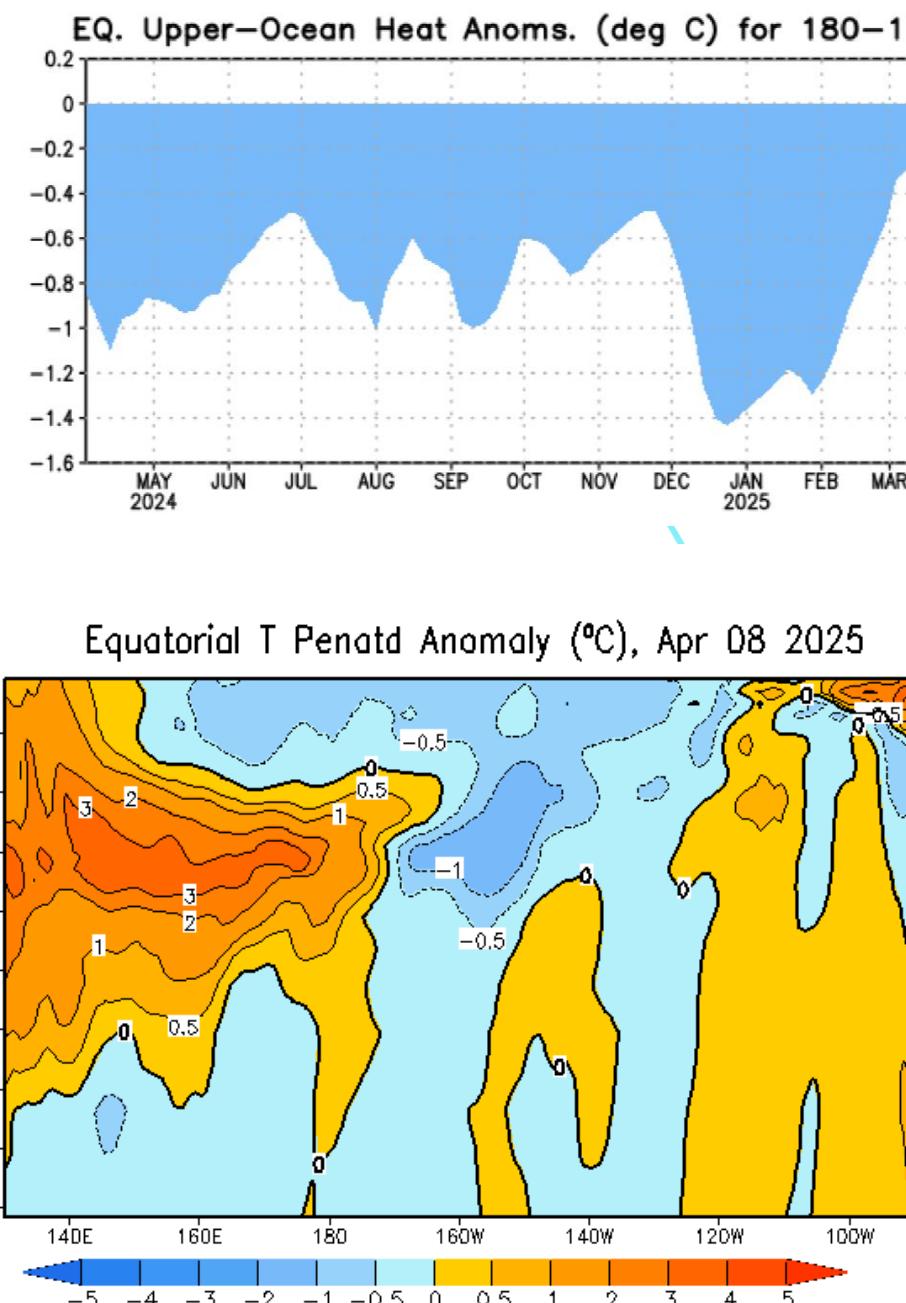
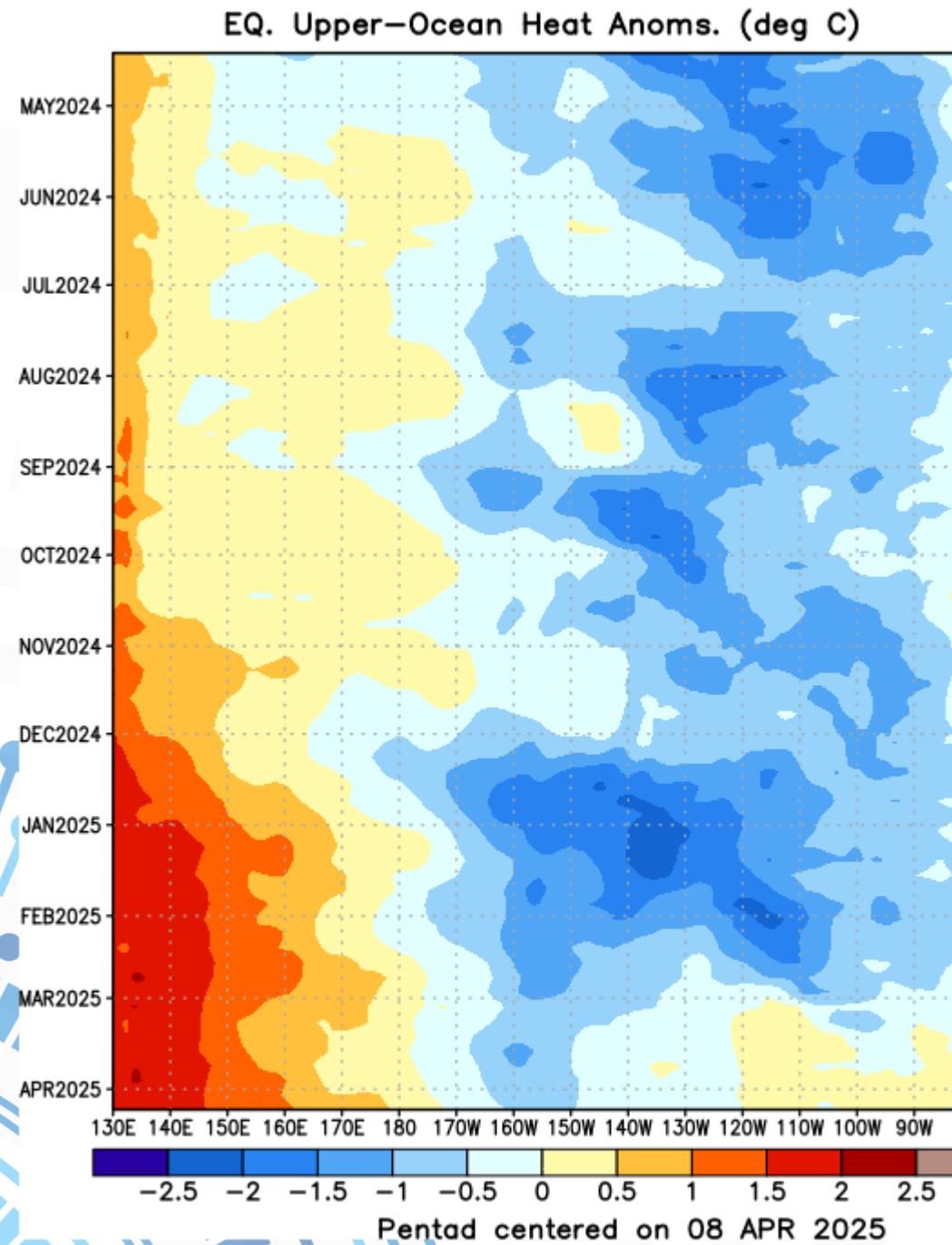


