

PACIFIC ISLANDS CLIMATE OUTLOOK FORUM-19

20 - 21 OCTOBER, 2026

HYBRID

PORT MORESBY, PAPUA NEW GUINEA

& ZOOM

WMO

PACIFIC REGIONAL CLIMATE CENTRE NETWORK

www.pacificrcc.net





PICOF-19

Looking back: Ocean

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Earth Sciences New Zealand

WMO

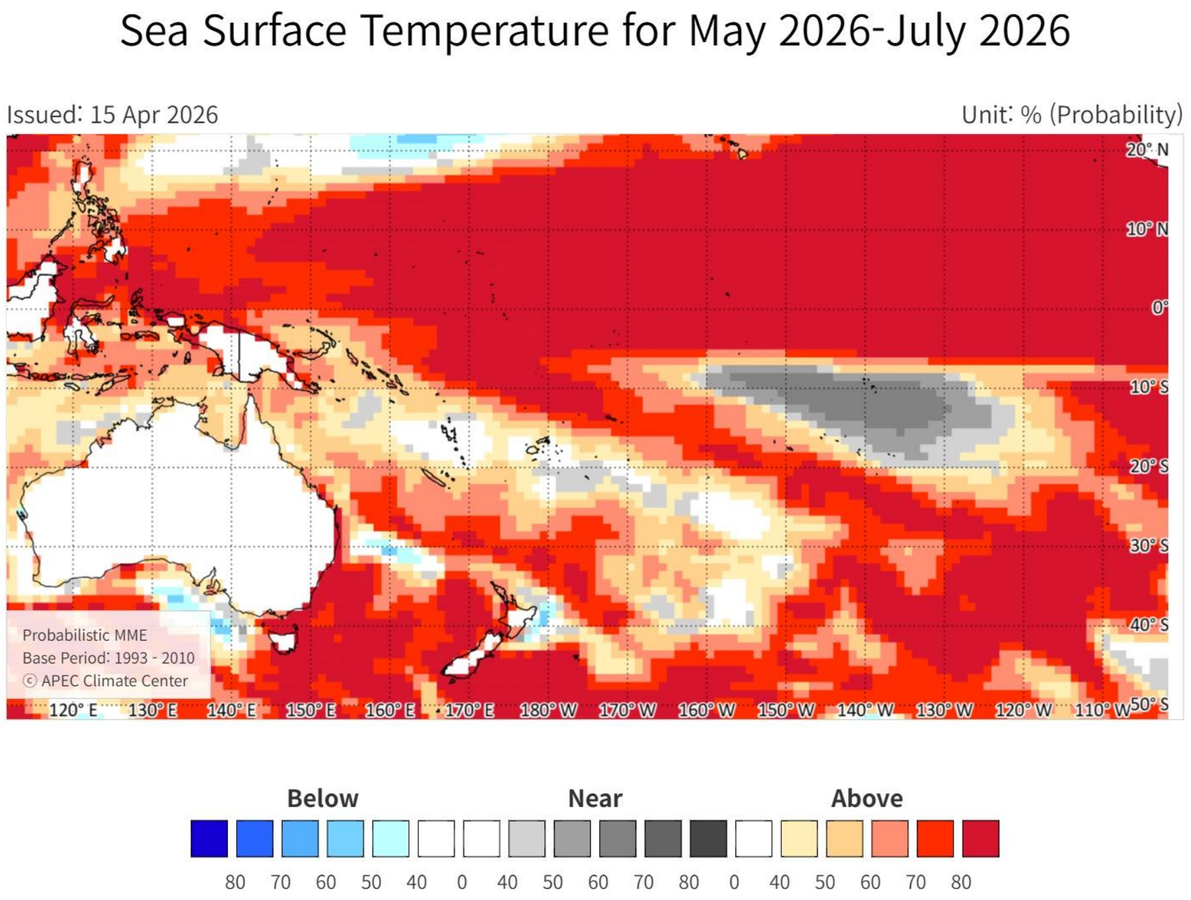
PACIFIC REGIONAL CLIMATE CENTRE NETWORK

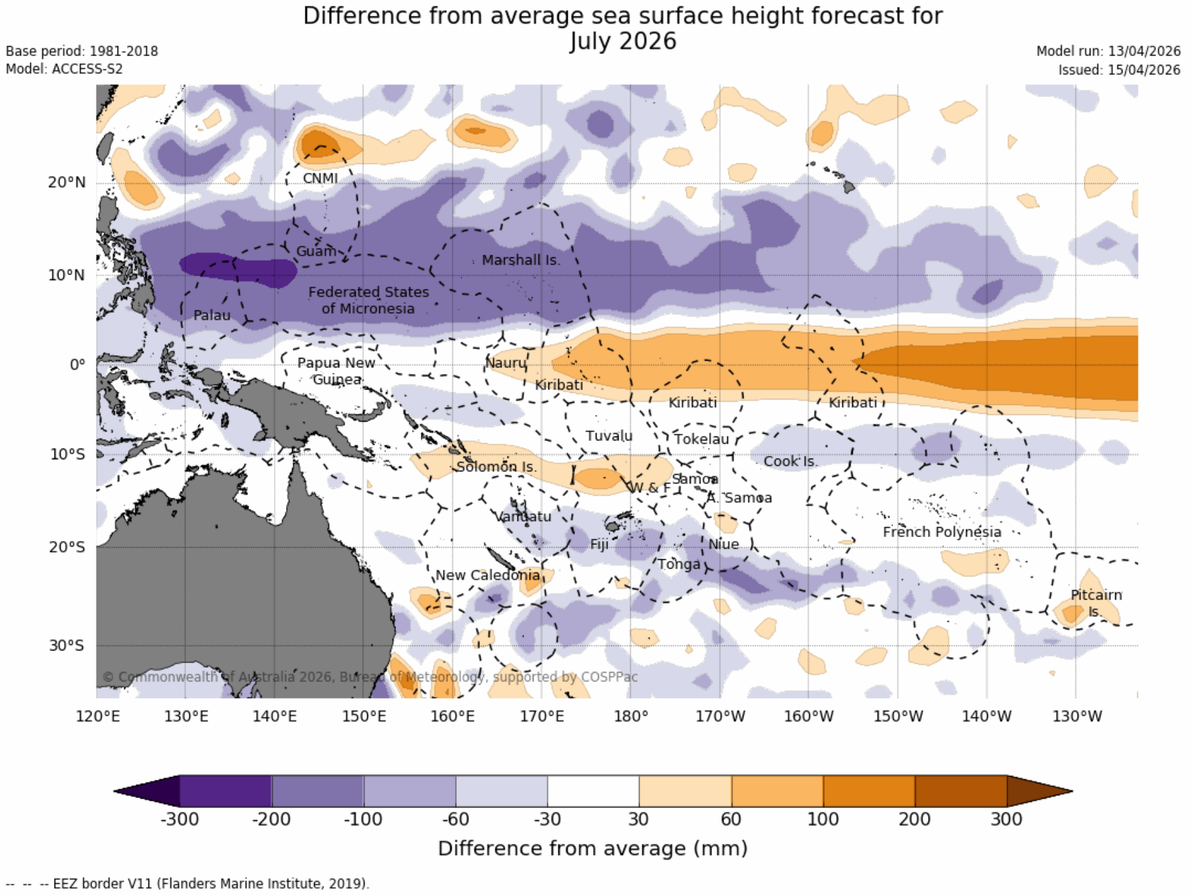
Earth Sciences New Zealand Te Whatu Ao

PICOF-18 Outlook: May–October 2026

Sea surface temperature	Mostly above-normal SSTs across the equatorial Pacific. Possible cooling in western Polynesia later in the season (Aug-Sept-Oct).
Sea level	Above-normal across equatorial Pacific (from Nauru to Kiribati). Below-normal across Micronesia and parts of the southwest Pacific.
Marine heatwaves	Widespread moderate-to-strong conditions, particularly across the central equatorial Pacific.
Coral bleaching	Increasing heat stress, with Alert Level 2 expected across equatorial Pacific from Nauru and Kiribati.
Fisheries convergence zone	Eastward and slightly equatorward displacement from its climatological position.

Expected Sea Surface Temperature & Sea Level





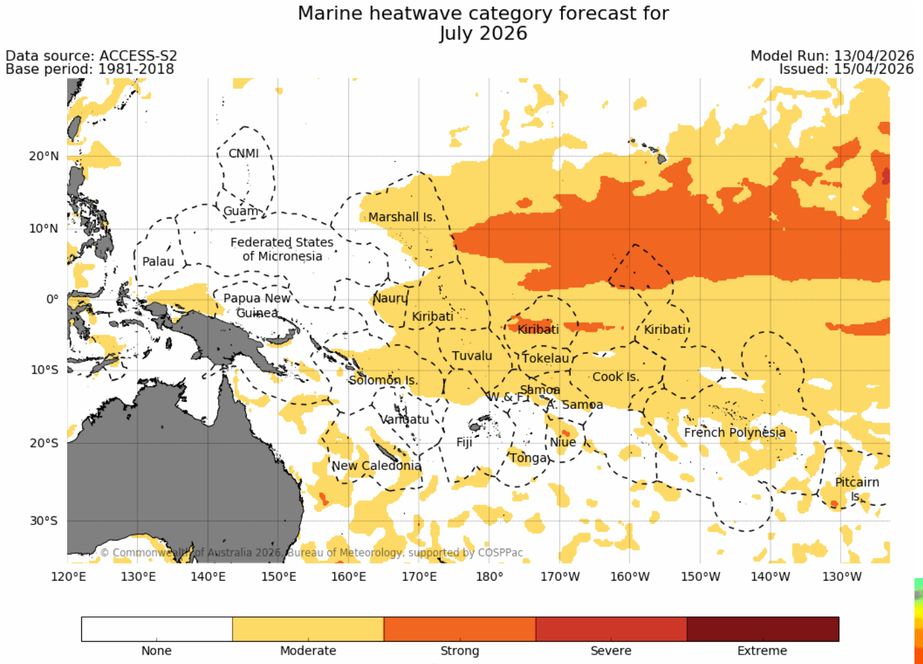
Sea Surface Temperature (May-July 2026)

APCC probabilistic multi-model ensemble (www.apcc21.org)

Sea Surface Height Anomaly (July 2026)

