

18th SESSION OF THE PACIFIC ISLANDS CLIMATE OUTLOOK FORUM PICOF - 18

23 - 24 April, 2026 | Nadi, Fiji



ClimSA
Climate and Oceans Support
Program in the Pacific



COSPPac
Climate and Oceans Support
Program in the Pacific



Pacific Community
Communauté
du Pacifique



Earth Sciences
New Zealand





Session 2.ii Ocean Review

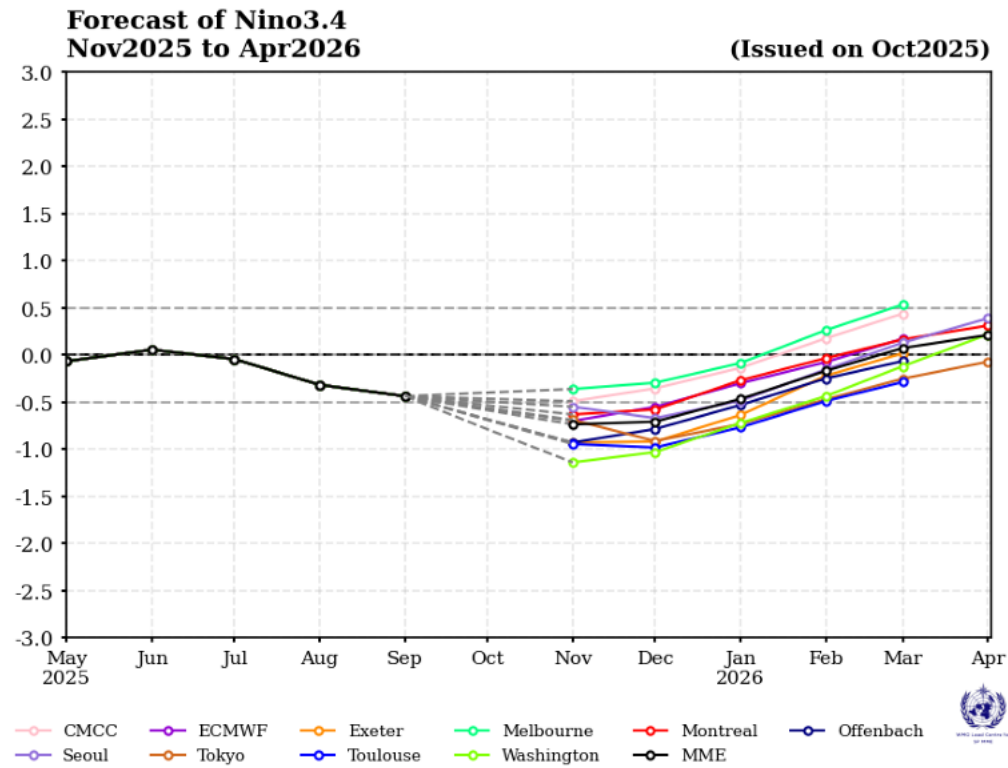
Grant Smith

COSPPac, Bureau of Meteorology

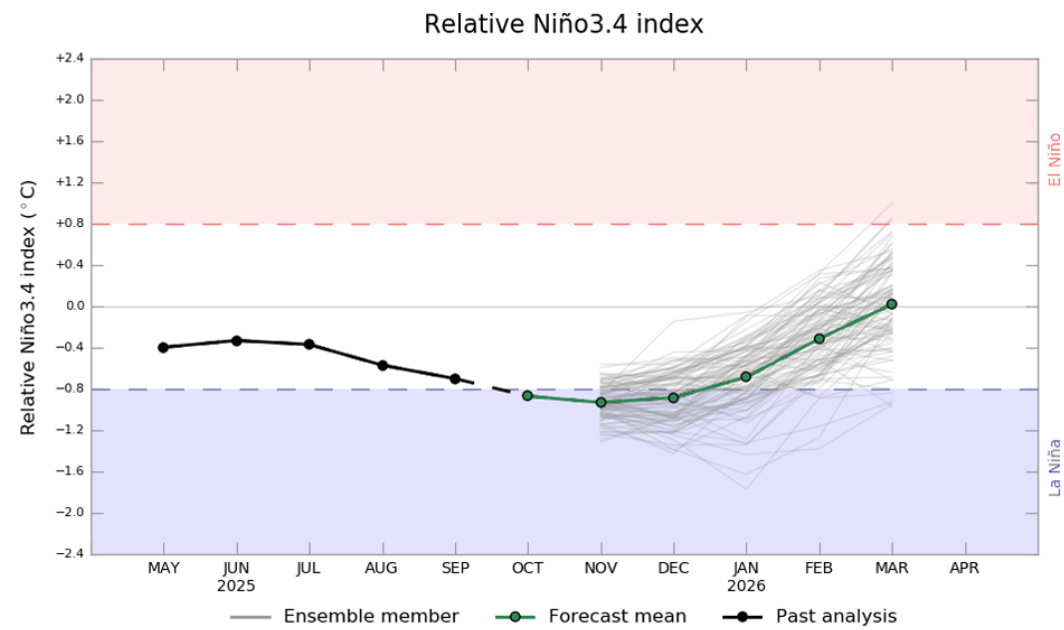
PICOF-17 Outlook (November 2025 - April 2026)

- La Niña conditions very likely to become established over the next three month period (November 2025 – January 2026) Consensus is that this event will be short-lived, with a return to Neutral conditions likely in the first quarter of 2026
- Above-normal SSTs are expected for most western Pacific countries, including COSPPac partner countries in the south. Cooler SSTs are forecasted along the central equatorial Pacific, consistent with a developing La Niña episode.
- Below-normal sea levels are favoured around Kiribati, Vanuatu, Fiji, Tonga, Niue, Southern Cook Islands and French Polynesia. Near-normal or above-normal sea levels are expected elsewhere, with higher levels in the western Pacific.
- Countries should be prepared for higher tides in the coming months.
- Coral Beaching Alert Levels 1 and 2 for PNG, FSM, RMI, Palau and Solomon Is.
- Fisheries convergence zone is projected to expand.

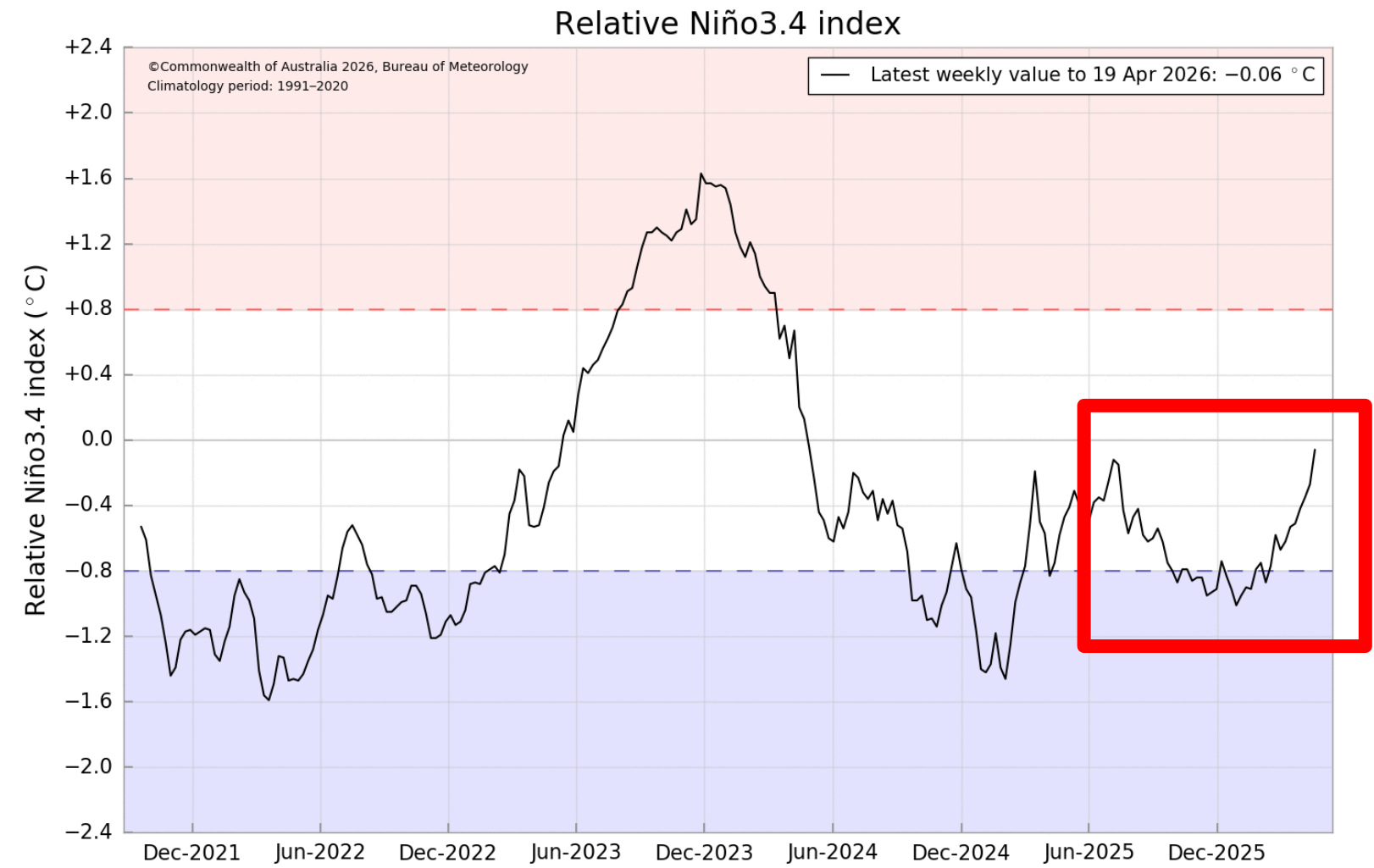
Niño34 Observations



WMO MME



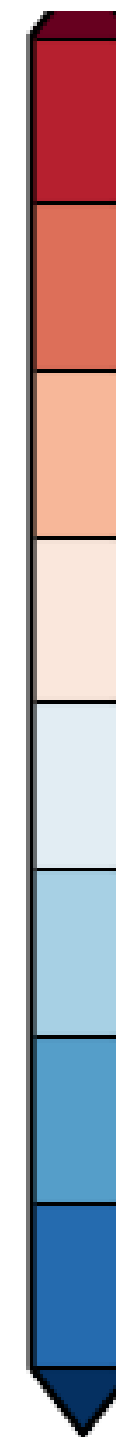
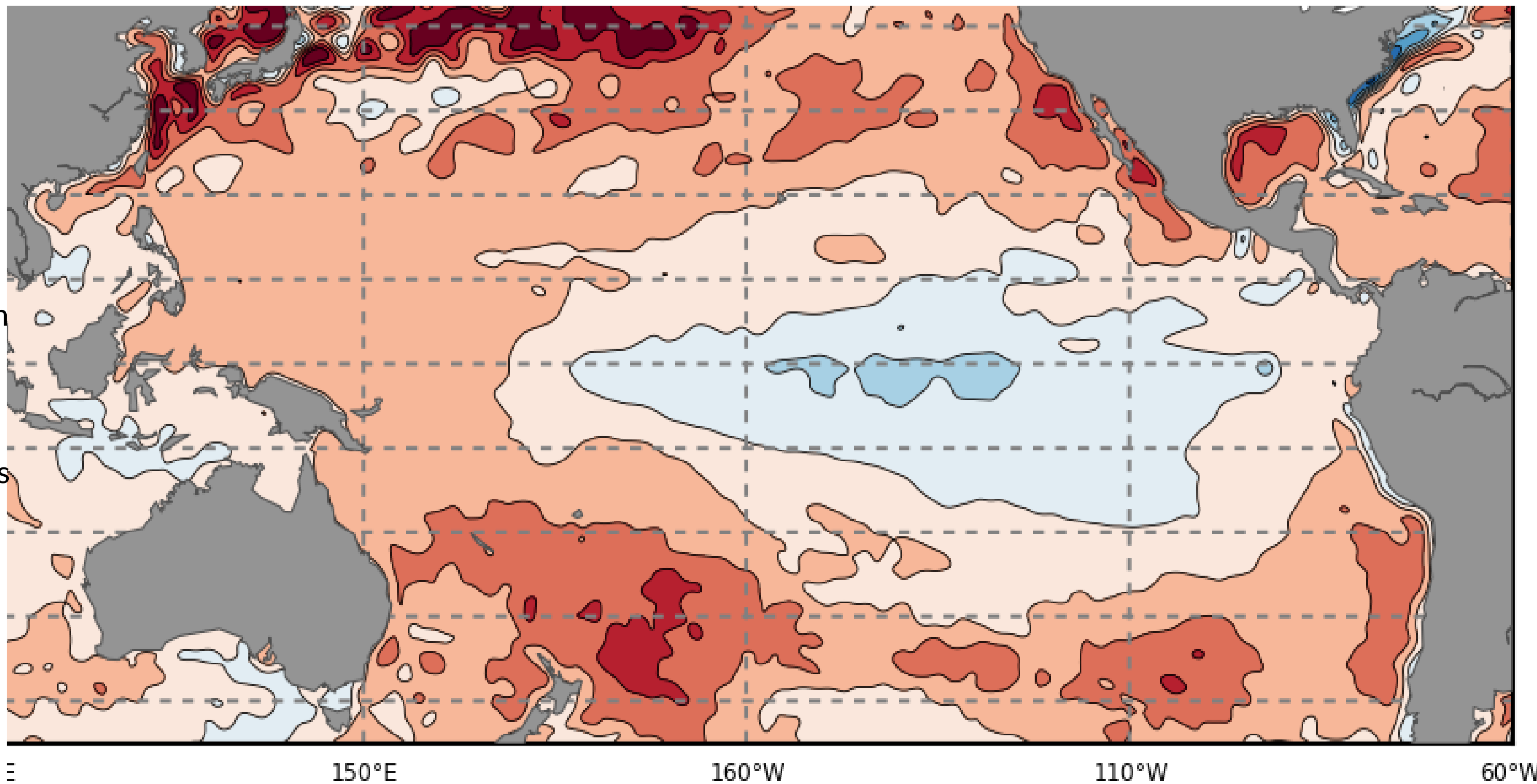
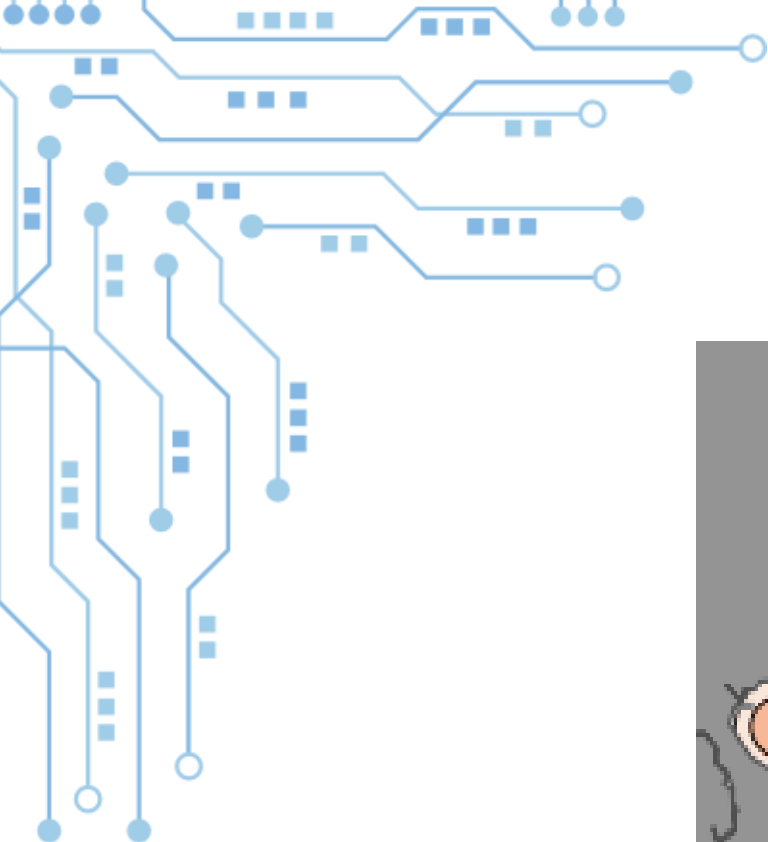
www.bom.gov.au/climate
Commonwealth of Australia 2025, Australian Bureau of Meteorology
Past analysis base period: 1991-2020
Forecast base period: 1981-2018
Model: ACCESS-S2
Model run: 11 Oct 2025