GSCU (issued Mar. 2025)

For the seasonal mean spanning December 2024 to February 2025, The Pacific Niño SST index anomalies in the far eastern Pacific (Niño 1+2) and the eastern Pacific (Niño 3) were near zero, while those in the central Pacific (Niño 3.4 and Niño 4) were slightly below average. Despite these weak below-average SST anomalies, oceanic and atmospheric conditions in the equatorial central and eastern Pacific remained consistent with a weak La Niña.

ENSO status : subsurface

Source: CPC/NOAA, NIWA



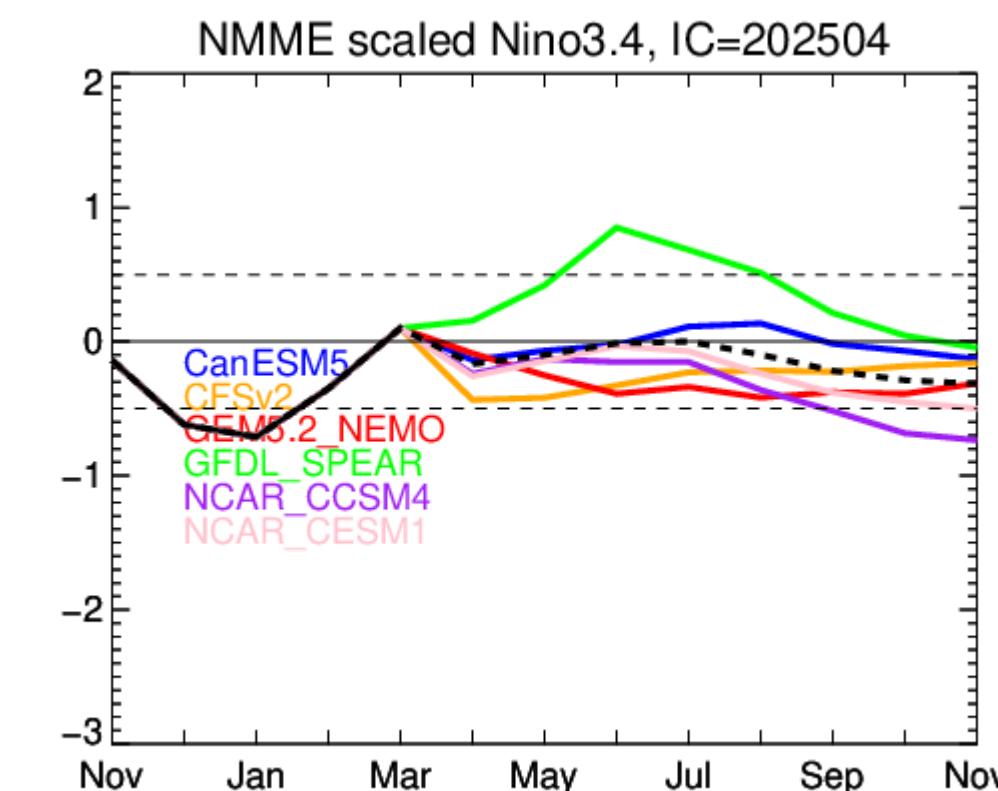
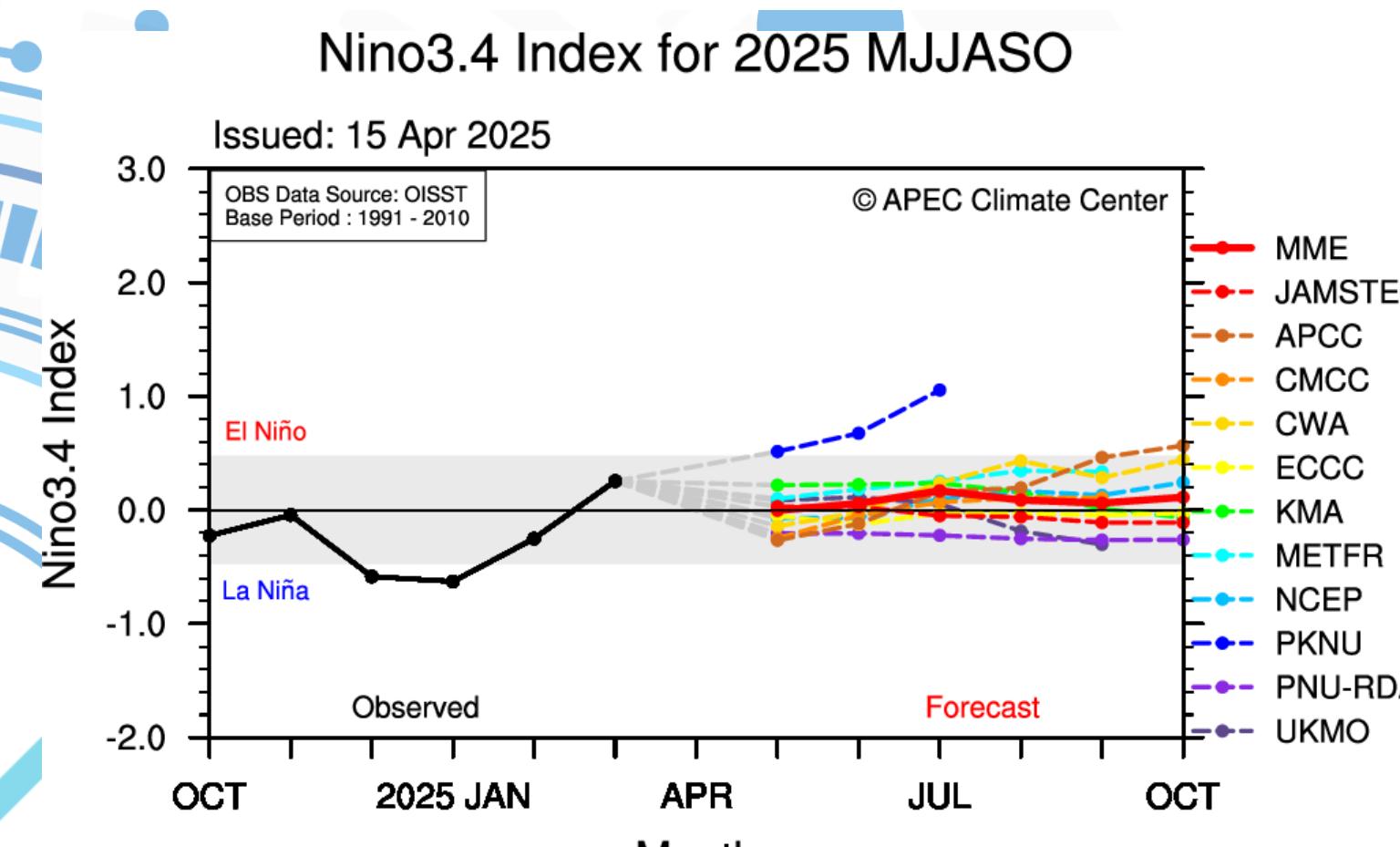
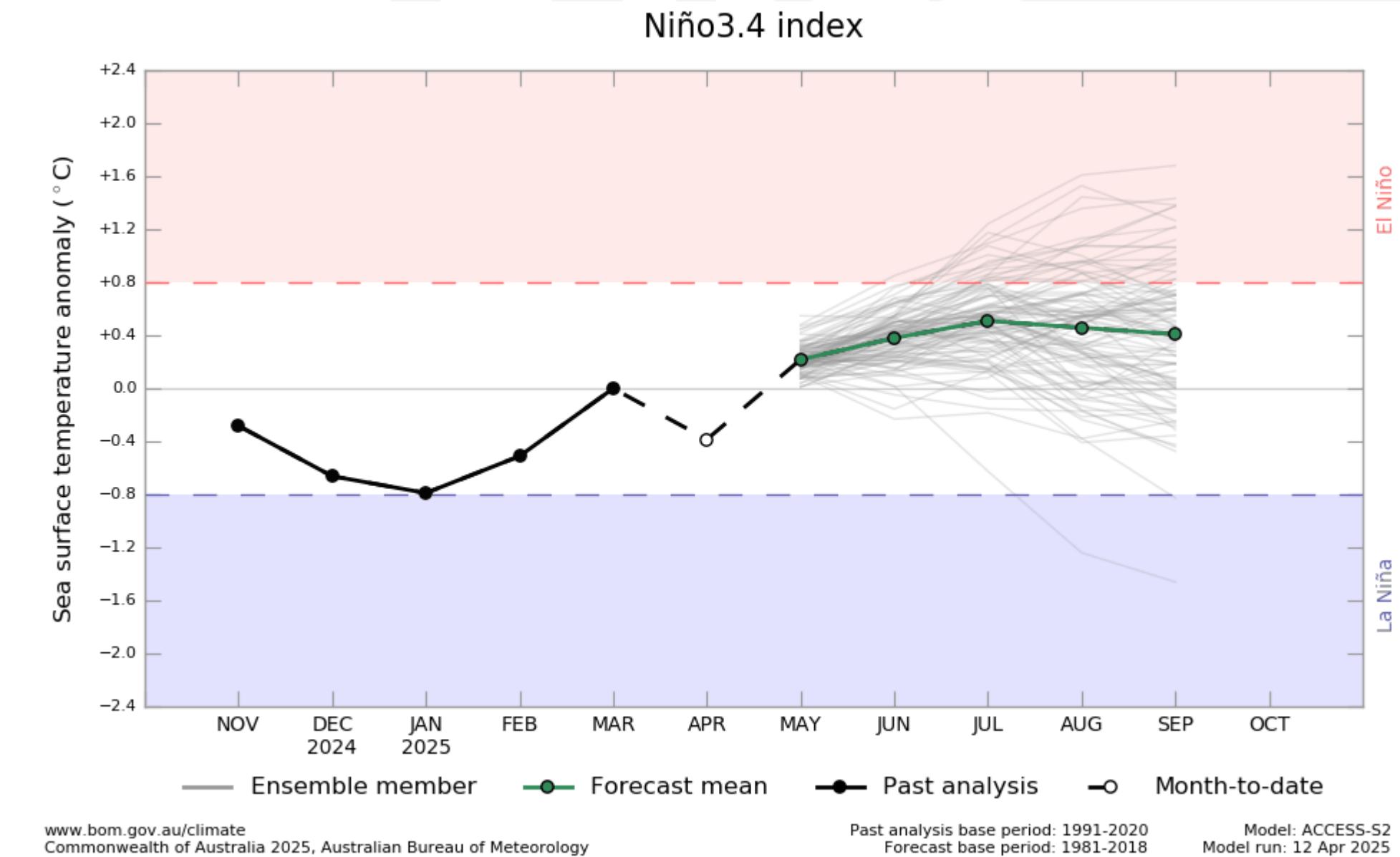
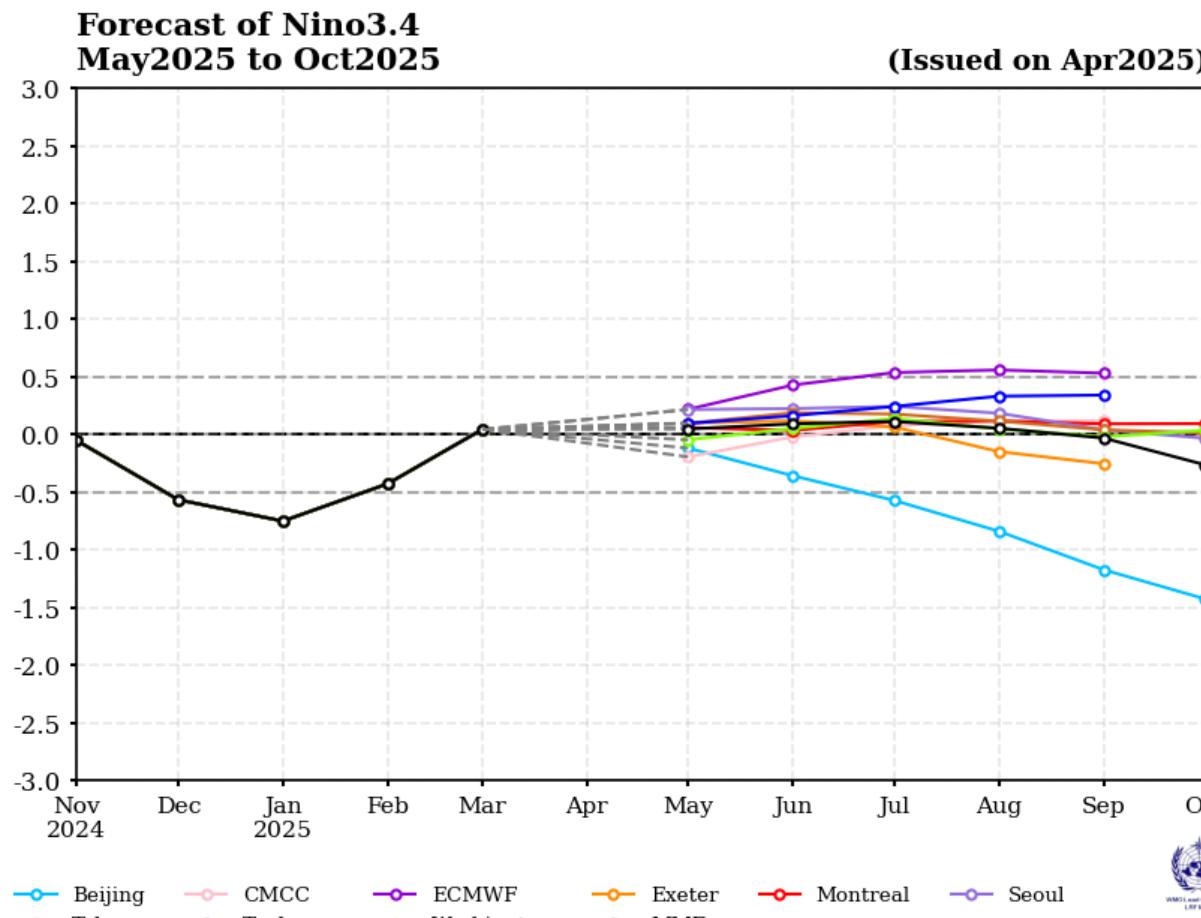
A short and weak La Niña is almost ended