BoM ACCESS-S2 forecast (https://access-s.clide.cloud)

Expected Marine Heatwaves, Coral Bleaching, & Fisheries

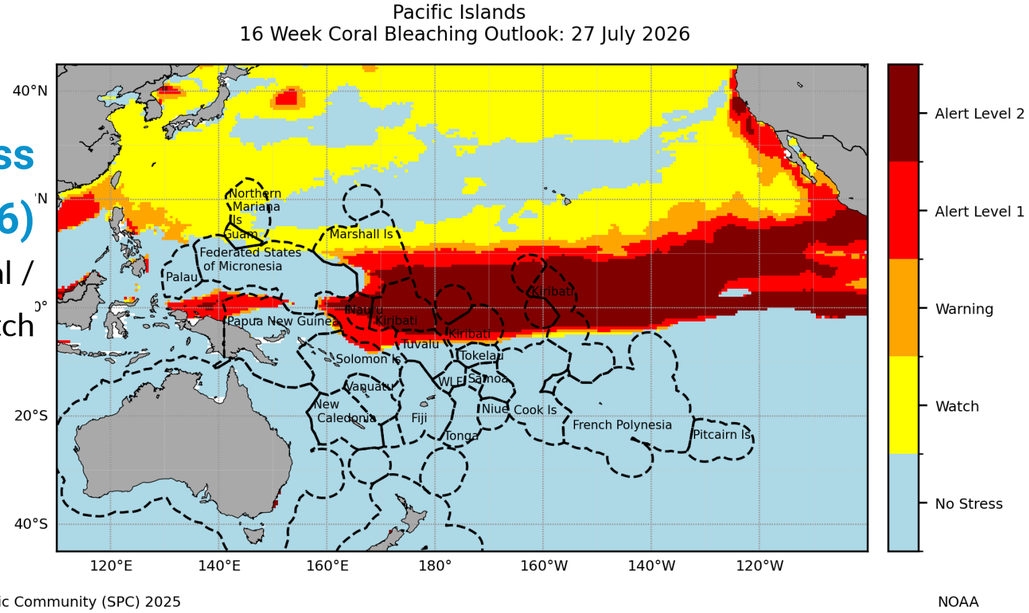


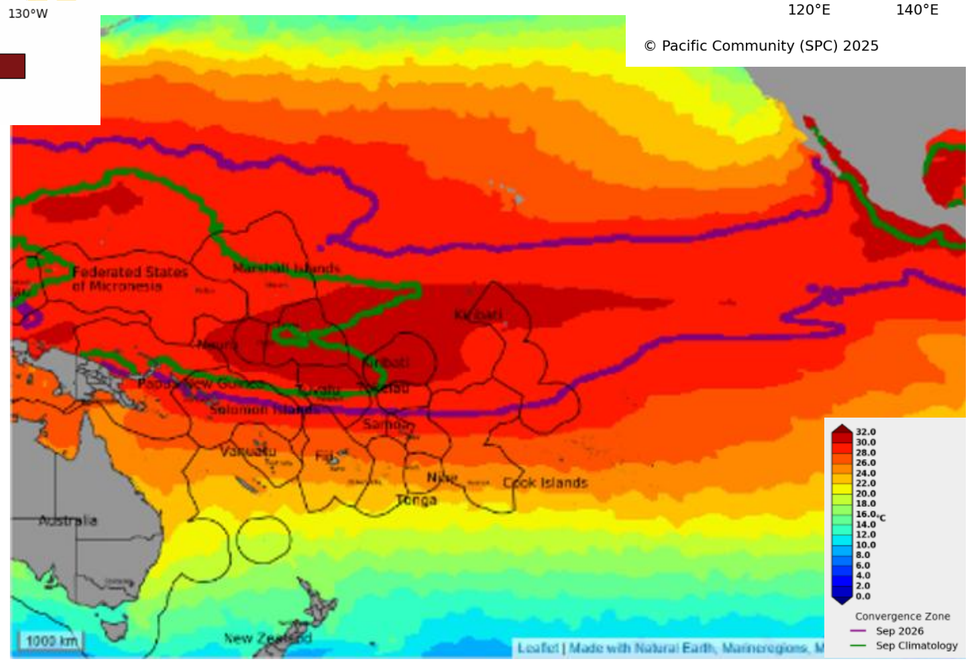
Marine Heatwave Category (July 2026)

BoM ACCESS-S2 forecast (access-s.clide.cloud)

Coral Bleaching Heat Stress Outlook (27 July 2026)

SPC Ocean Portal / NOAA Coral Reef Watch





Fisheries Convergence Zone (2026 Outlook)

SPC Ocean Portal (legacy-oceanportal.spc.int)

Observed Ocean Conditions since last PICOF

May 2026 to October 2026

Sea Surface Temperatures (from OISST v2.1)

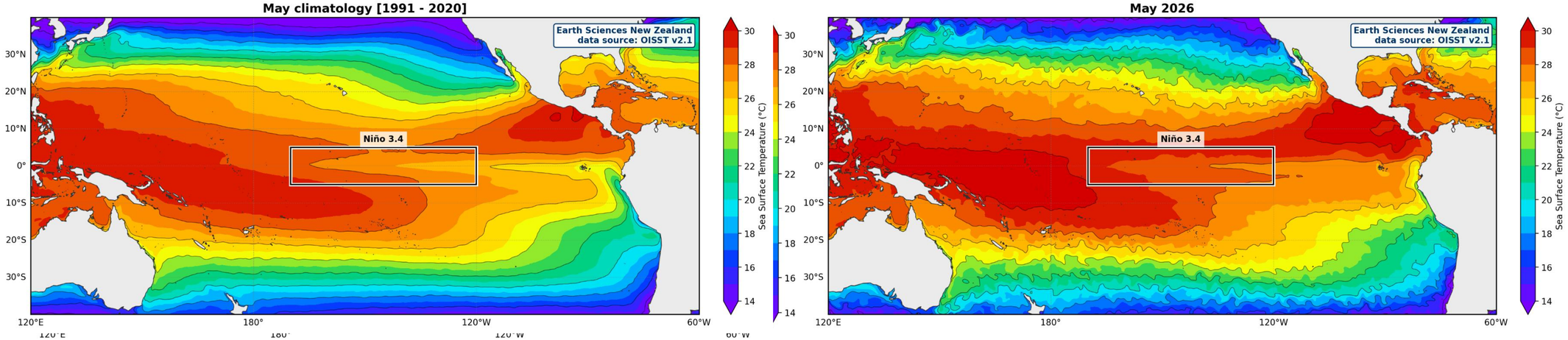
Sub-surface (0 – 300 m) temperatures and Oceanic Heat Content (from ARMOR3D)

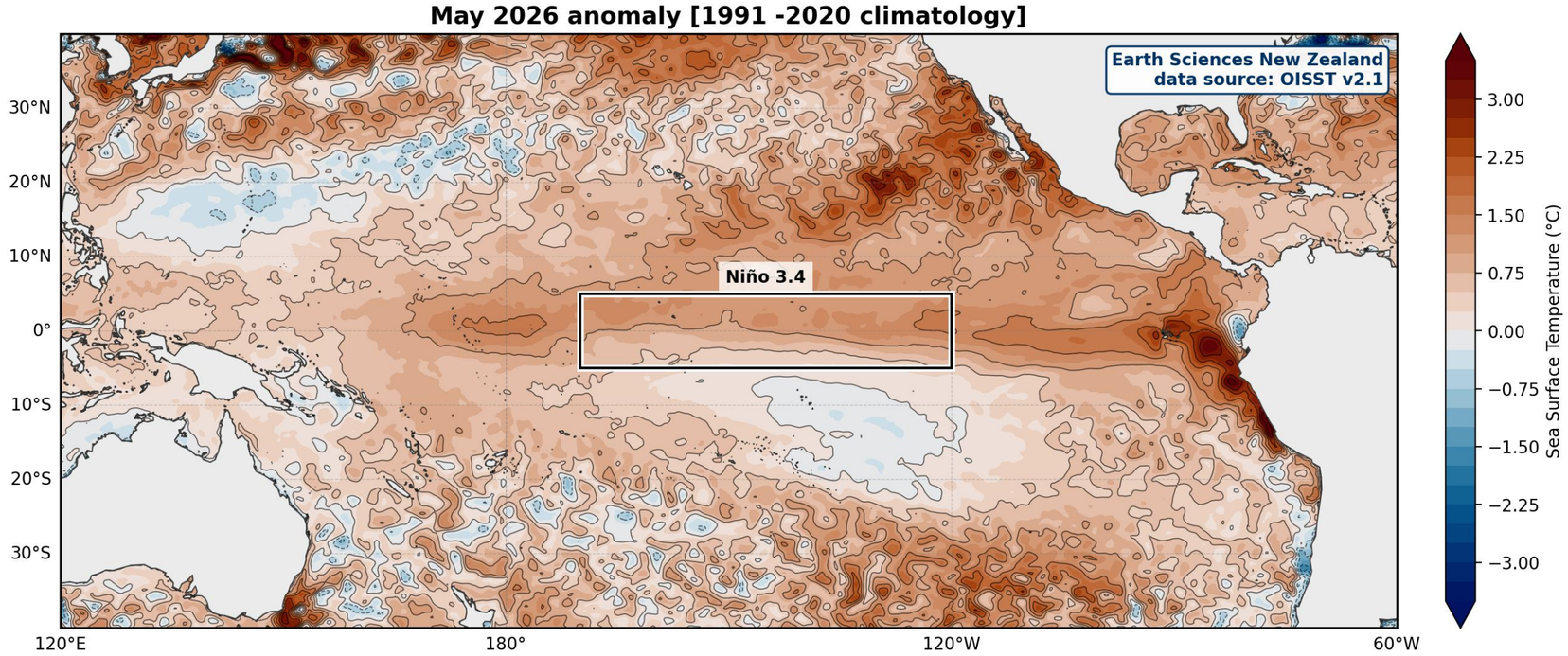
Coral bleaching (from NOAA CRW Bleaching Area Alert dataset)

Sea Level Anomalies (from NOAA CoastWatch datasets)