Observed

- Short lived La Niña
- Back to neutral by February
- Recent observations near to zero

Satellite SST: October 2025 to March 2026



- Warmer than normal in northern, southern, western Pacific
- Neutral in large regions in central and eastern Pacific
- Cool anomalies in central equatorial

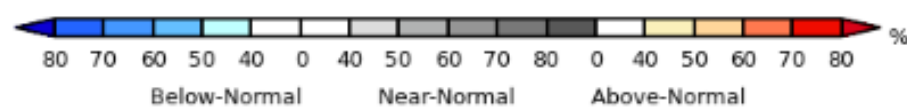
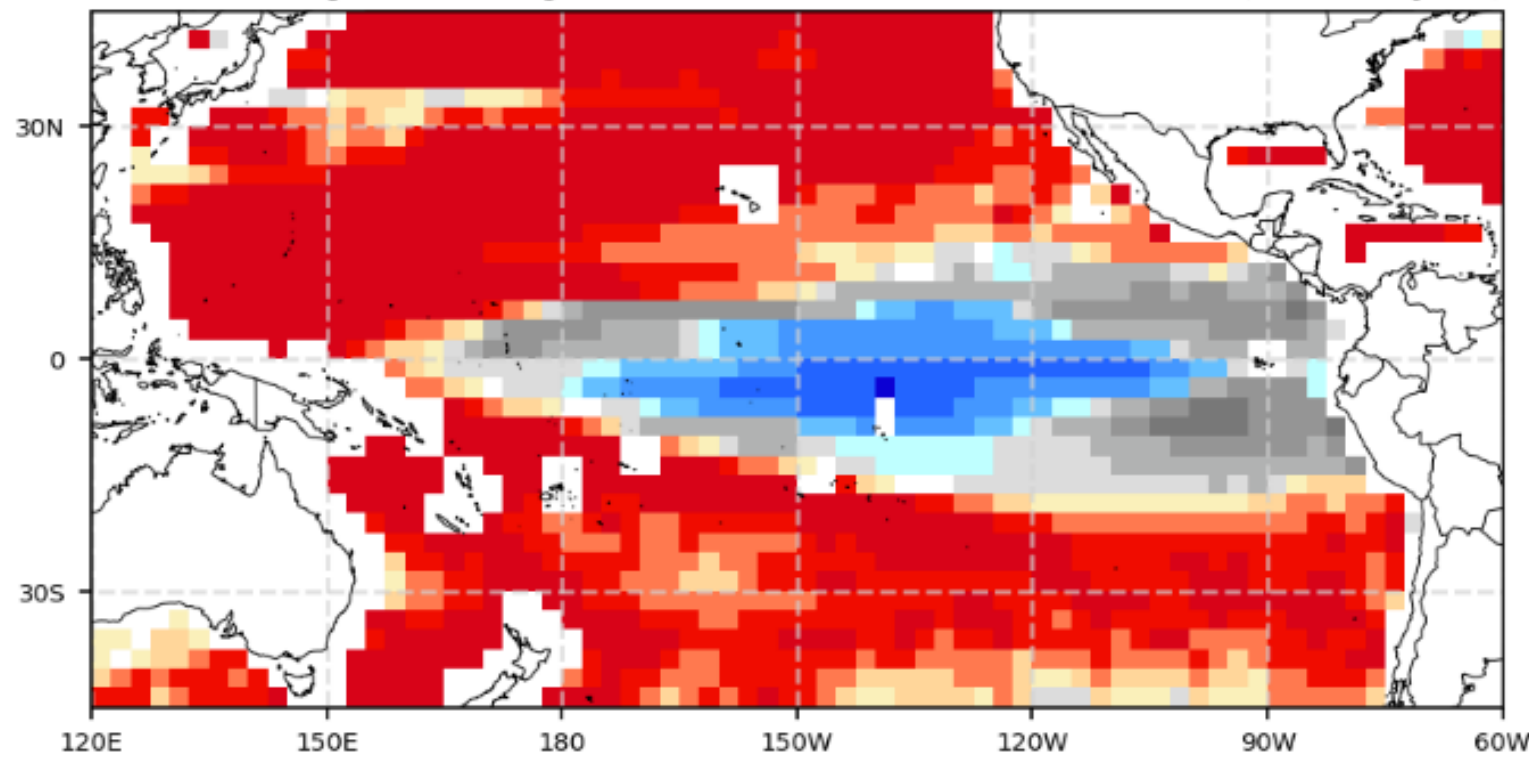
WMO-MME SST 6 Month Outlook (October 2025 to March 2026)

Probabilistic Multi-Model Ensemble Forecast

Montreal, Seoul, Tokyo, Washington

Sea Surface Temperature : ONDJFM2025

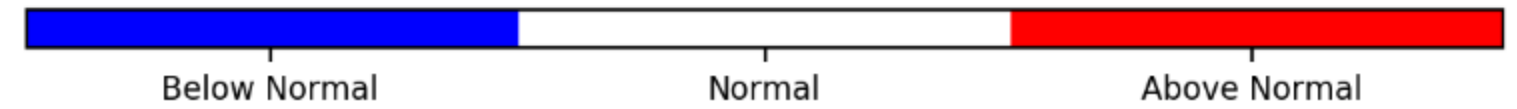
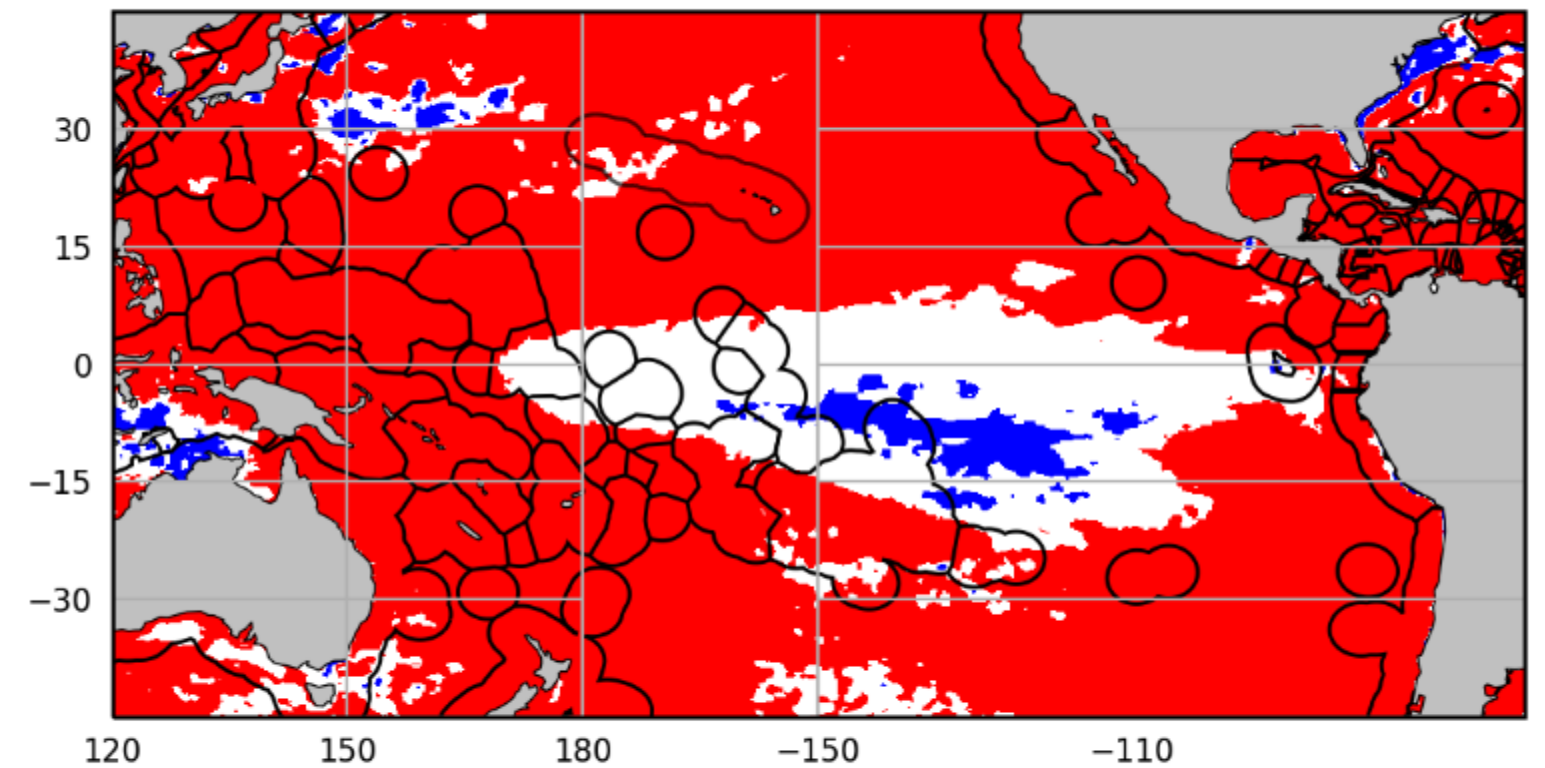
(issued on Sep2025)



WMO MME Issued September 2025

Satellite SST: Period=ONDJFM (2026)

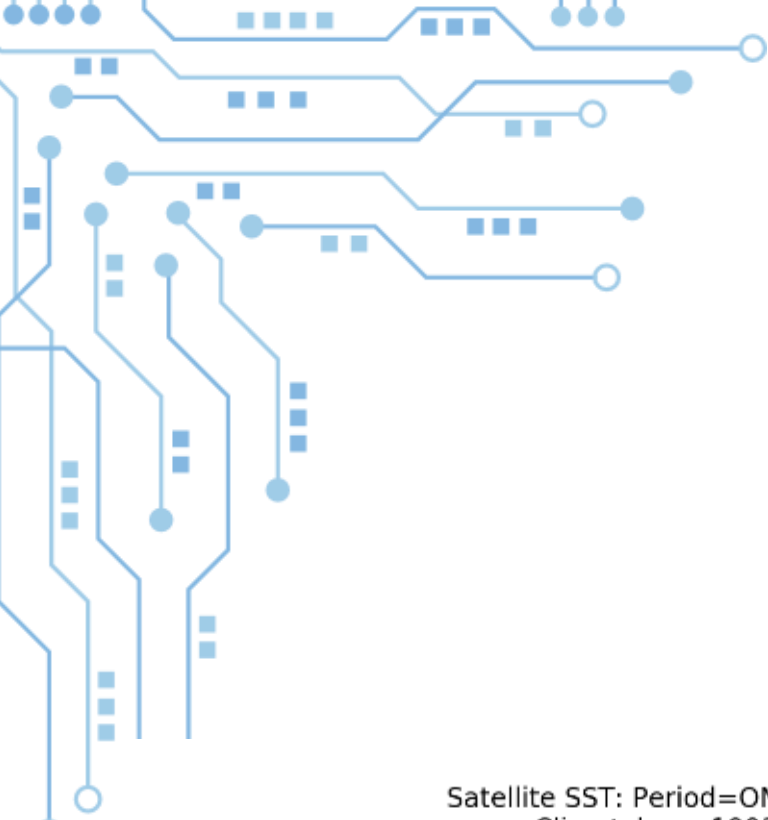
Climatology: 1993-2012



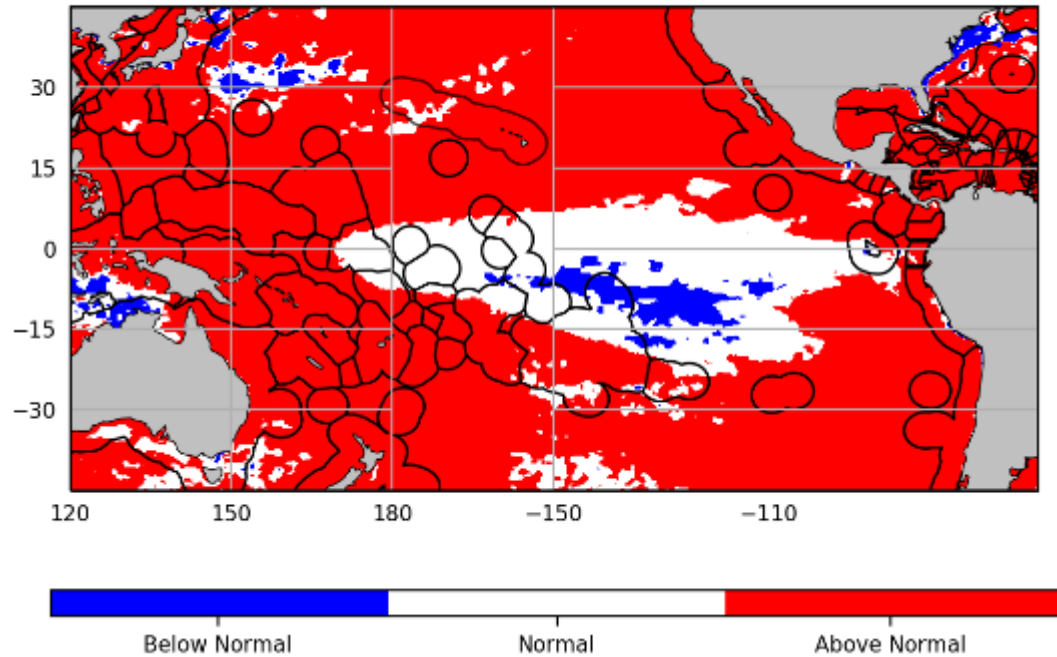
Satellite OISST

- Regions of high probability above normal were well forecast
- Moderate probabilities of below normal
- North Pacific features well represented
- Forecast not as confident where there were high SSTs in South Pacific