Atmosphere felt La Niña signature stronger than it is presented in the SST (related with basin-wide warming)

Subsurface status indicates La Niña may not be sustained

ENSO Outlook

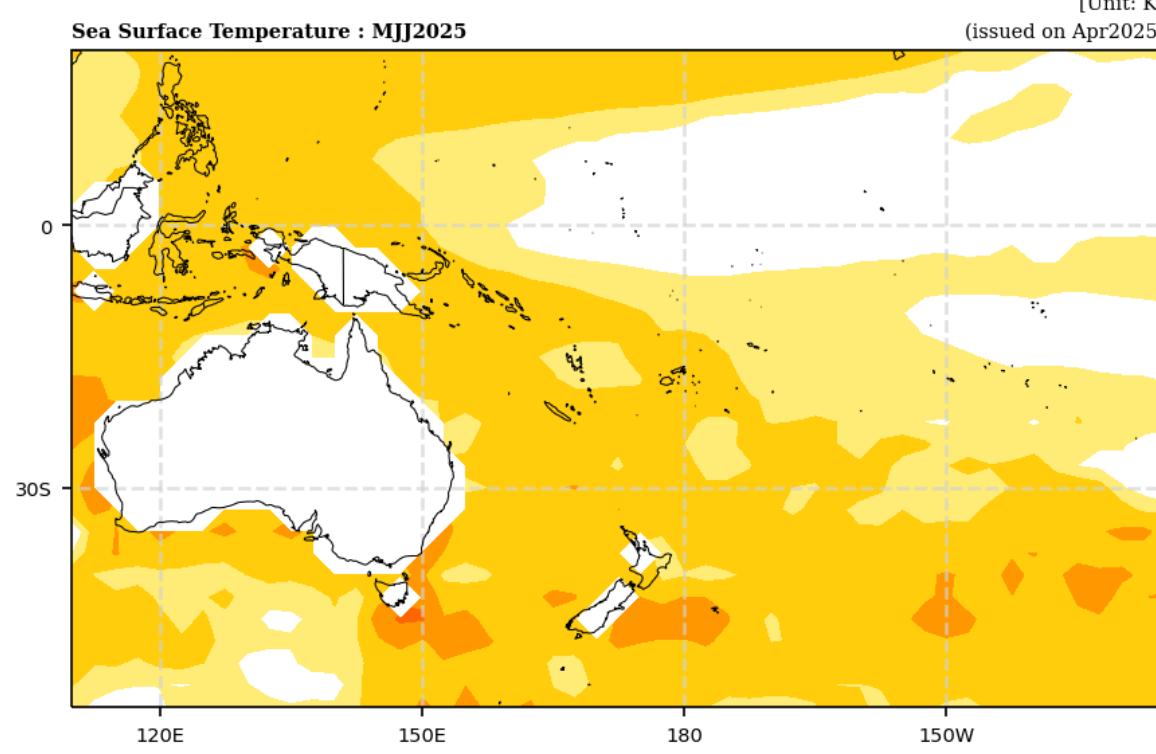
Source: WMO LC-SP, BoM, APCC, NMME (NOAA)