Sea Surface temperature

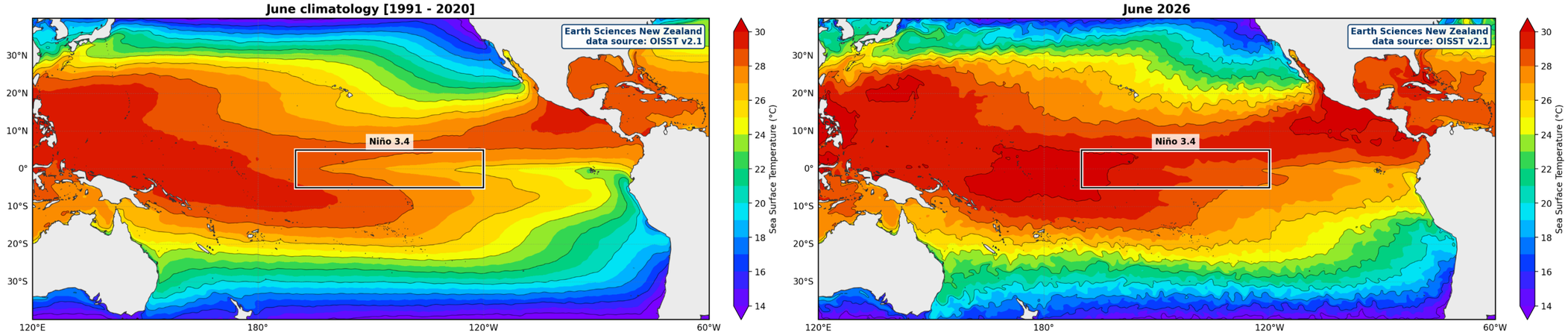
Source: OISST version 2.1

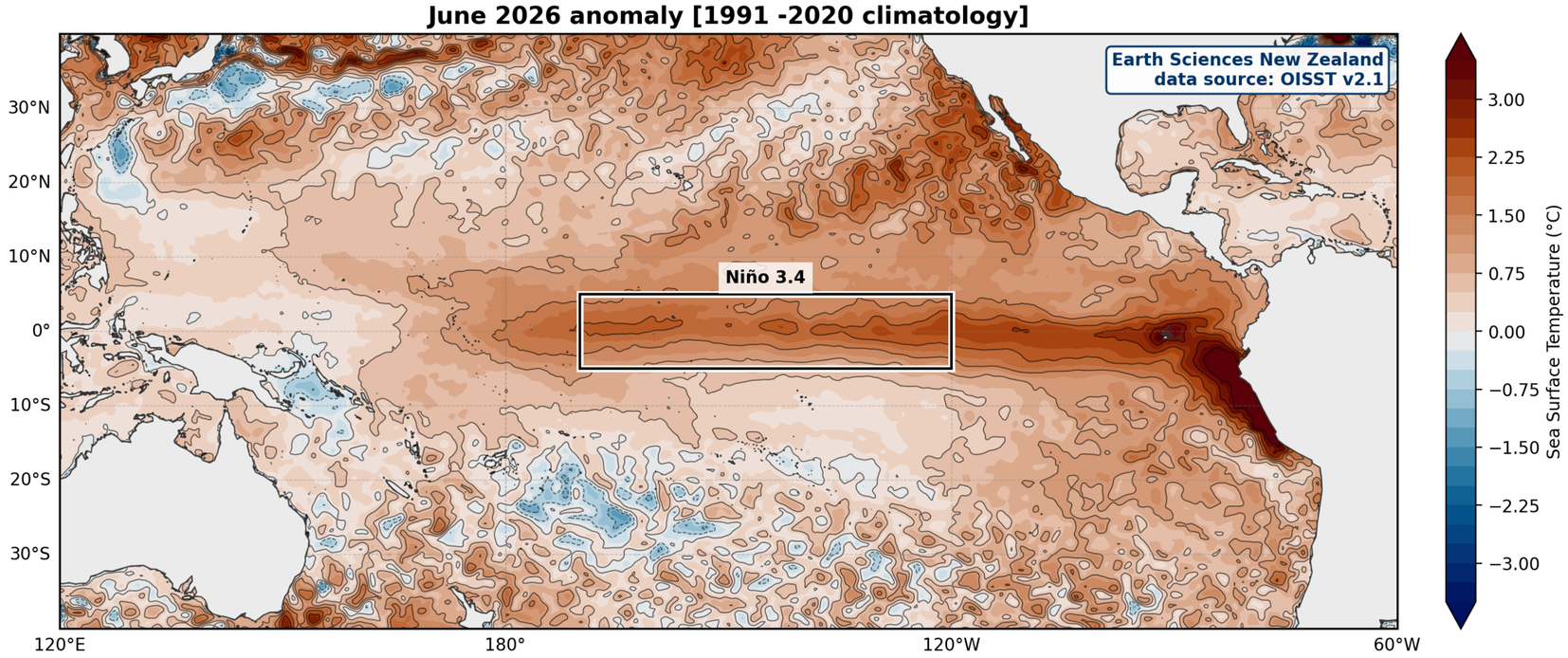




Sea Surface temperature

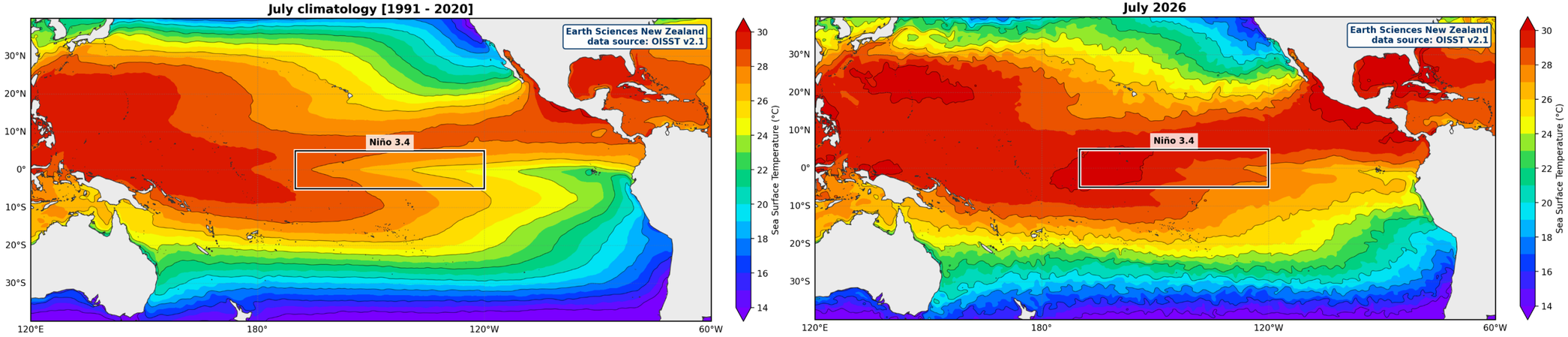
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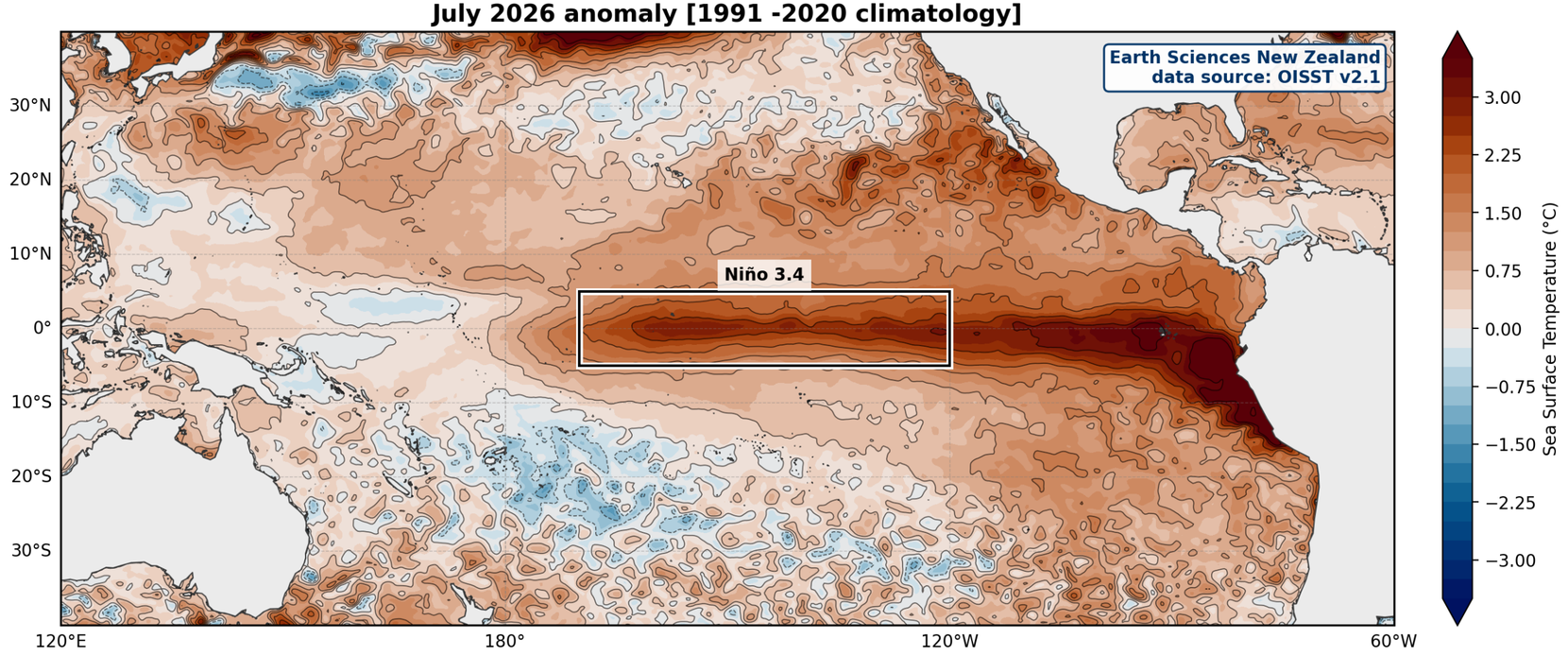