WMO-MME Individual Models 6 Month Outlook (October 2025 to March 2026)



Satellite SST: Period=ONDJFM (2026)
Climatology: 1993-2012



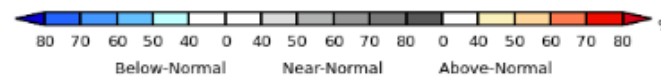
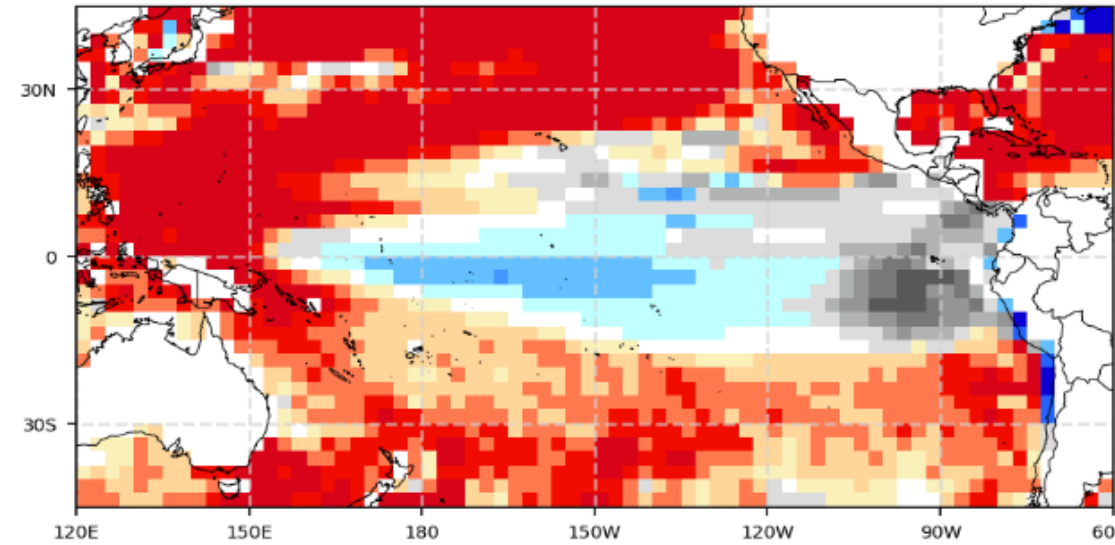
Satellite OISST

Probabilistic Multi-Model Ensemble Forecast

Montreal

Sea Surface Temperature : ONDJFM2025

(issued on Sep2025)



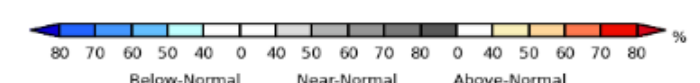
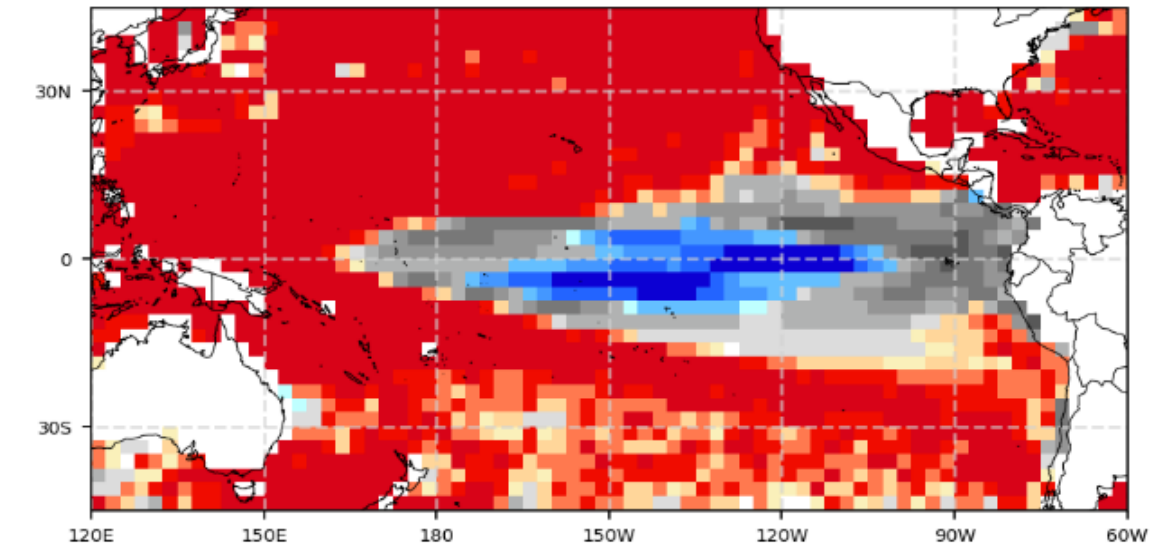
Canada

Probabilistic Multi-Model Ensemble Forecast

Seoul

Sea Surface Temperature : ONDJFM2025

(issued on Sep2025)



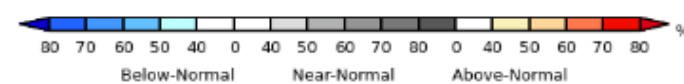
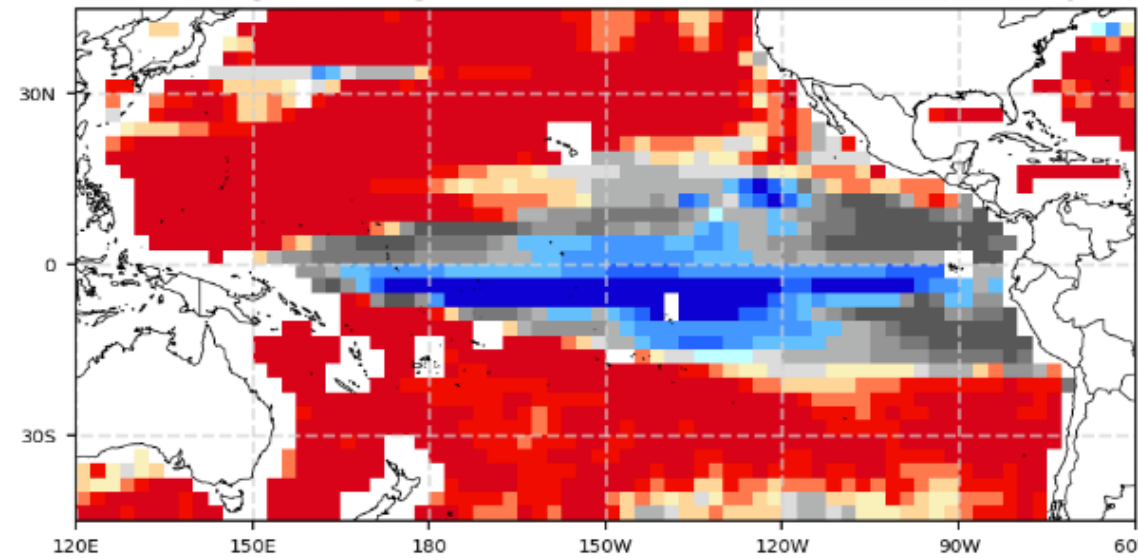
KMA

Probabilistic Multi-Model Ensemble Forecast

Tokyo

Sea Surface Temperature : ONDJFM2025

(issued on Sep2025)



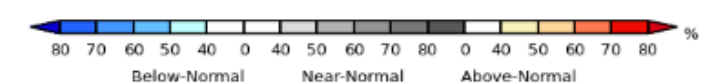
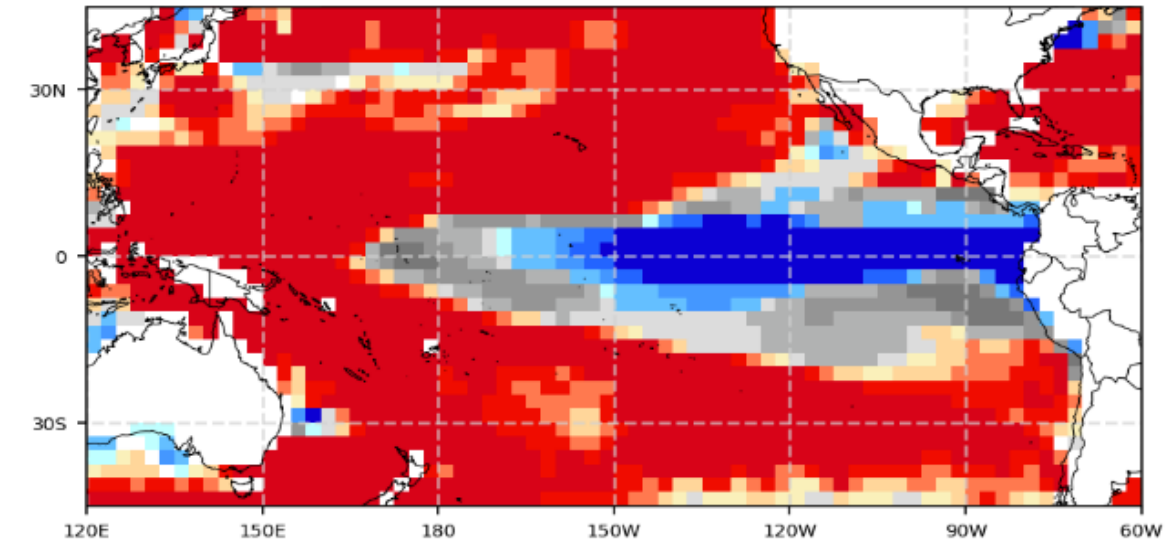
Japan

Probabilistic Multi-Model Ensemble Forecast

Washington

Sea Surface Temperature : ONDJFM2025

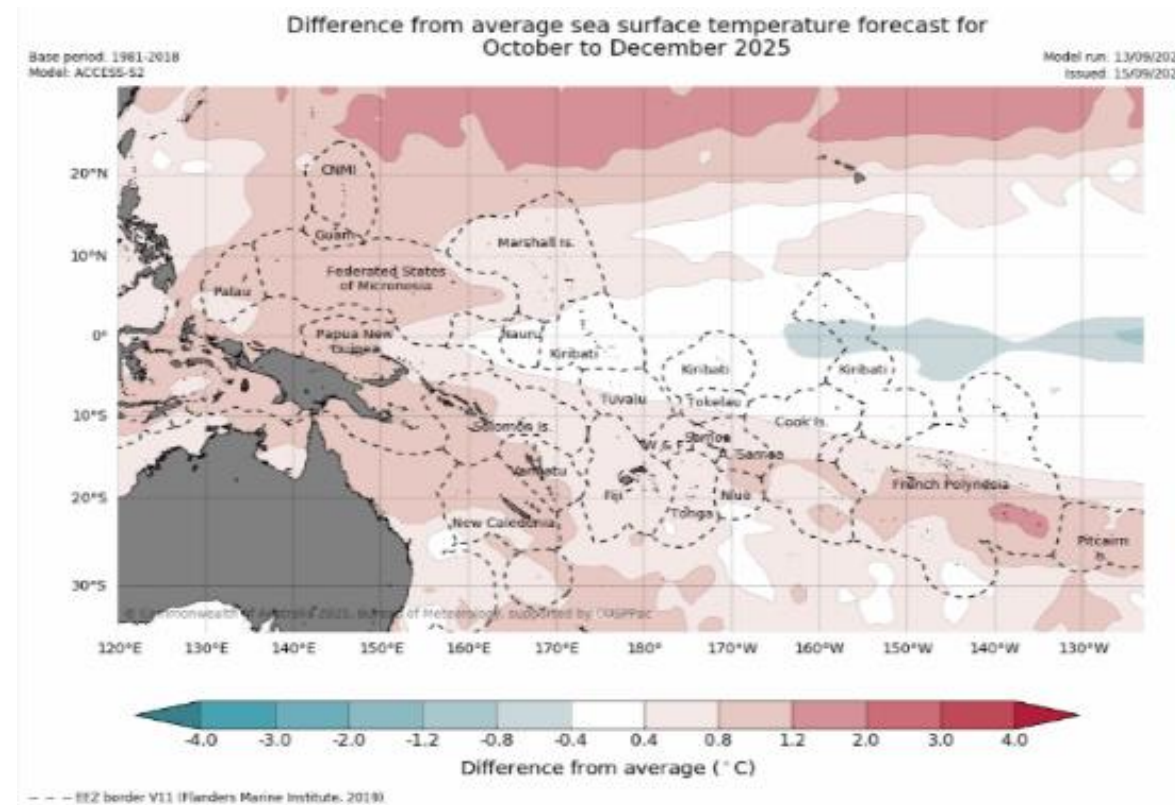
(issued on Sep2025)