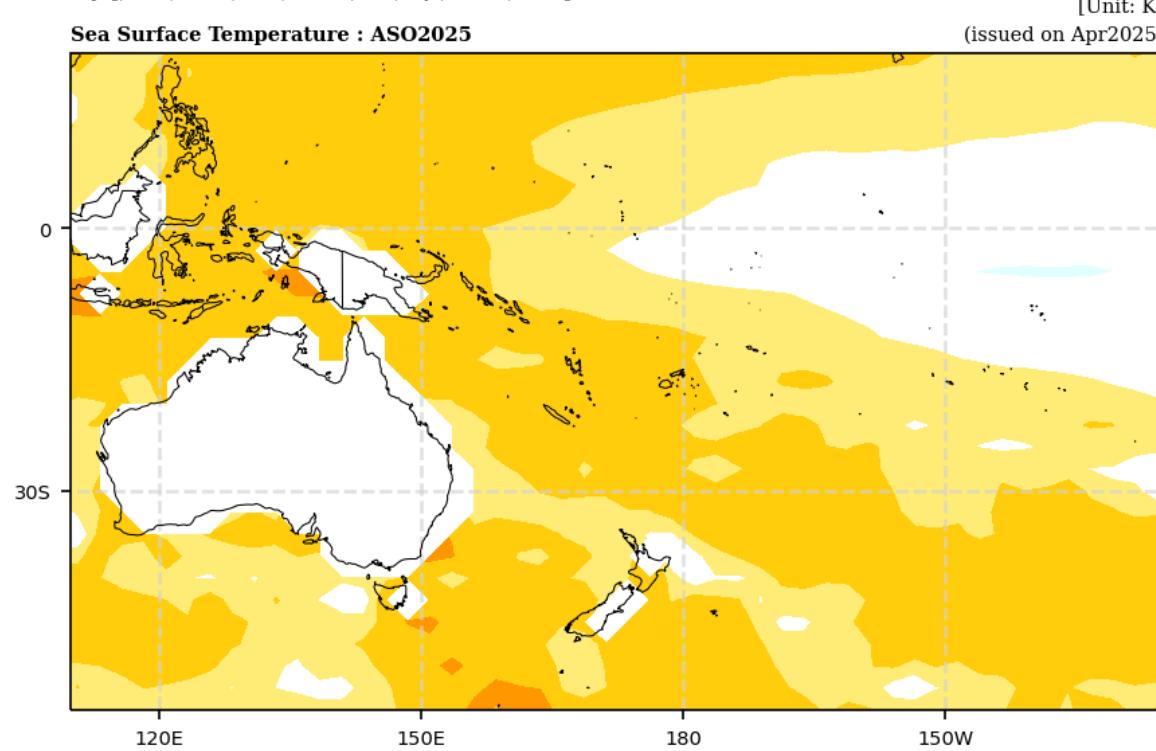
ENSO Outlook

Source: WMO LC-SP, APCC

Simple Composite Map
CMCC,ECMWF,Exeter,Montreal,Seoul,Tokyo,Toulouse,Washington

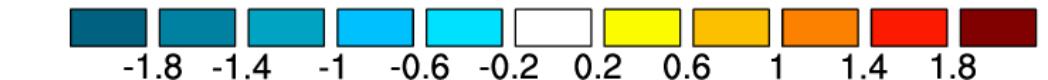
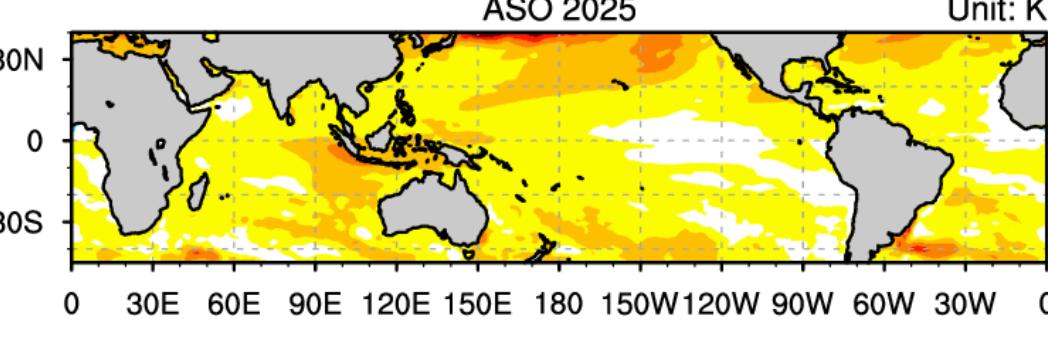
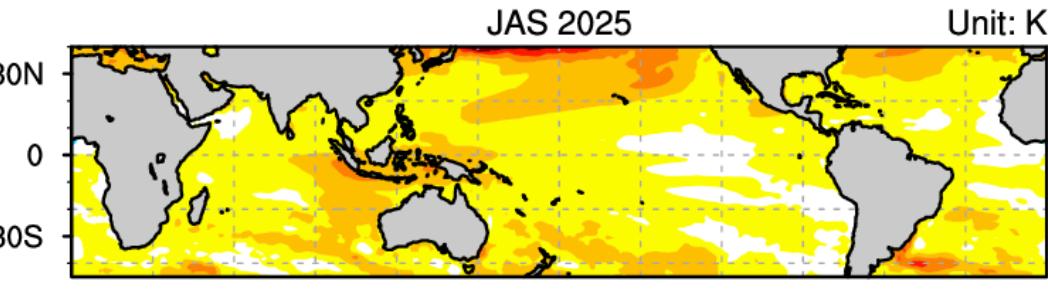
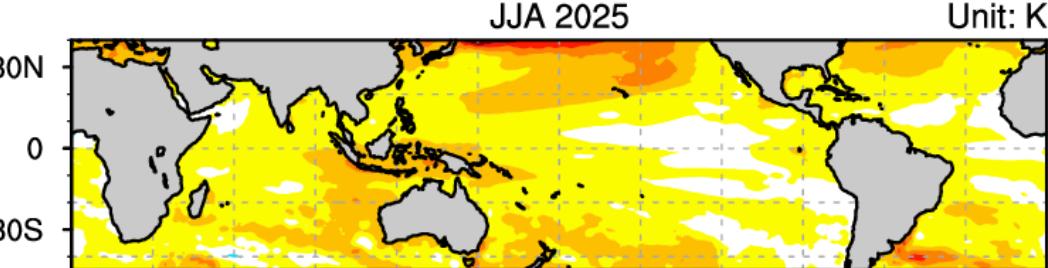
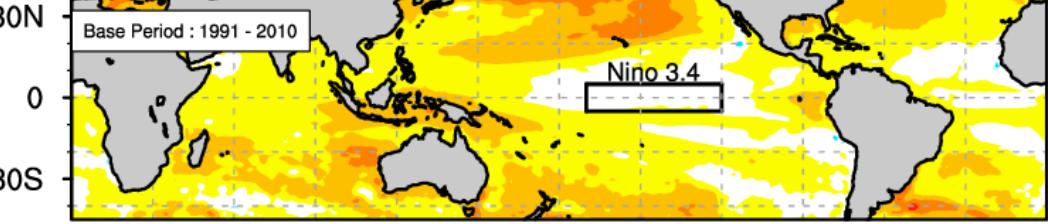


Simple Composite Map
Beijing,CMCC,ECMWF,Exeter,Montreal,Seoul,Tokyo,Toulouse,Washington