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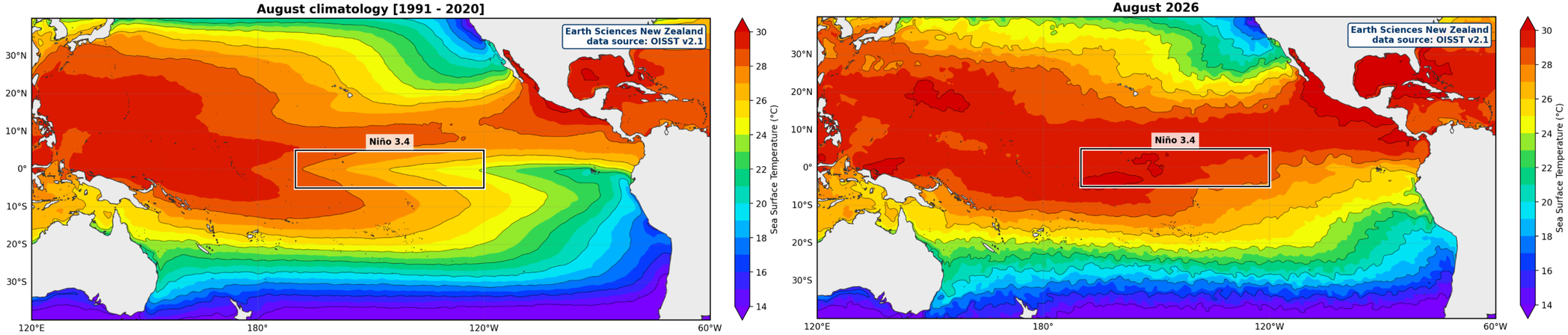
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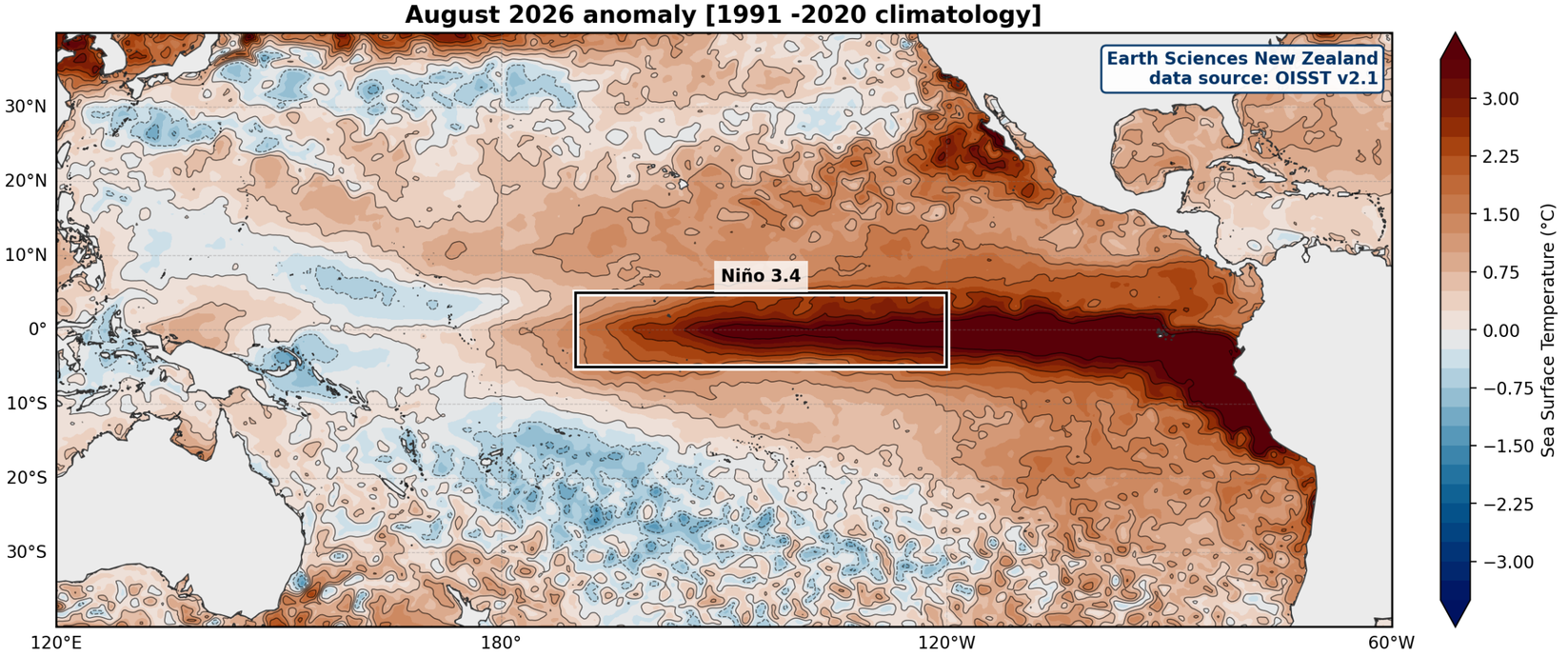




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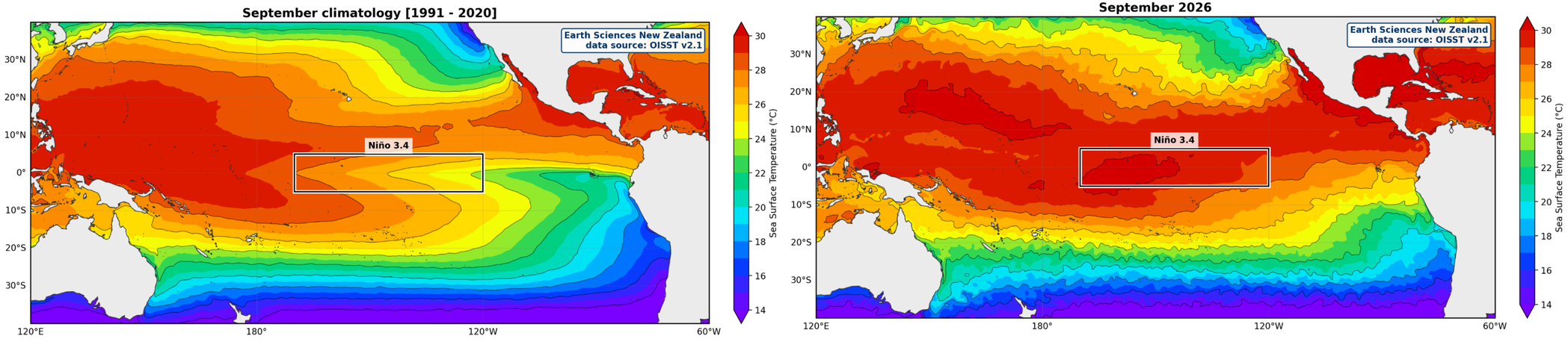
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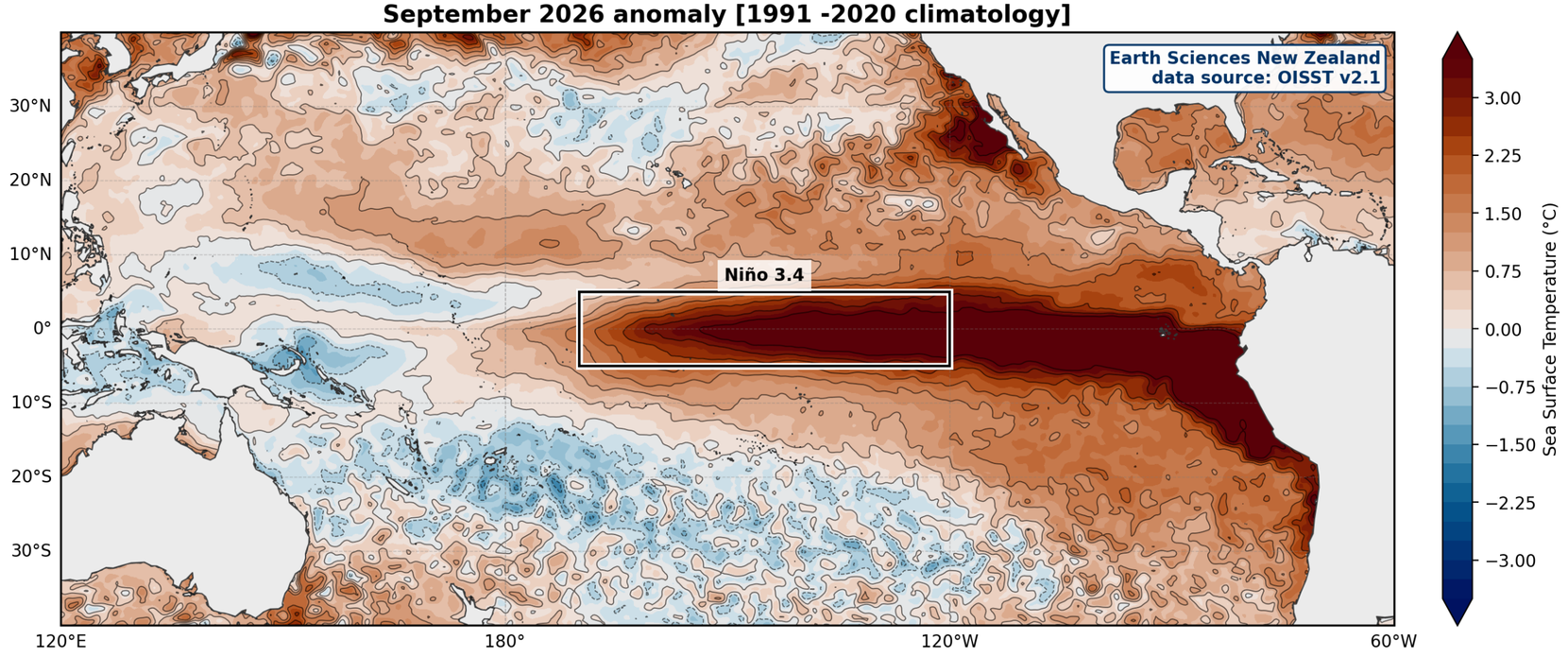