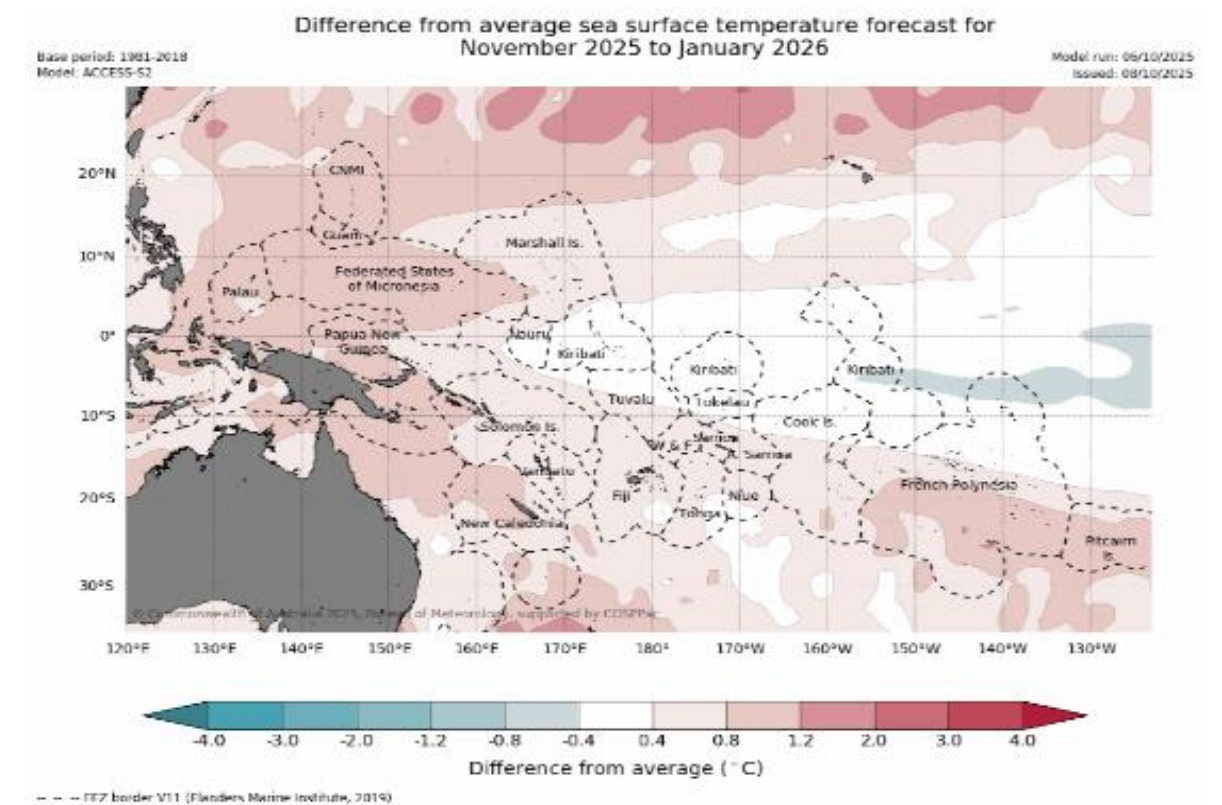
NOAA

ACCESS-S2 SST Seasonal Outlook (October 2025 to January 2026)

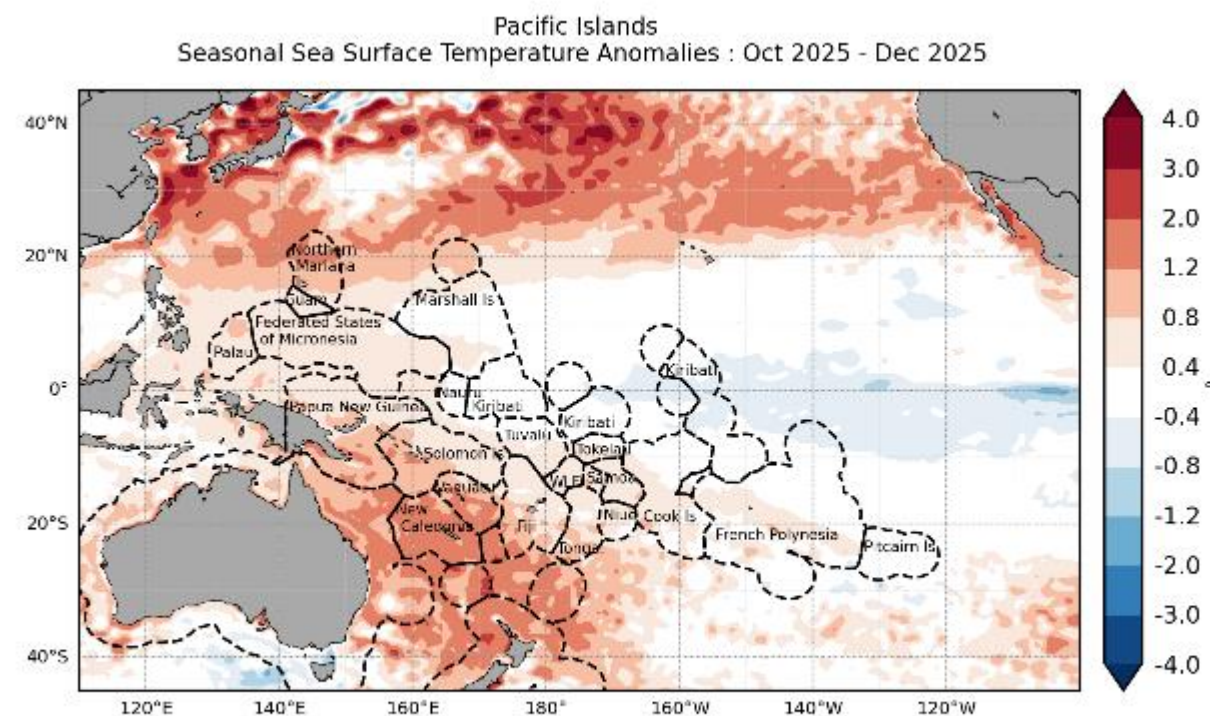
- Slight warm bias in tropical Pacific
- Forecast too cool in Tasman Sea region and far northeast Pacific
- Forecast too warm in places in northern subtropical and near French Polynesia/Pitcairn Islands.



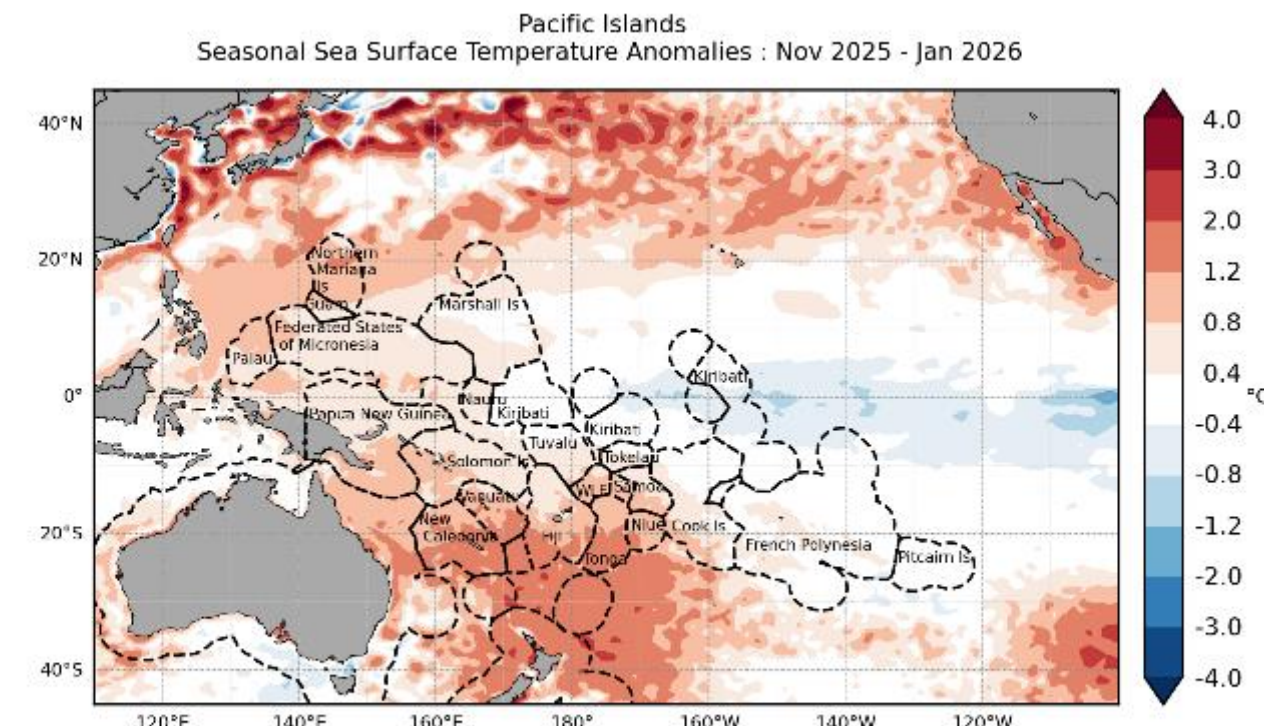
ACCESS-S2 (Oct 2025 to Dec 2025)



ACCESS-S2 (Nov 2025 to Jan 2026)



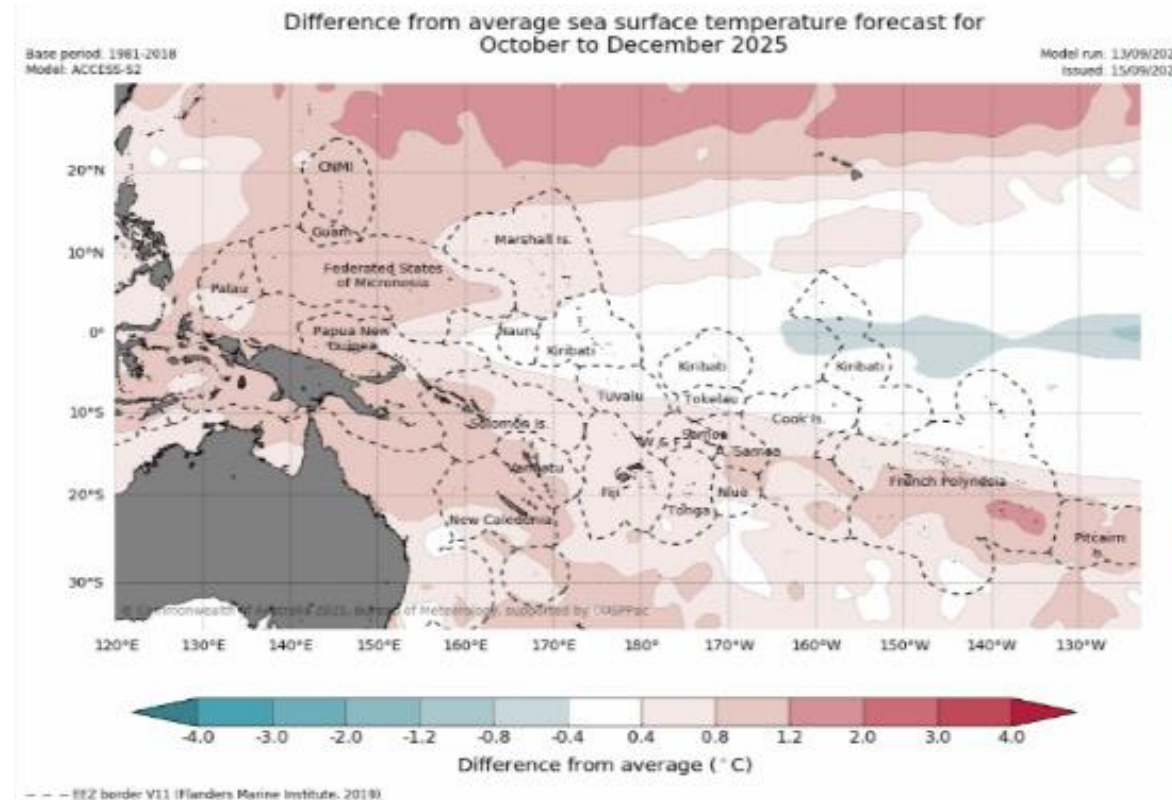
Satellite OISST (Oct 2025 to Dec 2025)



Satellite OISST (Nov 2025 to Jan 2026)

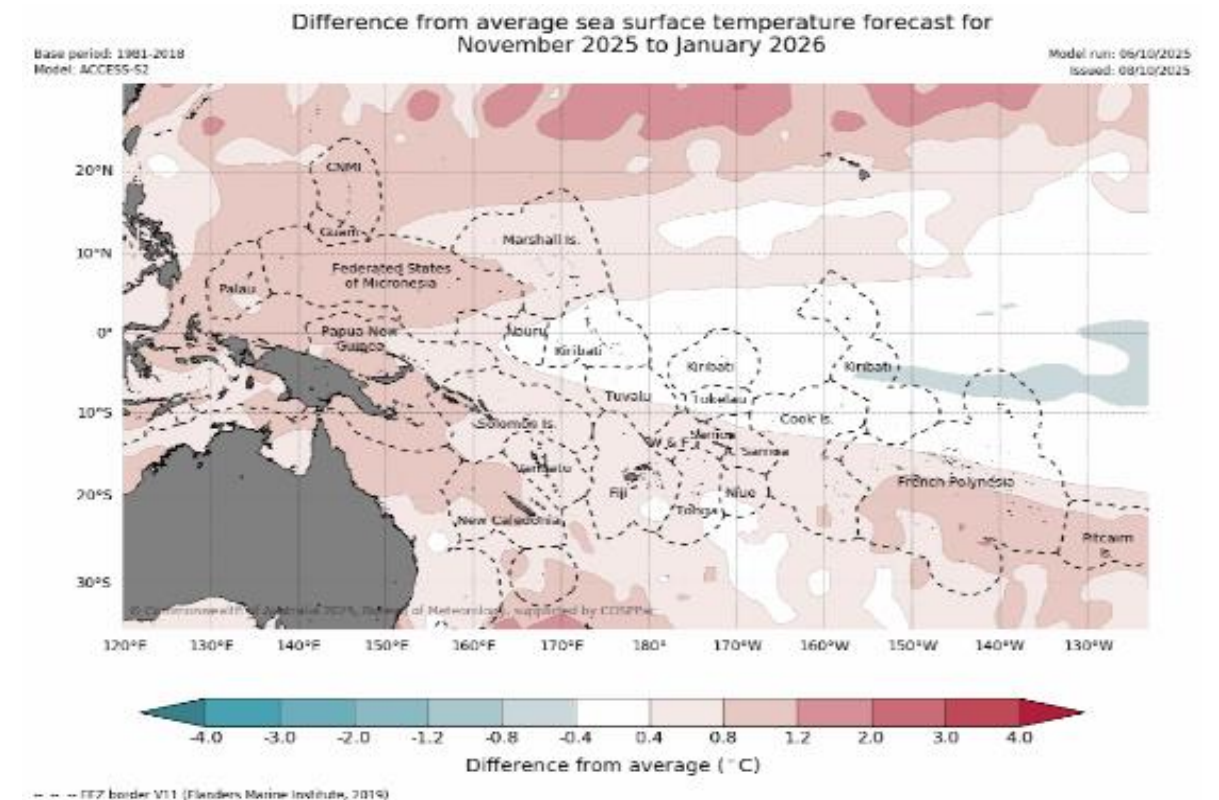
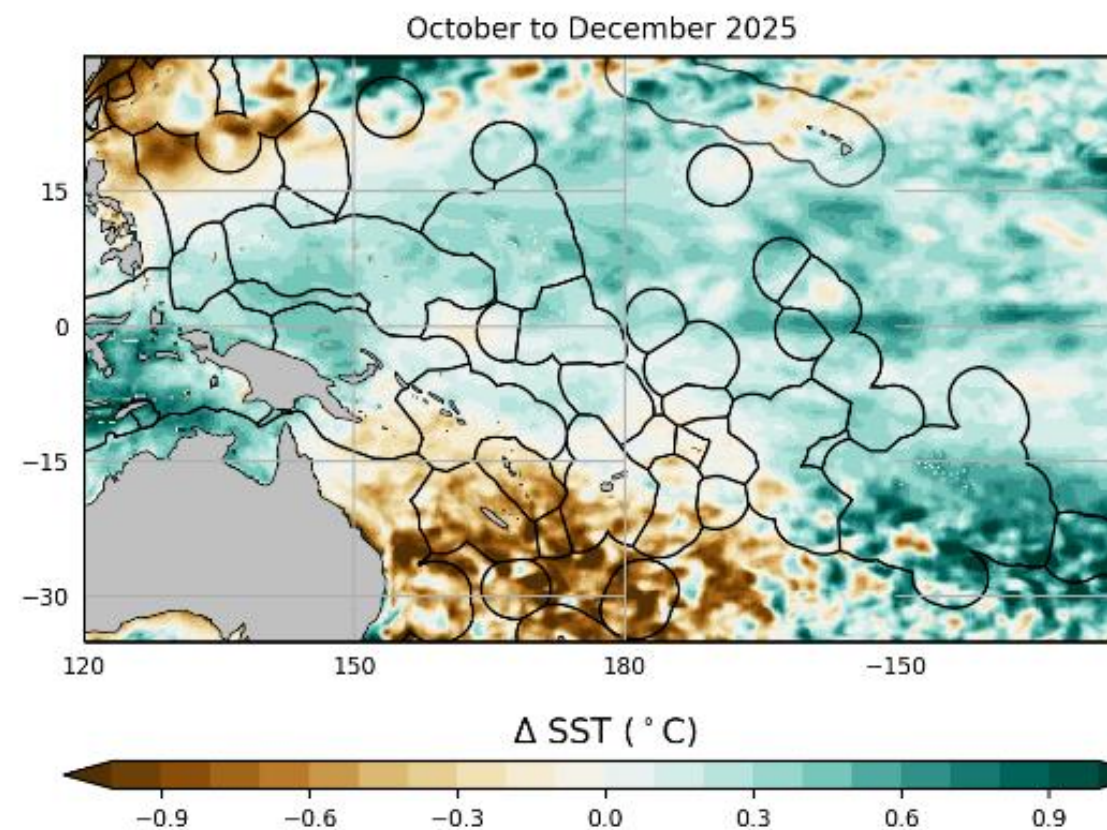
ACCESS-S2 SST Seasonal Outlook (October 2025 to January 2026)