SST Anomaly for MJJ-ASO 2025

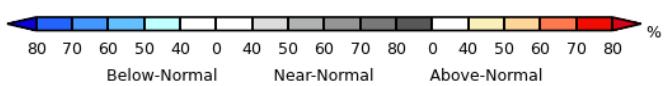
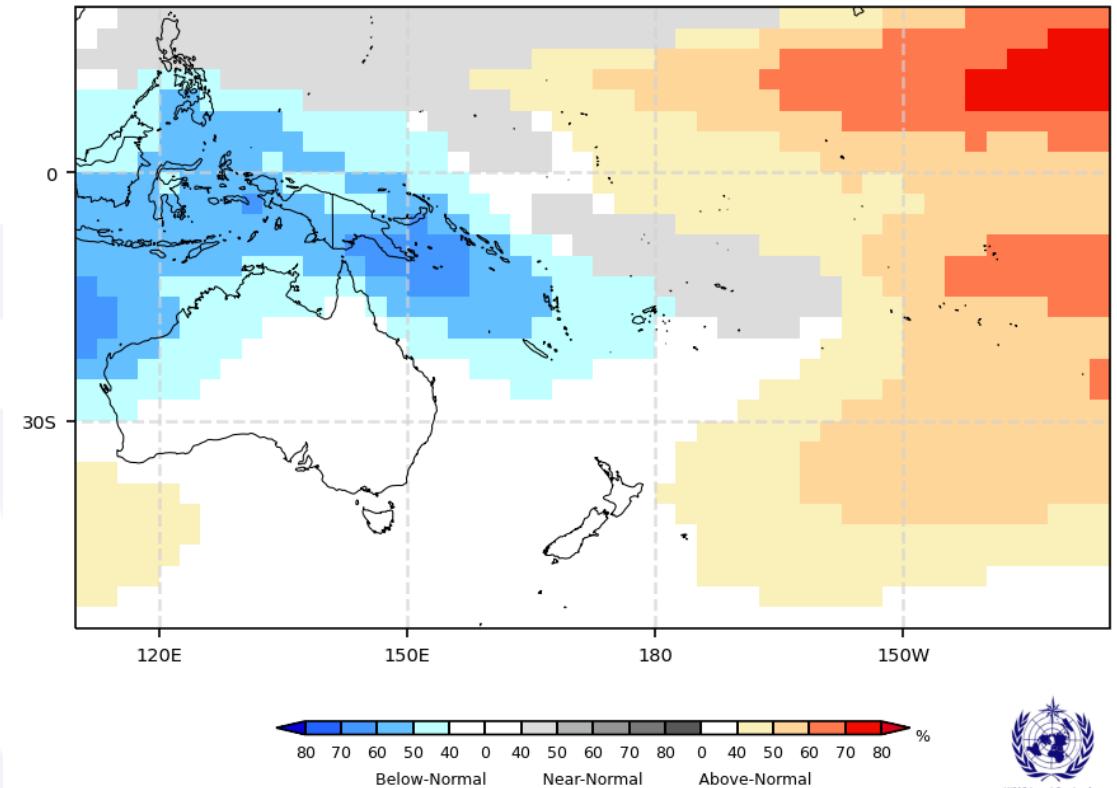
Issued: 15 Apr 2025 MJJ 2025 Unit: K



Probabilistic Multi-Model Ensemble Forecast

CMCC,CPTEC,ECMWF,Exeter,Montreal,Moscow,Seoul,Tokyo,Toulouse,Washington

Mean Sea Level Pressure : MJJ2025



GSCU (issued Mar. 2025)

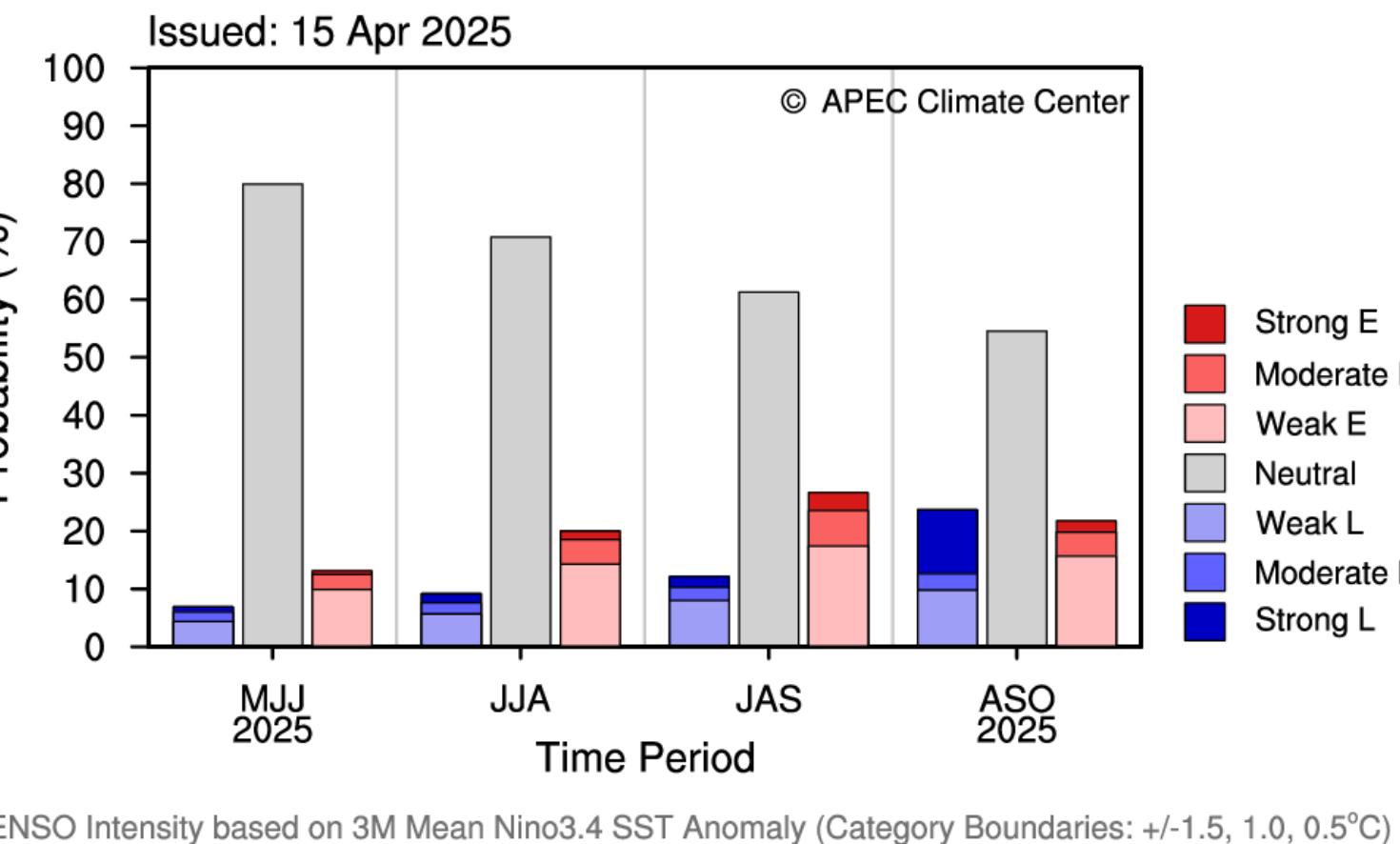
For April–June 2025, sea surface temperature anomalies in the **Niño 3.4 and Niño 3** regions are forecast to decline to **near-average levels**, indicating a **neutral state** for the El Niño–Southern Oscillation (ENSO). In the **Niño 4 region farther west**, sea surface temperature anomalies are also projected to **decrease to near-average**.