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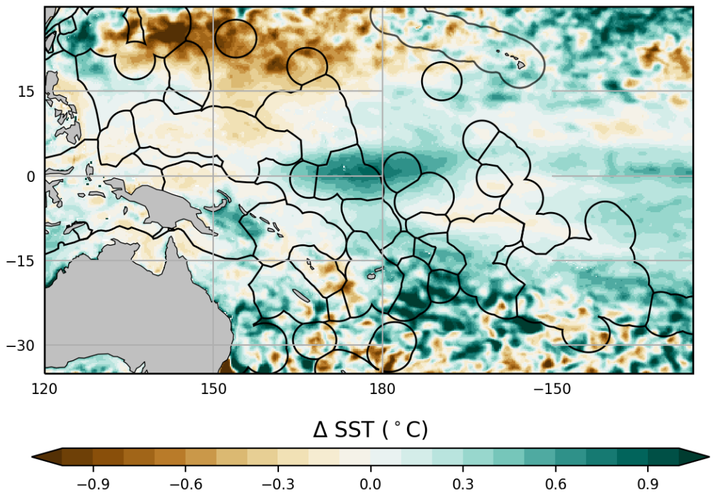




Sea Surface temperature

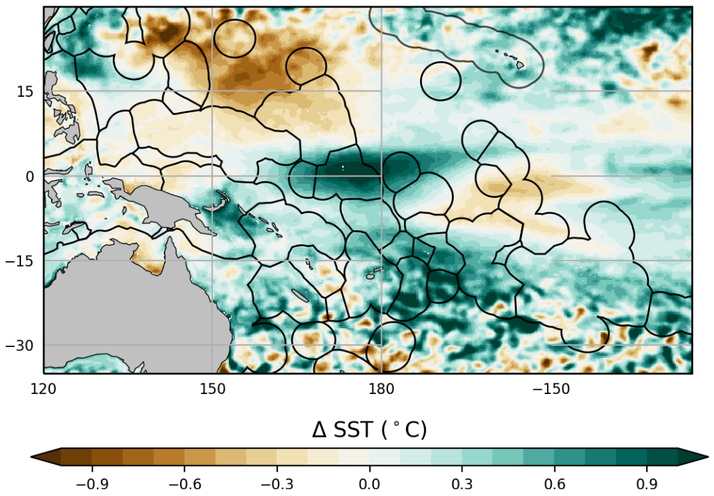
ACCESS-S minus Observations

May to July 2026



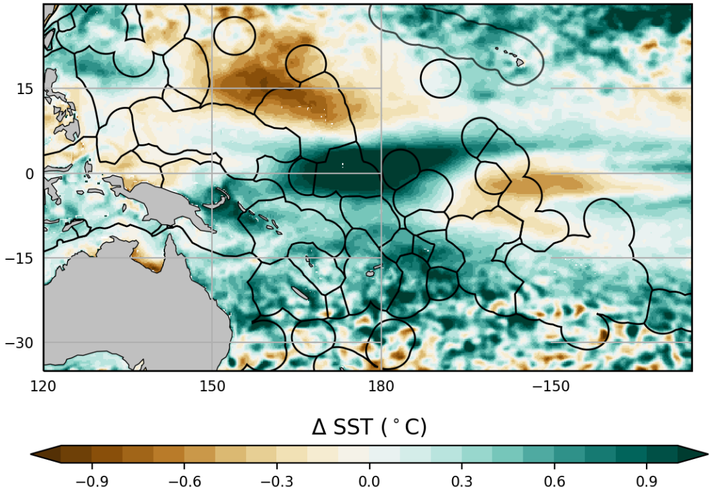
ACCESS-S minus Observations

June to August 2026

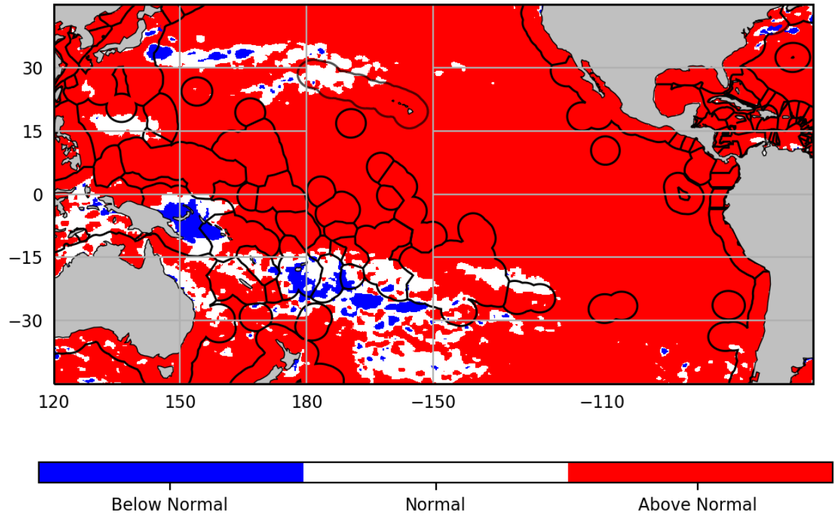


ACCESS-S minus Observations

July to September 2026

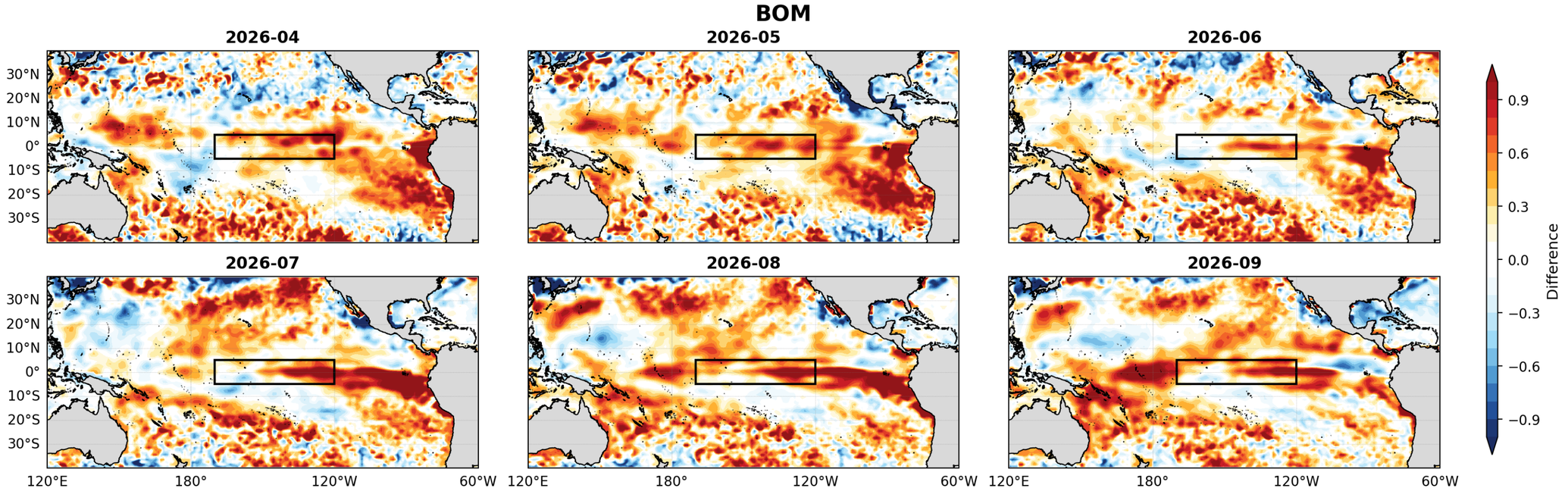


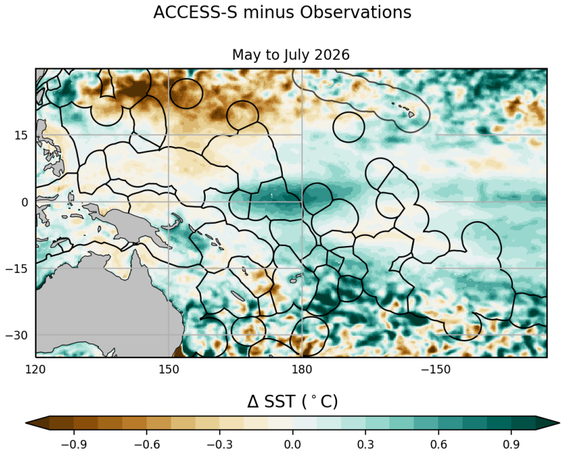
Satellite SST: Period=AMJJAS (2026)
Climatology: 1993-2010

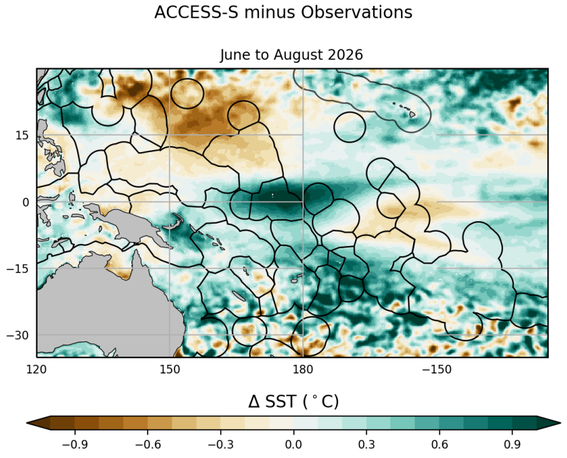


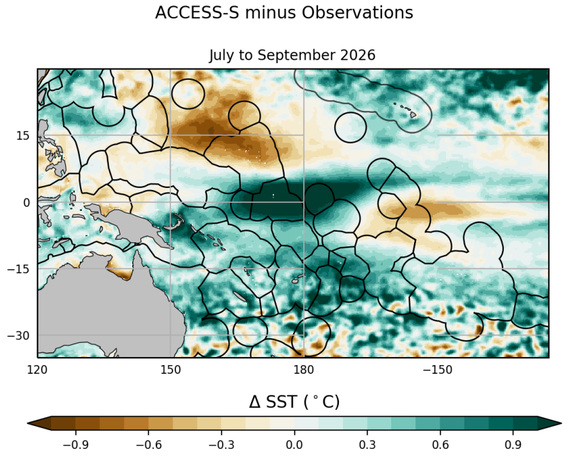
Sea Surface temperature

Forecasts issued April 2026 (C3S CDS) vs ERSST version 6 (1993 – 2016 climatology)