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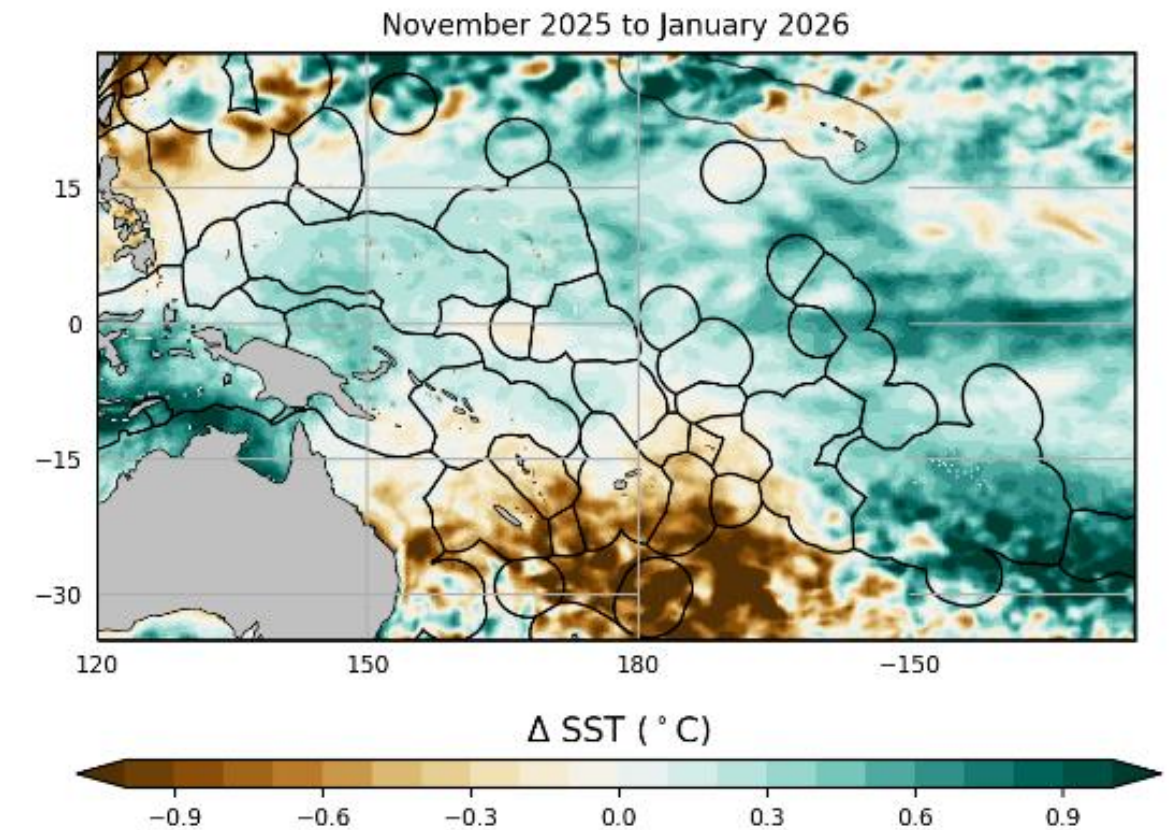
ACCESS-S2 (Oct 2025 to Dec 2025)

ACCESS-S minus Observations

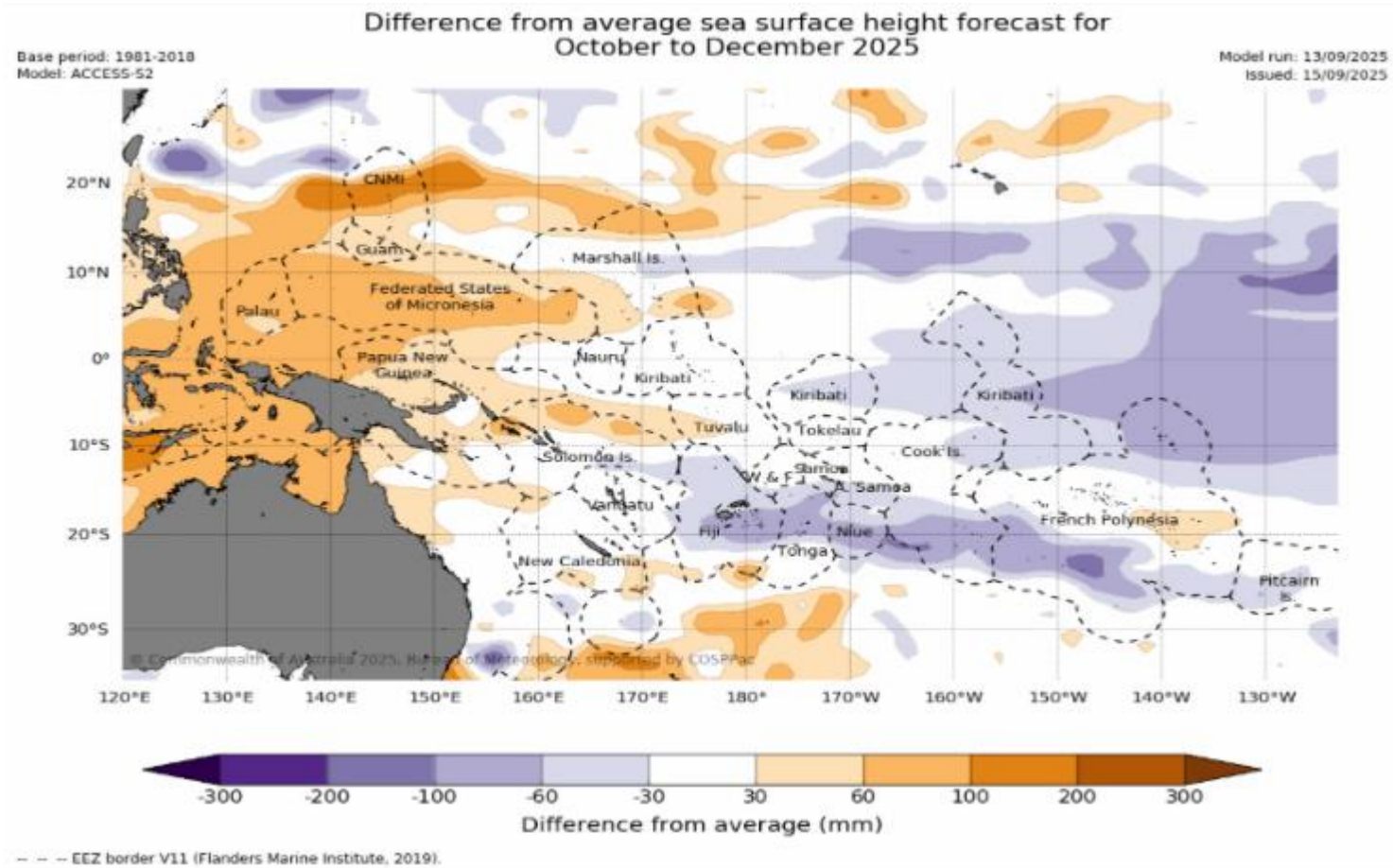


ACCESS-S2 (Nov 2025 to Jan 2026)

ACCESS-S minus Observations



Sea Level ACCESS-S2/CFSv2 (October 2025 to December 2026)

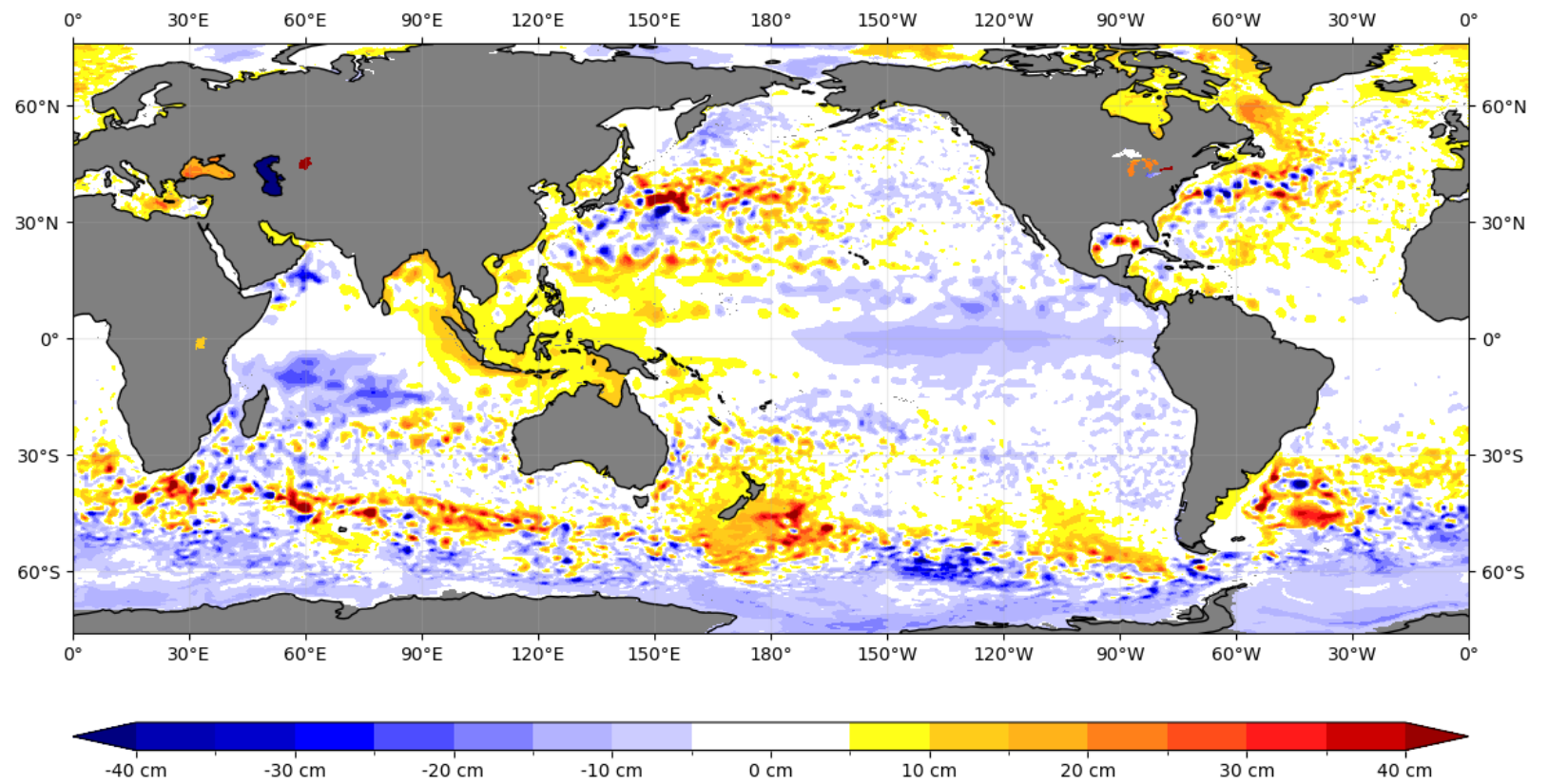


Reanalysis Sea Surface Height Anomaly

Full Month: November 2025

Region: Global

Period: 2025-11-01 to 2025-11-30

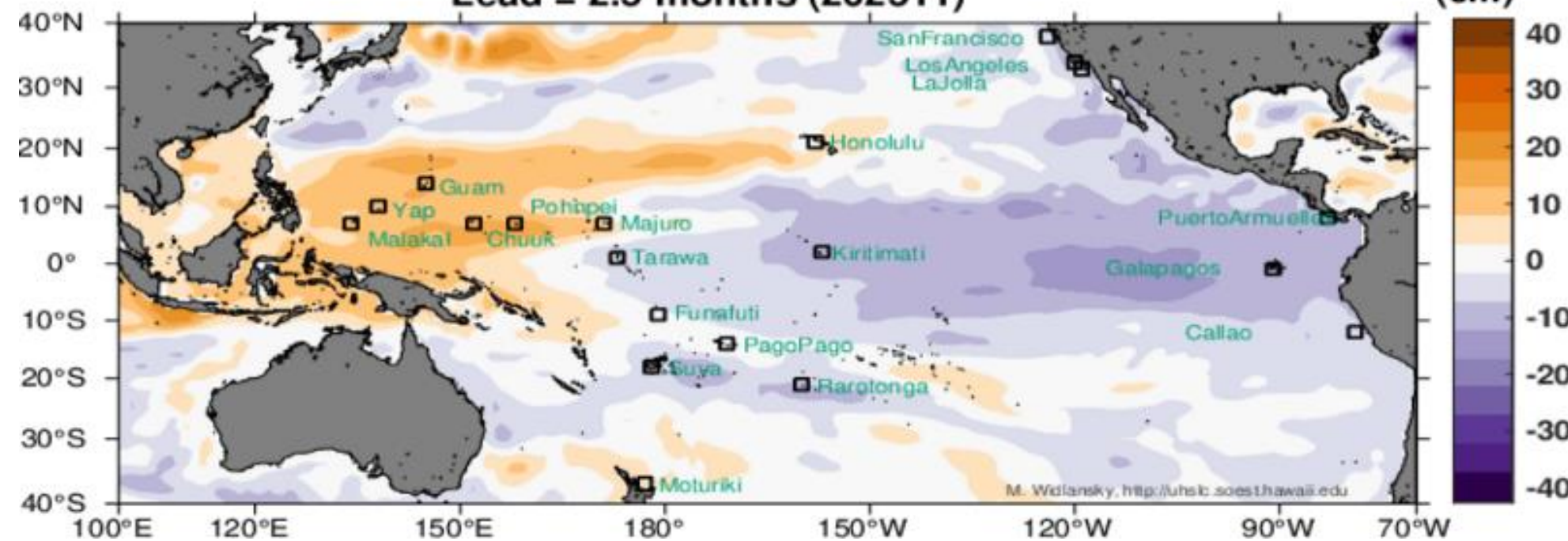


ACCESS-S

Model forecast (CFSv2: initialized 20250901-20250930)