ENSO Outlook

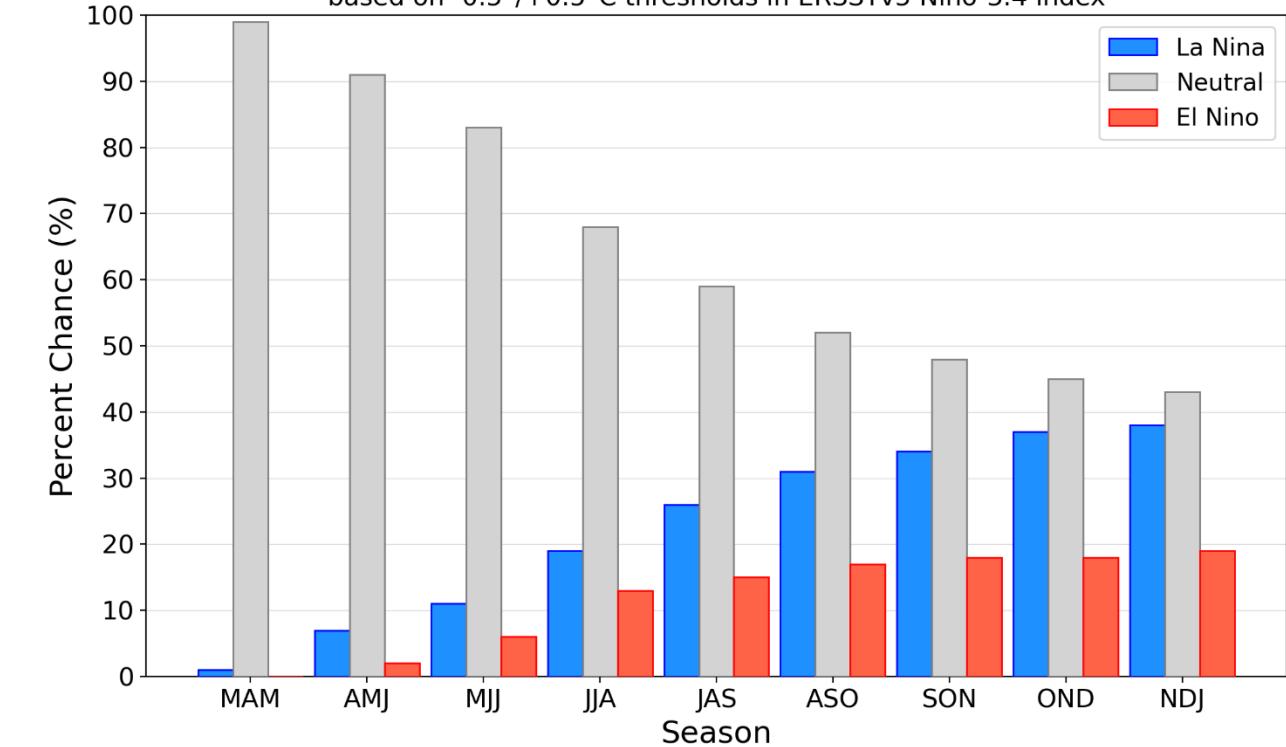
Source: NIWA, APCC, CPC (NOAA)



Probabilistic ENSO Forecast for 2025 MJJASO



Official NOAA CPC ENSO Probabilities (issued April 2025)
based on $-0.5^{\circ}/+0.5^{\circ}\text{C}$ thresholds in ERSSTv5 Niño-3.4 index



ENSO neutral state will be prevalent for coming seasons

Prediction for later this year is uncertain

Will Atmosphere still feel La Niña like East-West SST gradient?

Summary

- Since the PICOF-15, La Niña has been developed and is about to end
 - Cooler than normal SST anomalies are remained central equatorial Pacific but weak
 - Eastern, western pacific is warmer than Normal
 - Favorable subsurface structure to persist La Nina is weak.
- Neutral condition is expected until the next PICOF
 - Agreement from the models on sustained near normal SSTs
 - Above 80% chance of ENSO Neutral conditions up to July 2025

THANK YOU!

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