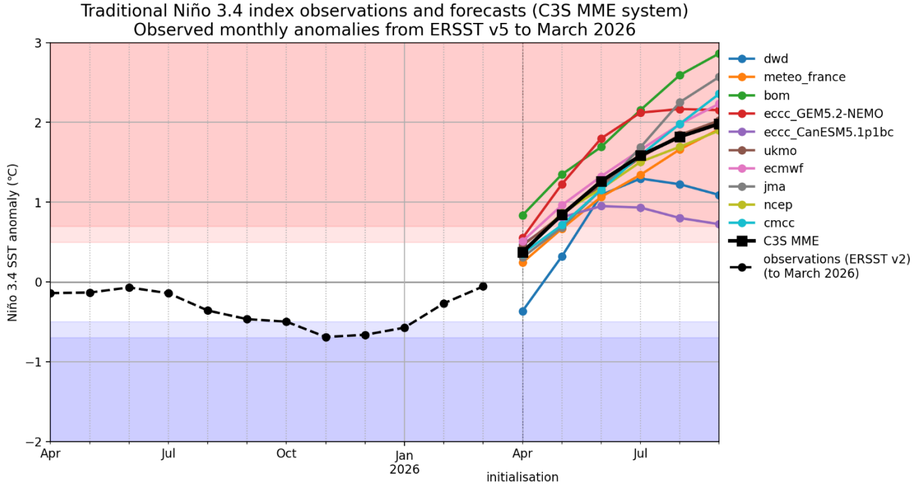


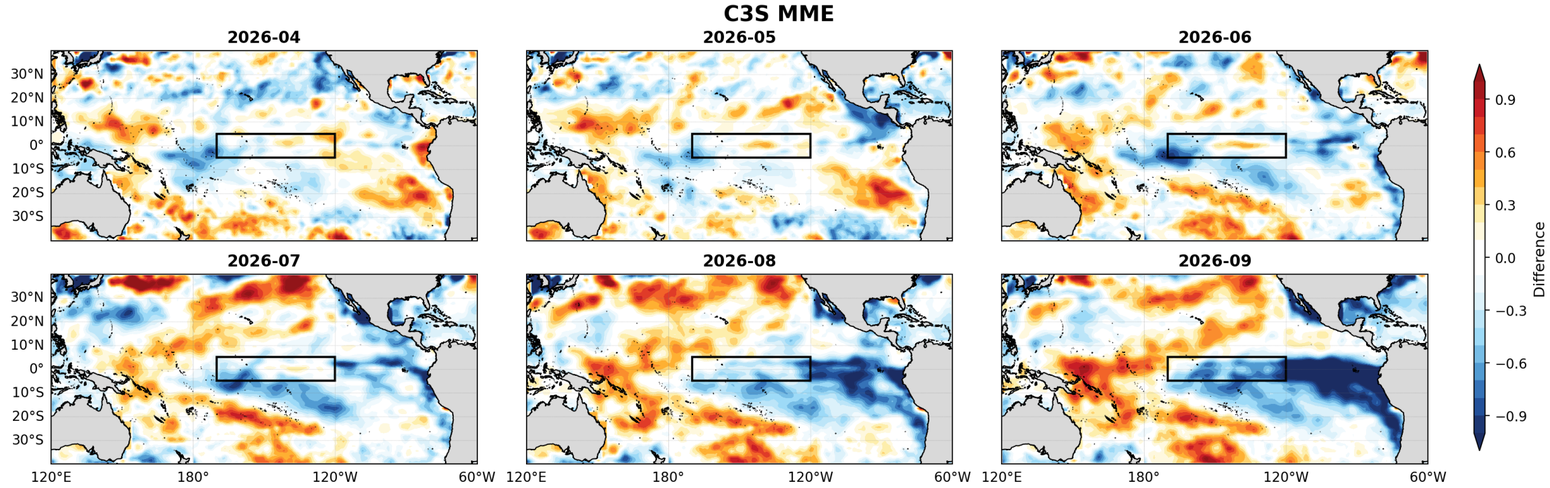


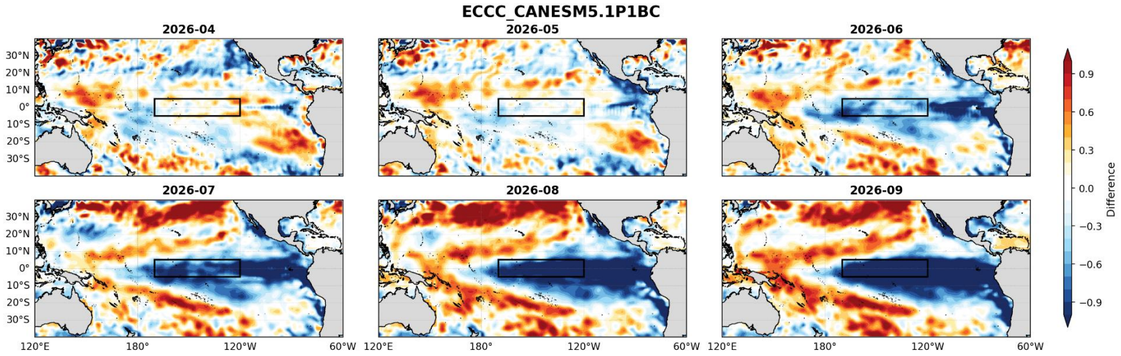


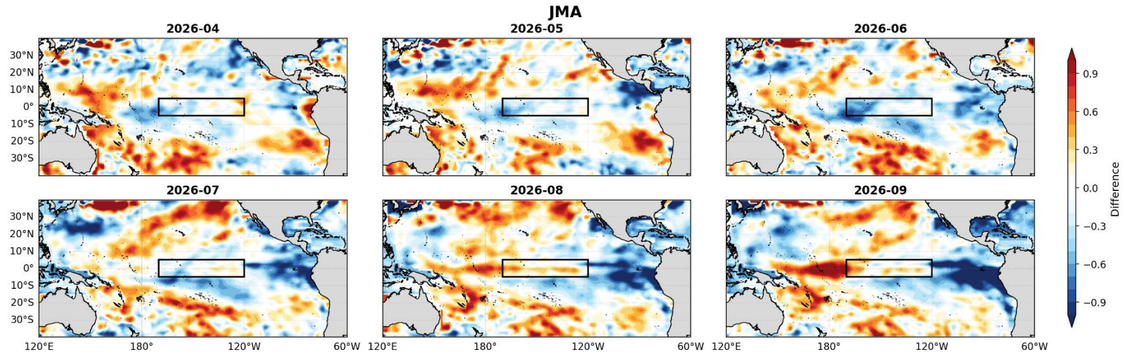
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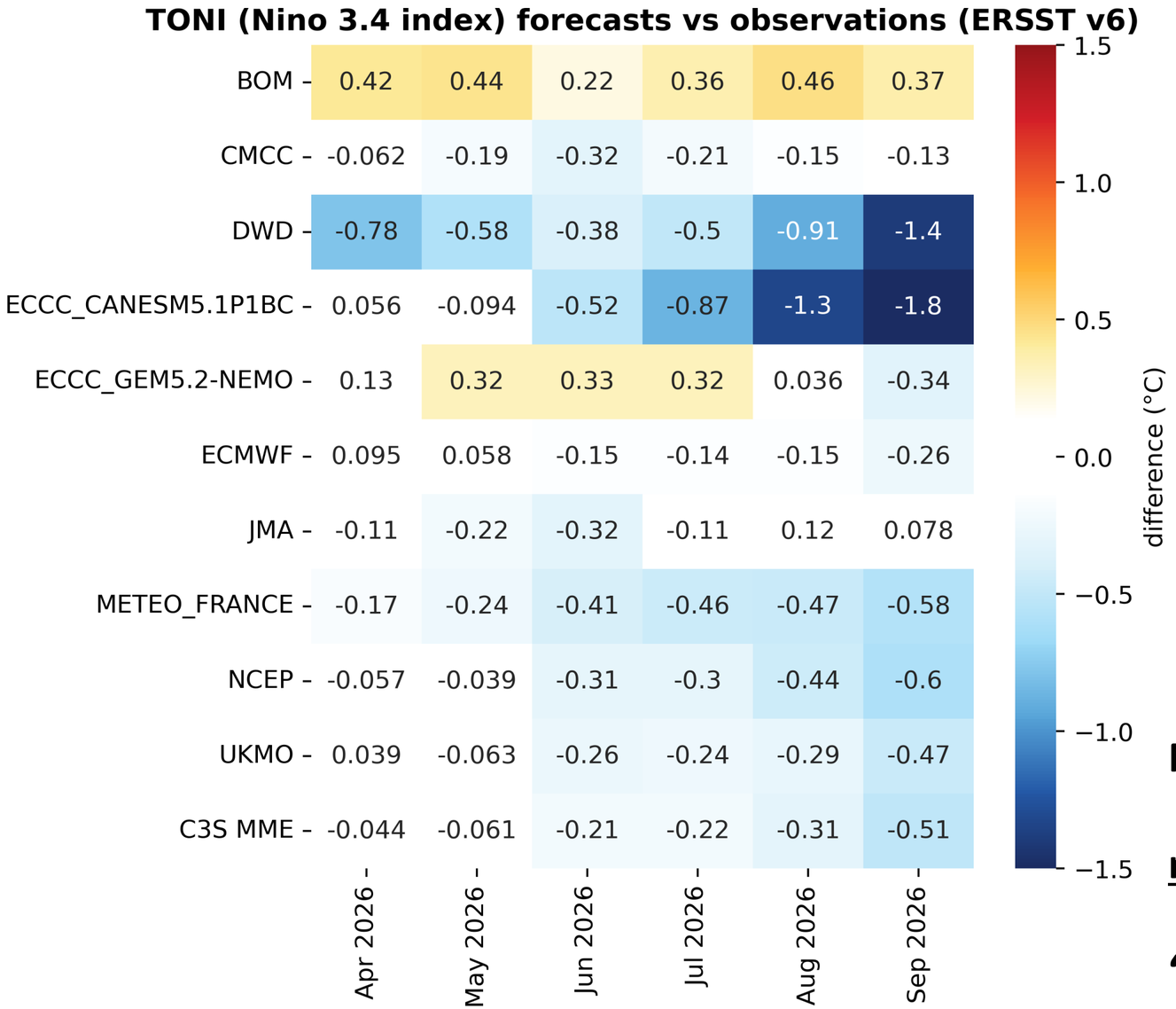