Lead = 2.5 months (202511)

CFSv2



Satellite OISST

- Models did well in equatorial Pacific where lower than normal sea levels were present
- Picked up smaller lower than normal features in subtropics
- Western Warm Pool overforecast for higher than normal

Sea Level CFSv2 (March 2026)

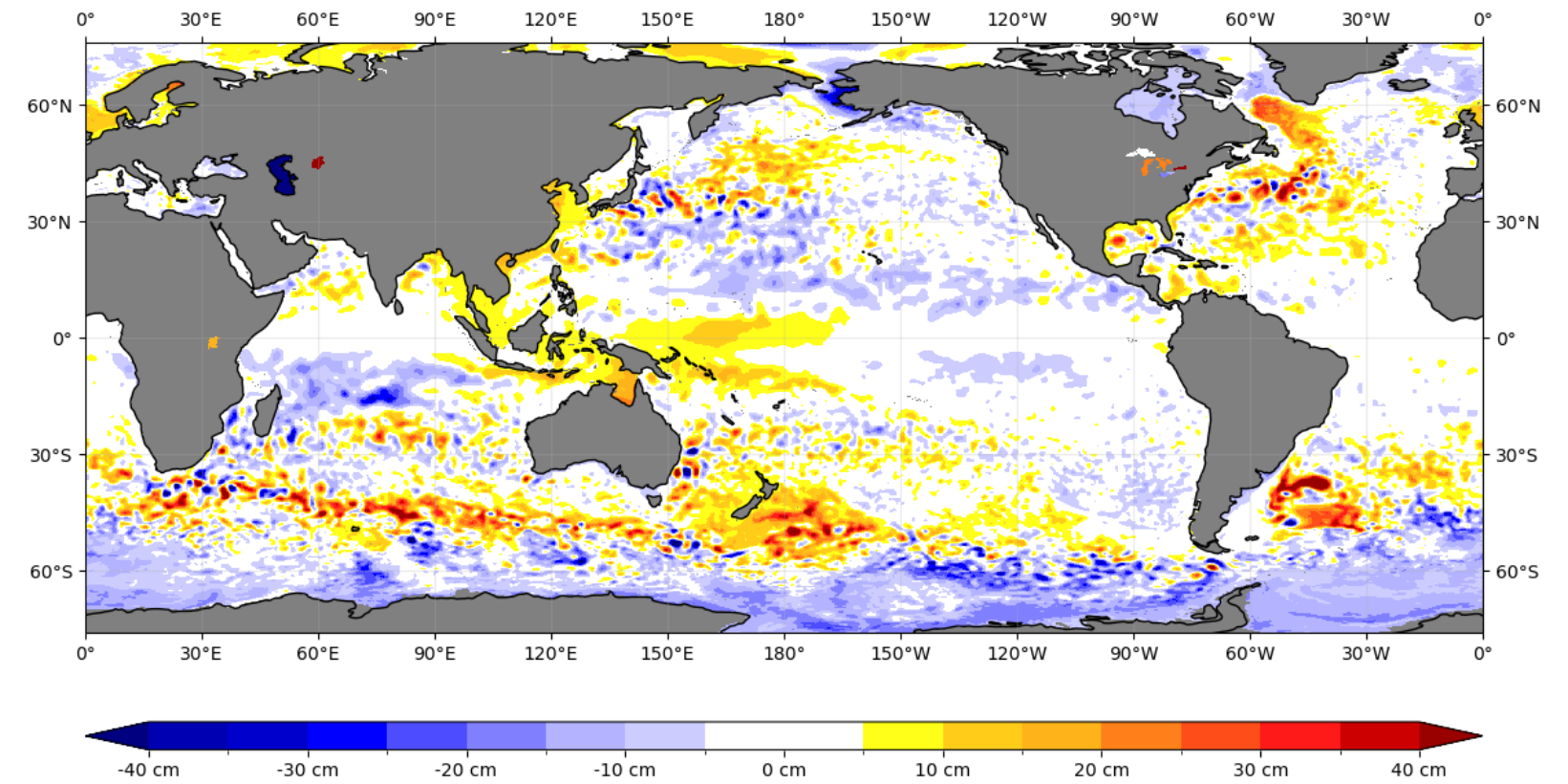
- Model attempted to forecast bands of lower than normal sea level
- Western Warm Pool slightly overforecast for higher than normal

Reanalysis Sea Surface Height Anomaly

Region: Global

Full Month: March 2026

Period: 2026-03-01 to 2026-03-31



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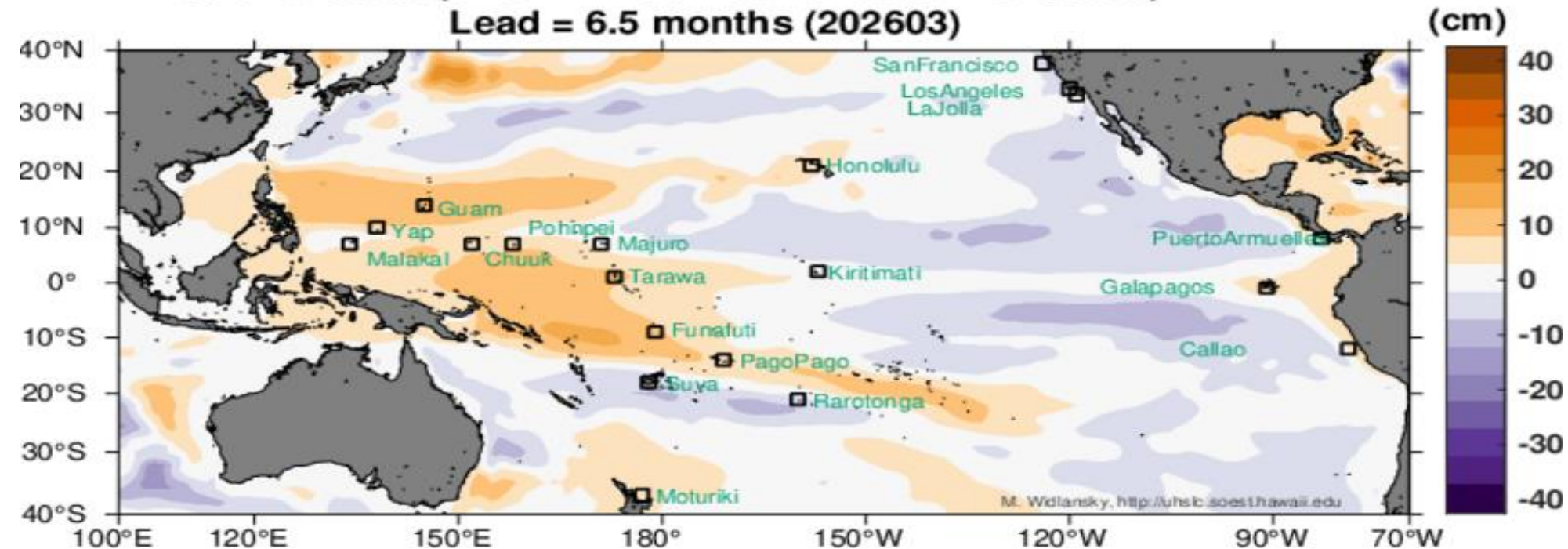
Climatology: 1981 to 2018

Resource: gay548/ux62/reanalysis

Model forecast (CFSv2: initialized 20250901-20250930)

Lead = 6.5 months (202603)

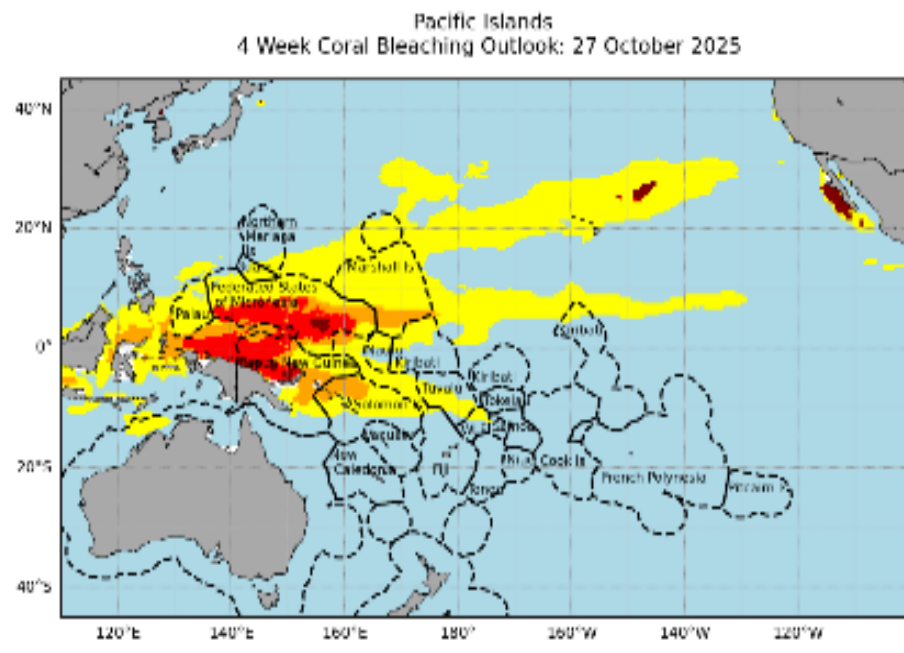
CFSv2



Satellite OISST

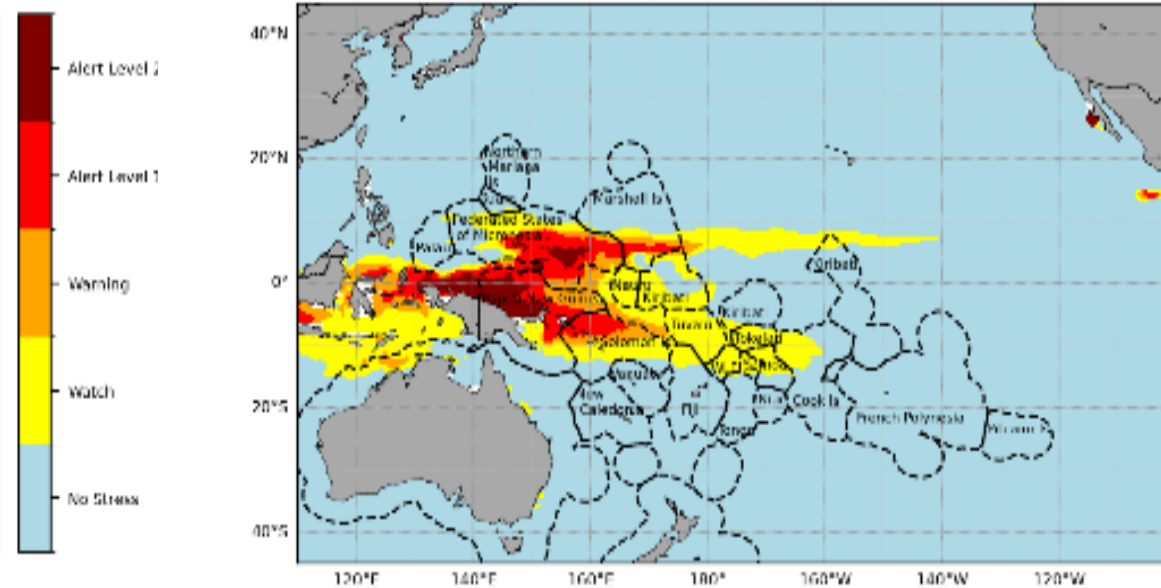
Coral Bleaching Risk Outlook (October 2025 to December 2026)