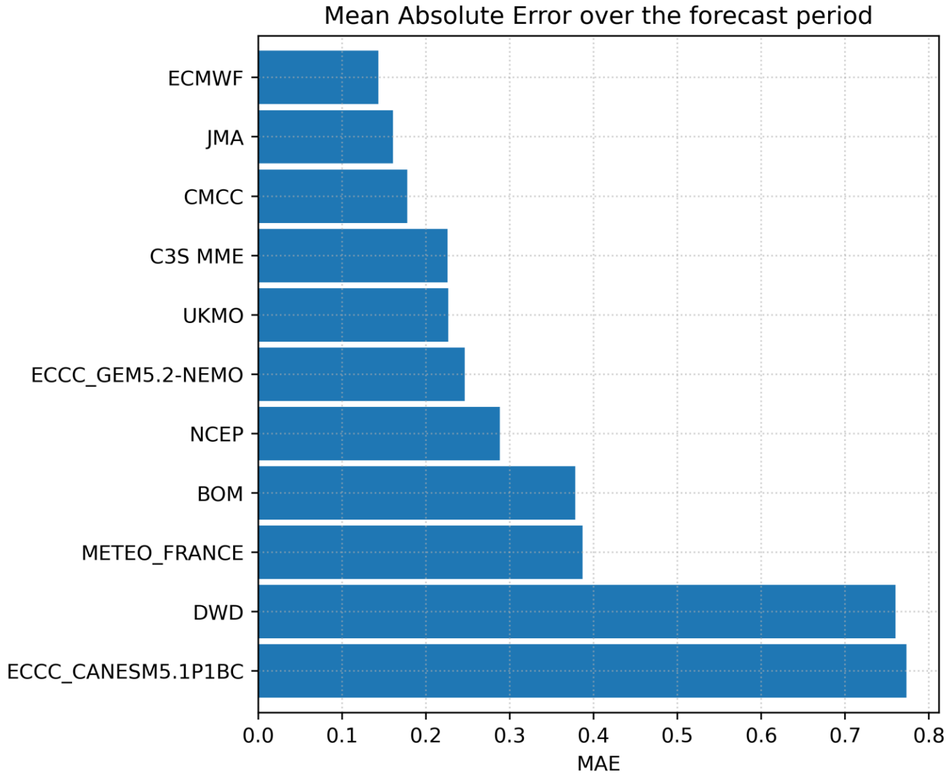




Sea Surface temperature

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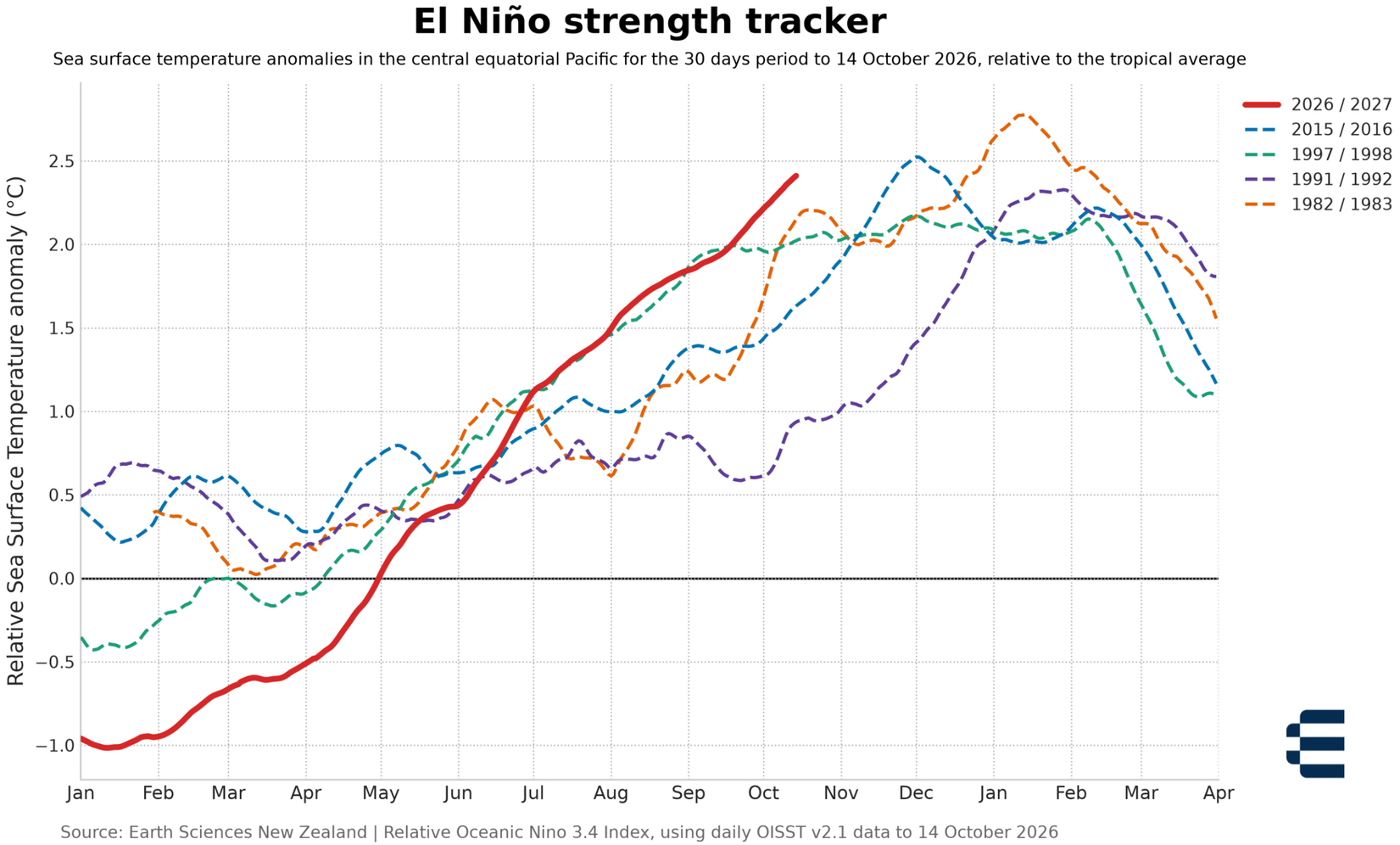
Note: <u>preliminary results</u>,