Outlooks



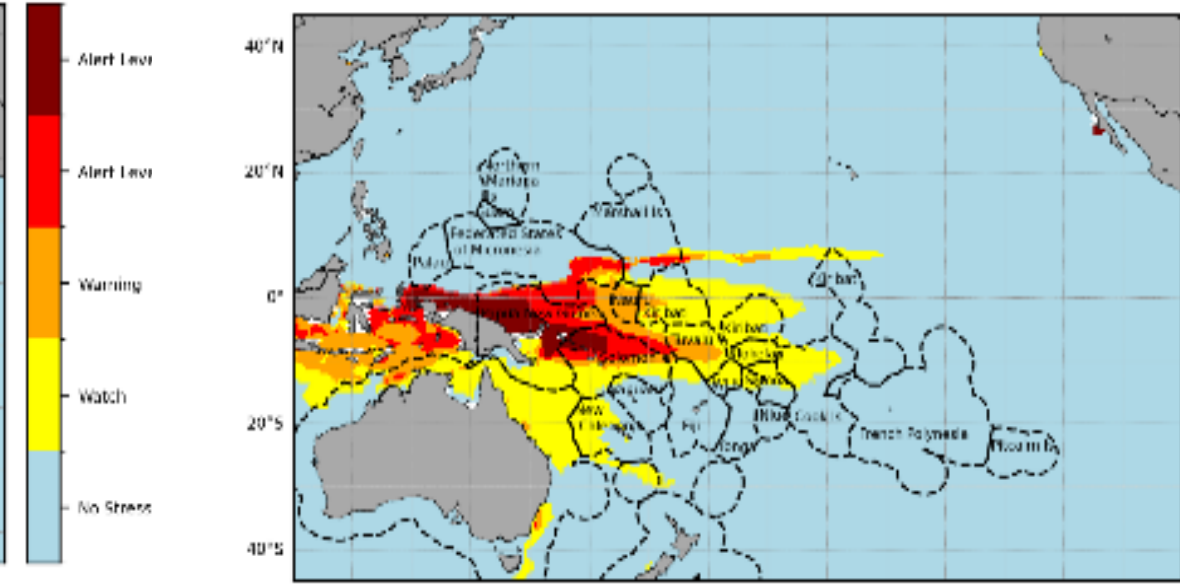
© Pacific Community (SPC) 2025

October 2025



NOAA © Pacific Community (SPC) 2025

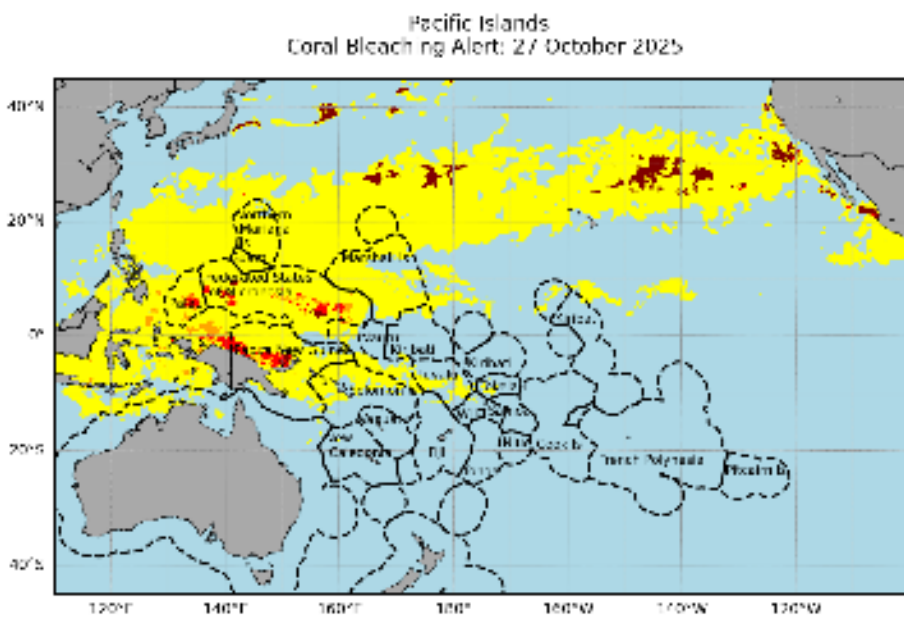
November 2025



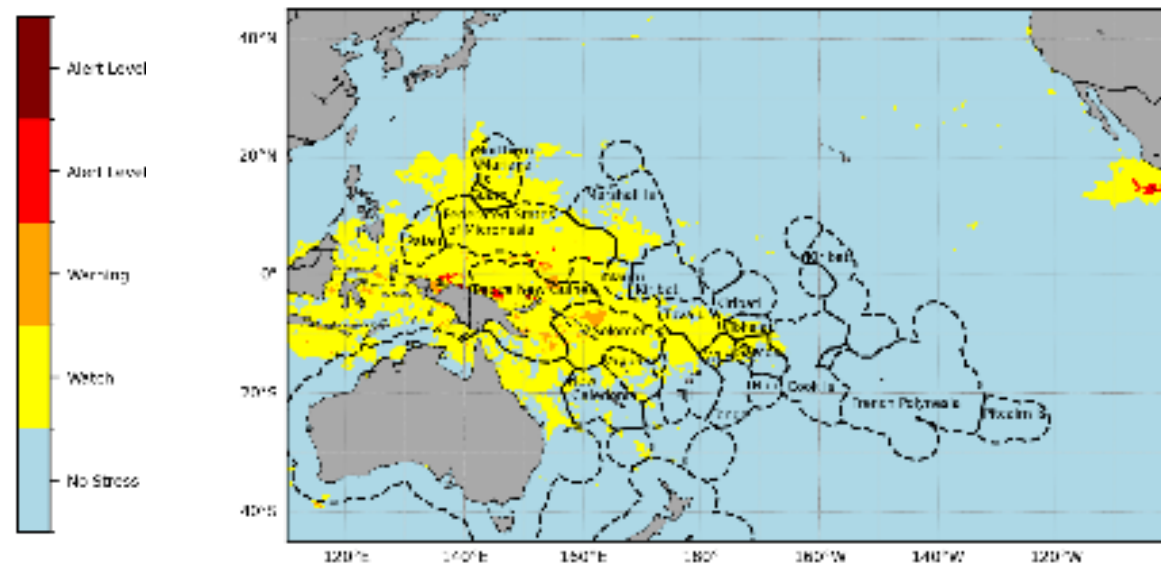
NOAA © Pacific Community (SPC) 2025

December 2025

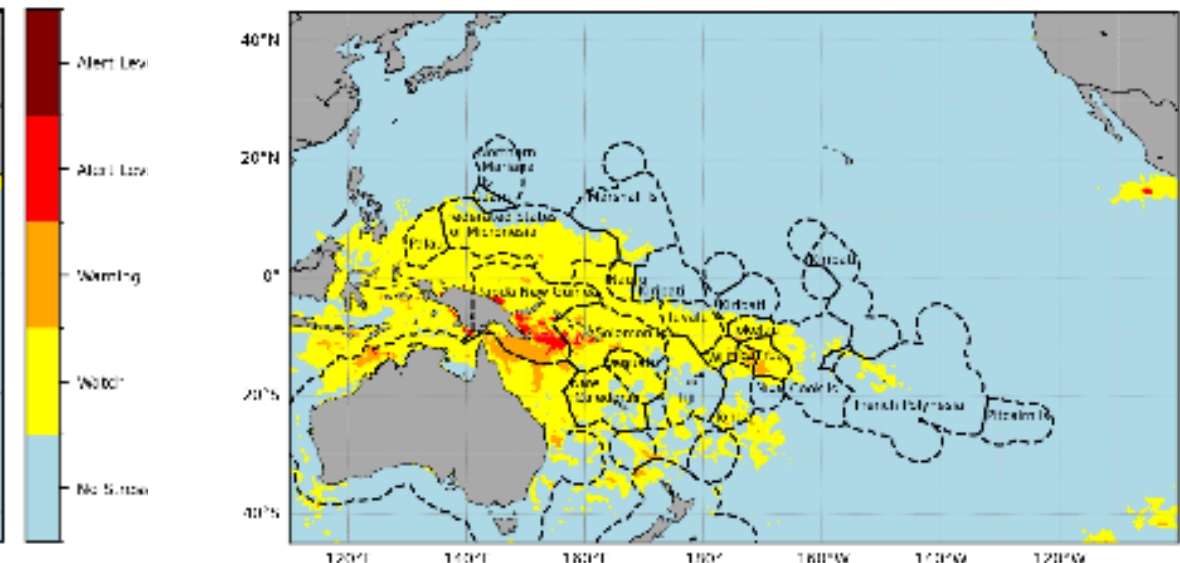
Observations



© Pacific Community (SPC) 2025



NOAA © Pacific Community (SPC) 2025

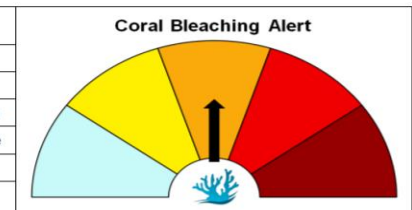


NOAA © Pacific Community (SPC) 2025

NOAA

- Alerts too high in western warm pool
- Warming region more widespread in observations

Alert Level	Effect
No Data	No alert data available
No Stress	No thermal stress
Bleaching Watch	Low-level thermal stress
Bleaching Warning	Coral bleaching possible
Bleaching Alert Level 1	Coral bleaching likely
Bleaching Alert Level 2	Coral mortality likely

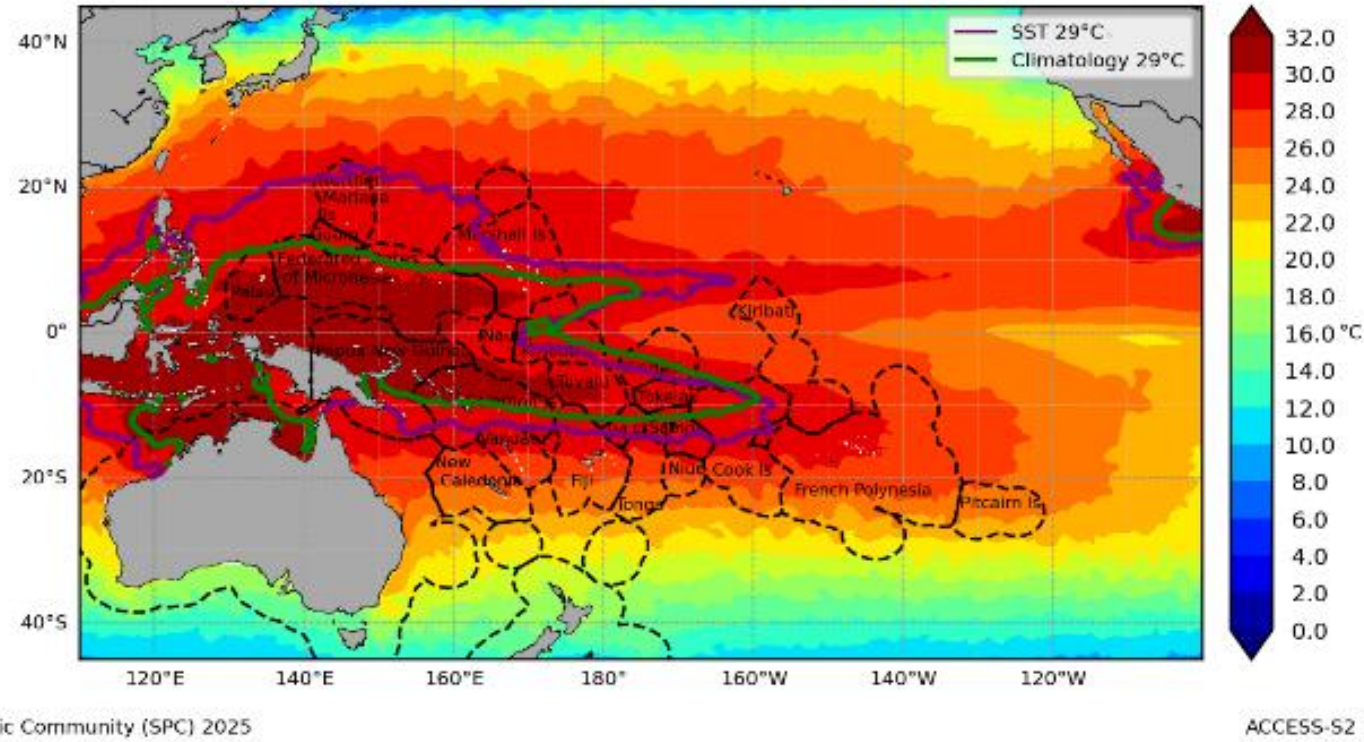


Fisheries Convergence Zone (November 2025, January 2026, March 2026)

Source: ACCESS-S2

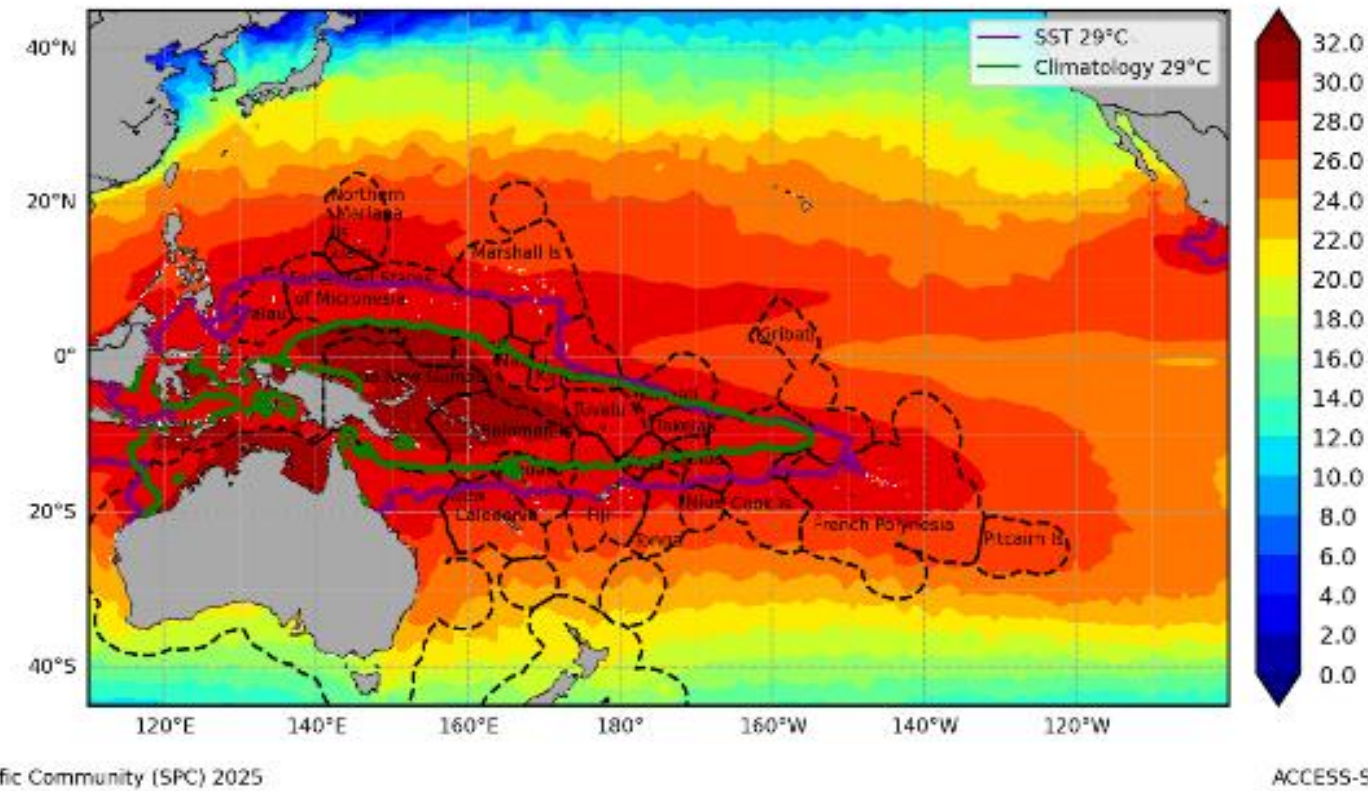
- No direct verification for FCZ (would require catch data)
- Slight warm bias in tropics for SST forecast (~0.3 deg)

Pacific Islands
Fisheries Convergence Zone: November 2025



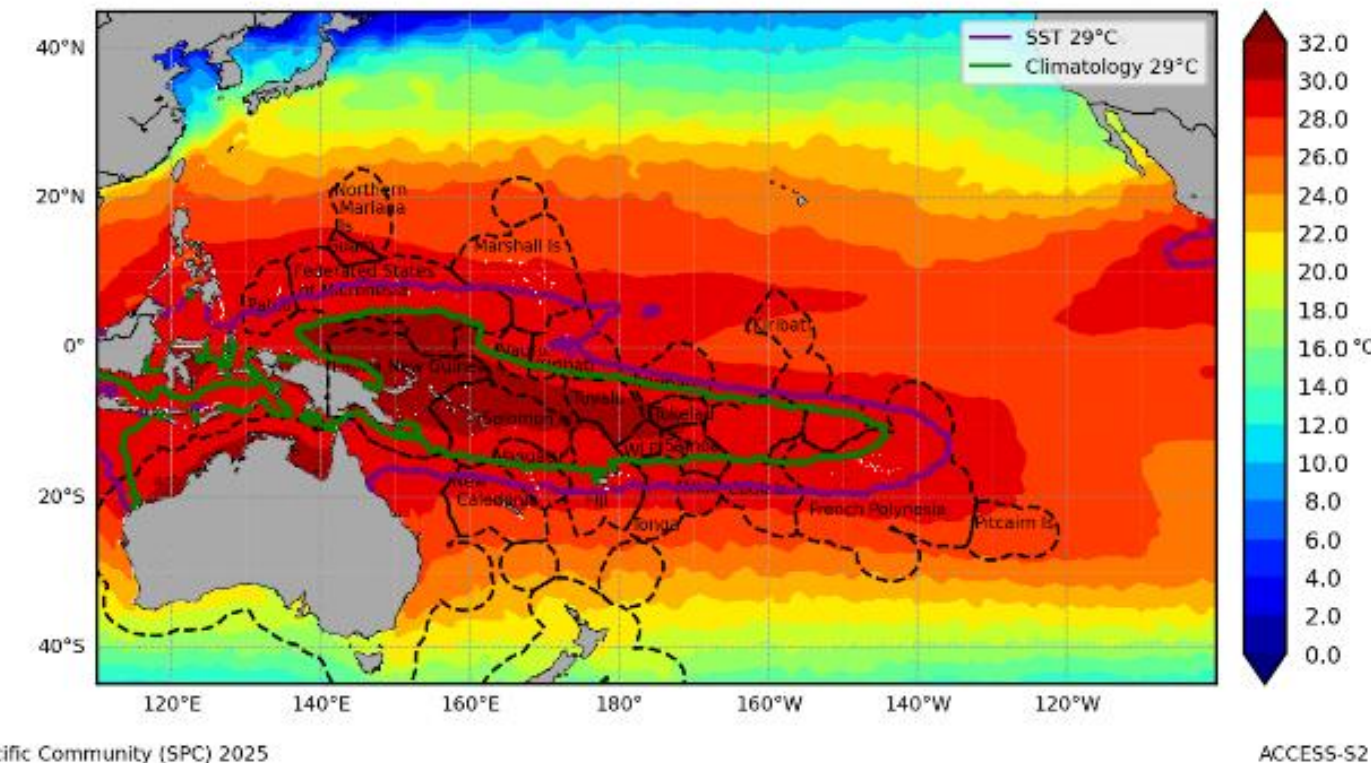
November 2025

Pacific Islands
Fisheries Convergence Zone: January 2026



December 2025

Pacific Islands
Fisheries Convergence Zone: March 2026



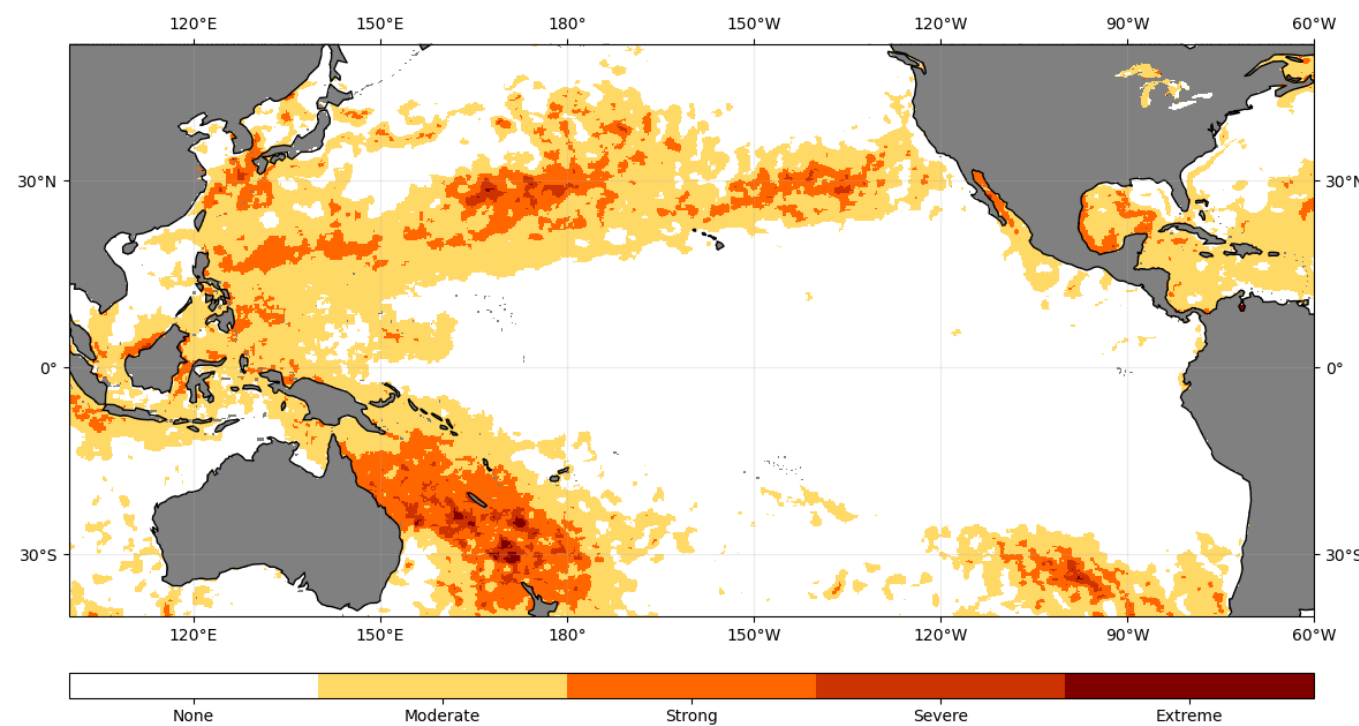
January 2025

Reanalysis Marine Heatwave

Region: Pacific

Full Month: November 2025

Period: 2025-11-01 to 2025-11-30



Created: 2026-04-14 17:03:43

Climatology: 1981 to 2018

Resource: gay548/ux62/reanalysis

Marine Heatwaves (November 2025, January 2026, March 2026)

Source: ACCESS-S2 Reanalysis

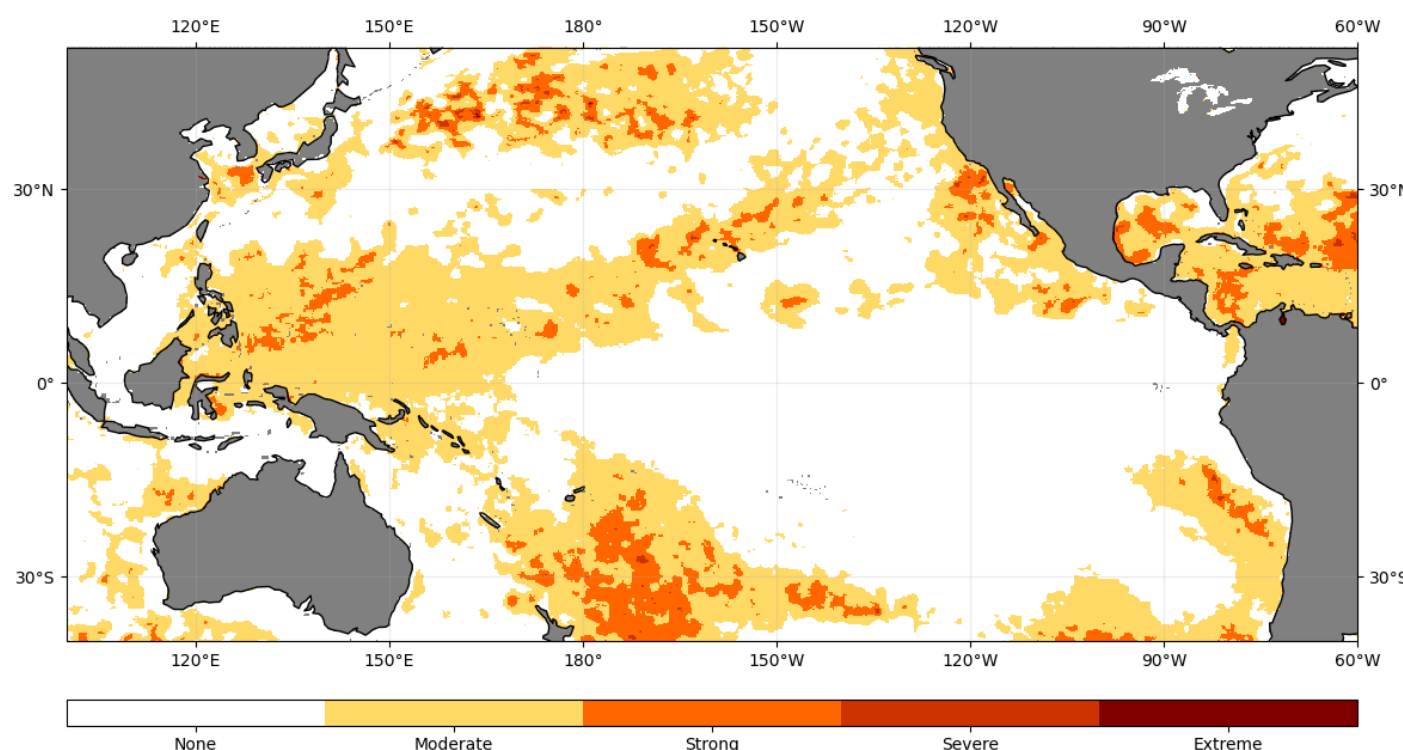
- Nov 2025: Marine Heatwaves in subtropics and Western Warm Pool
- Nov 2025 and Jan 2026: Drifted south in North Pacific and eastward in South Pacific
- March 2026: Strengthened across FSM to RMI to 'Strong' Category

Reanalysis Marine Heatwave

Region: Pacific

Full Month: January 2026

Period: 2026-01-01 to 2026-01-31



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Climatology: 1981 to 2018

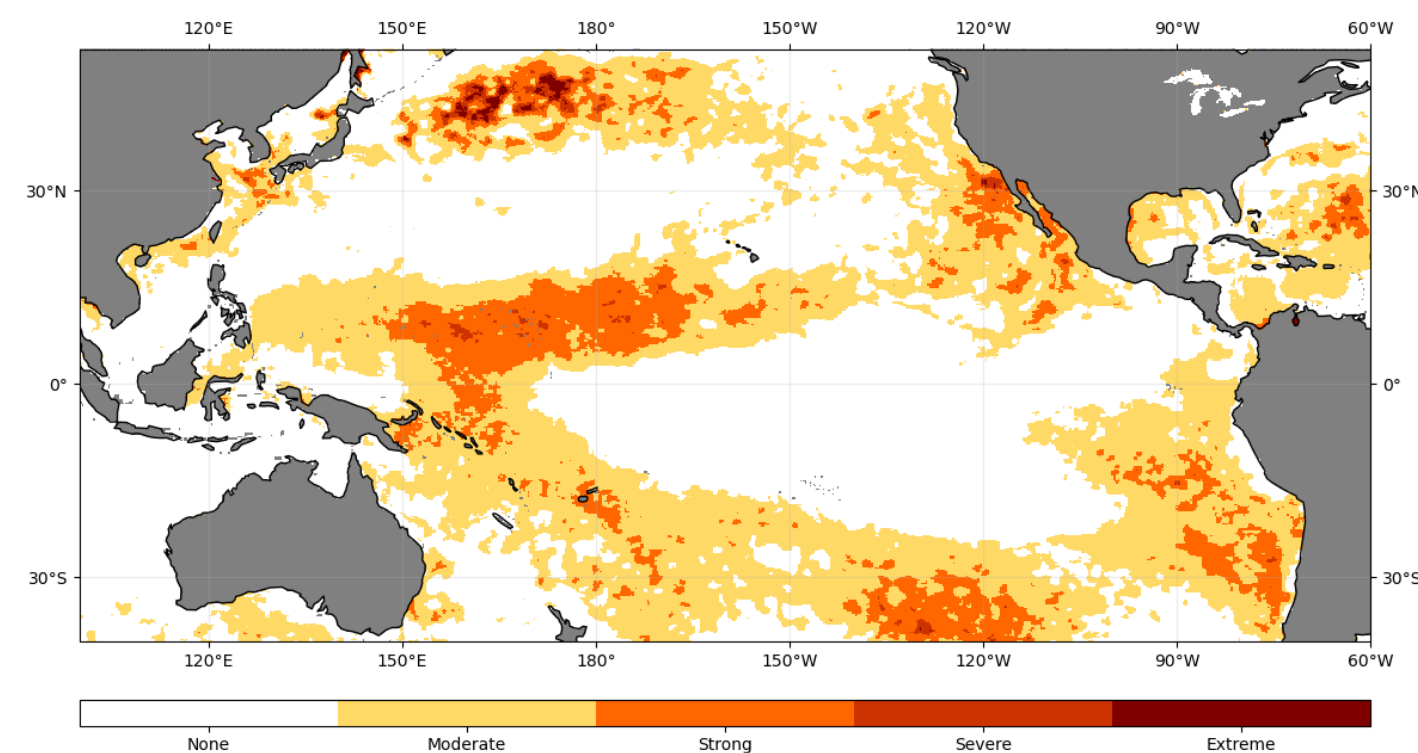
Resource: gay548/ux62/reanalysis

Reanalysis Marine Heatwave

Region: Pacific

Full Month: March 2026

Period: 2026-03-01 to 2026-03-31



Created: 2026-04-15 17:29:28

Climatology: 1981 to 2018

Resource: gay548/ux62/reanalysis

THANK YOU

grant.smith@bom.gov.au



**PACIFIC REGIONAL
CLIMATE CENTRE NETWORK**



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Climate and Ocean Support
Program in the Pacific



SPREP
Secretariat of the Pacific Regional
Environment Programme



COSPPac
Climate and Ocean Support
Program in the Pacific



Pacific
Community
Communauté
du Pacifique



Earth Sciences
New Zealand