<u>not</u> the official validation from the respective institutions

‘post-mortem’ of this El Nino via the WMO ET-CLI

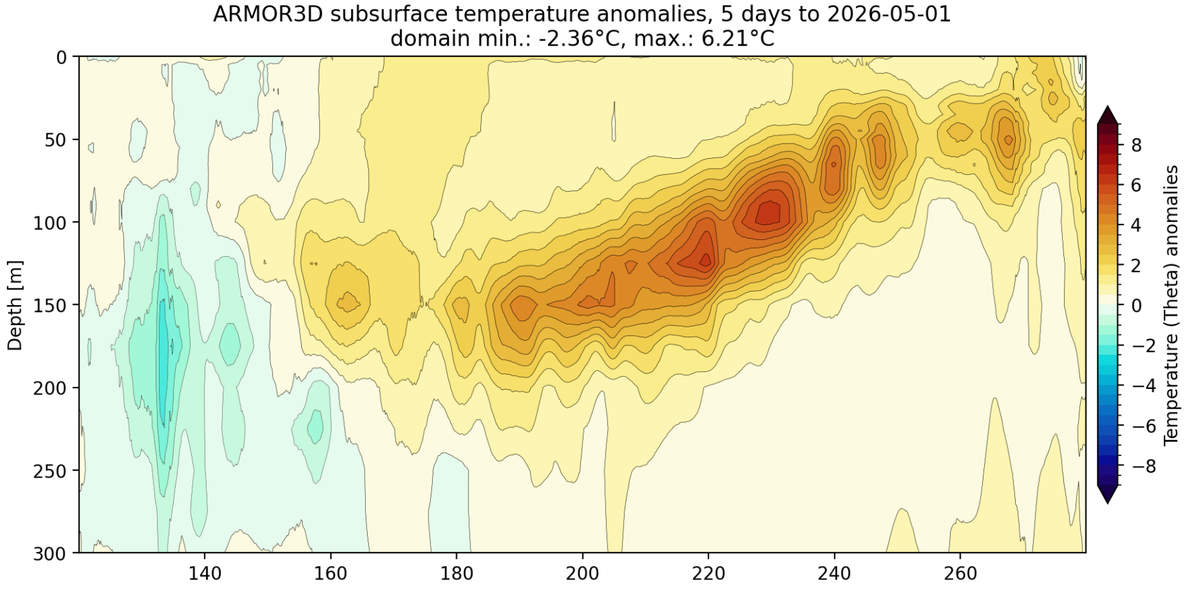
Sea Surface temperature

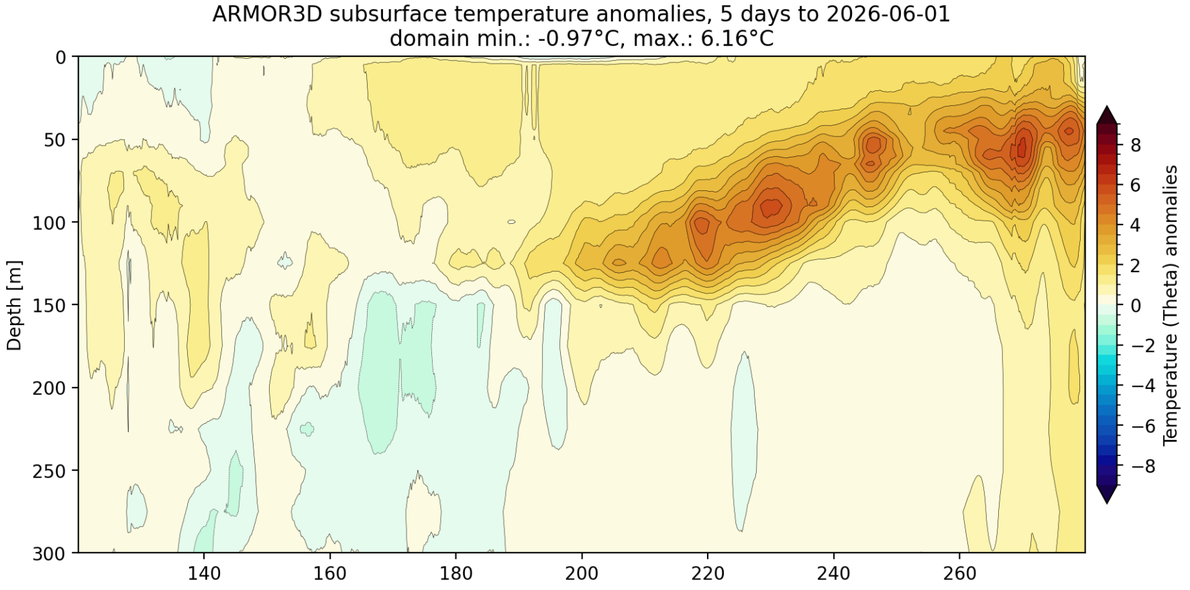
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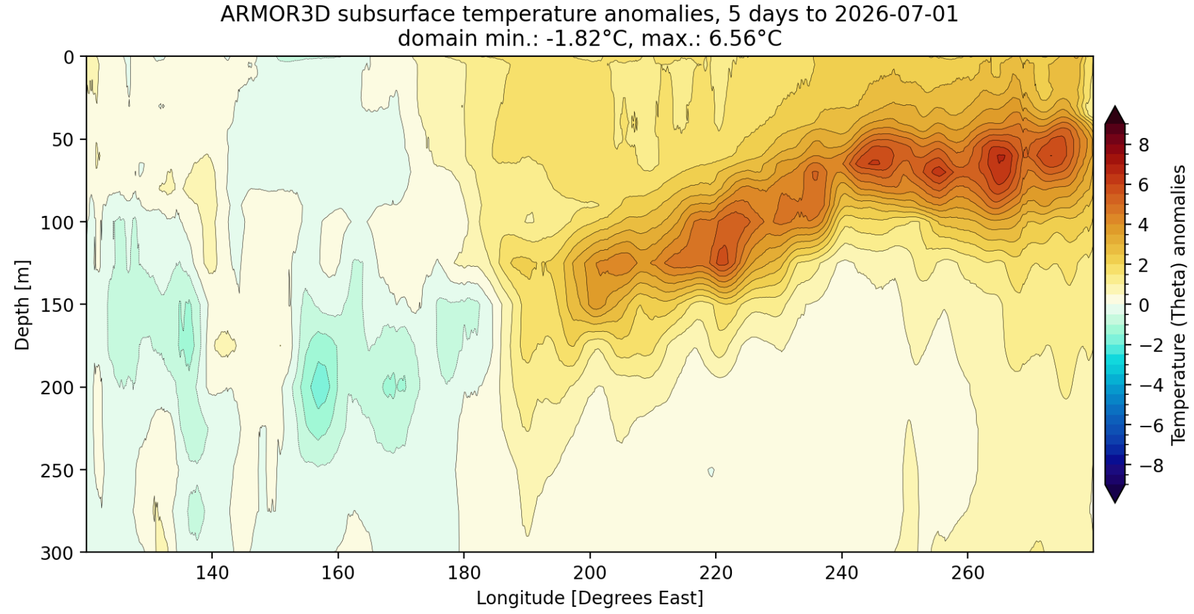


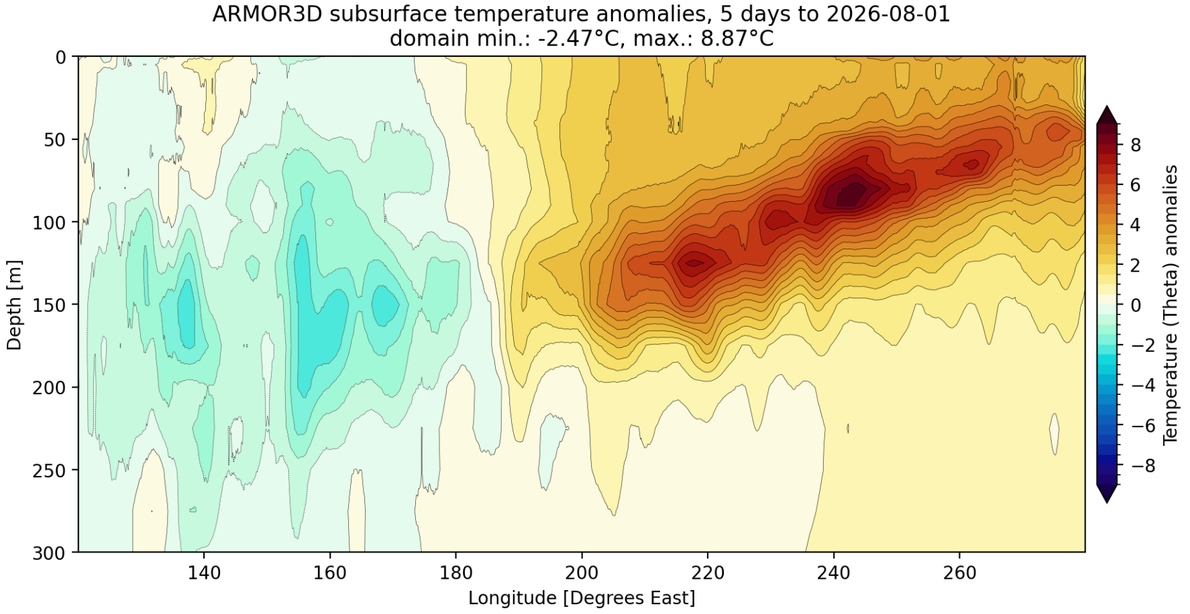
Subsurface temperature anomalies

5-day anomalies from May 2026, ARMOR3D dataset



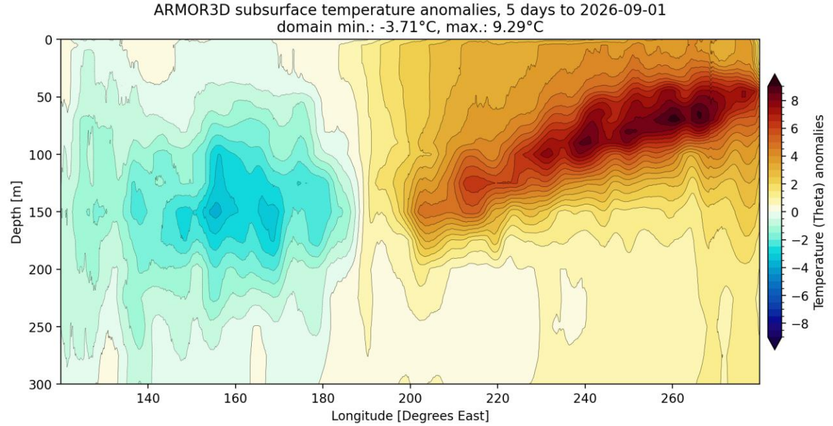


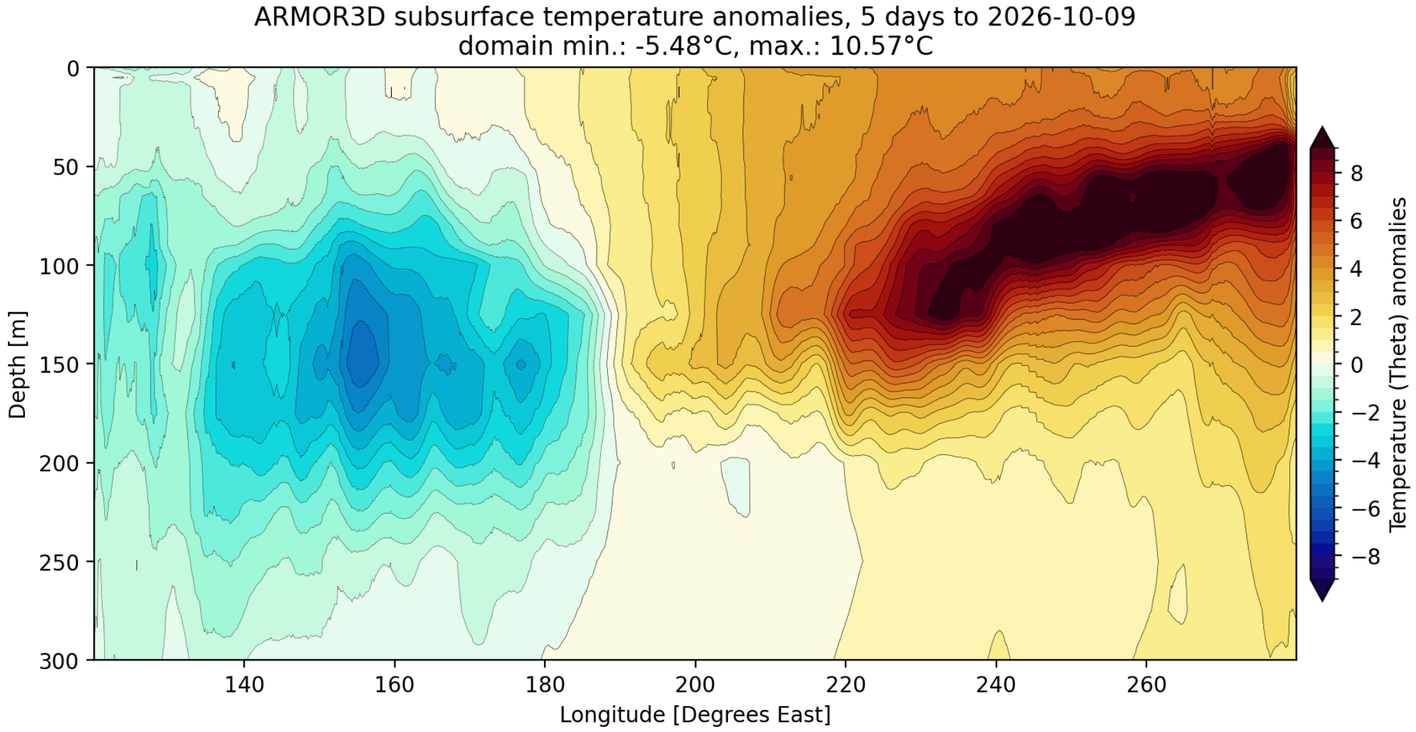


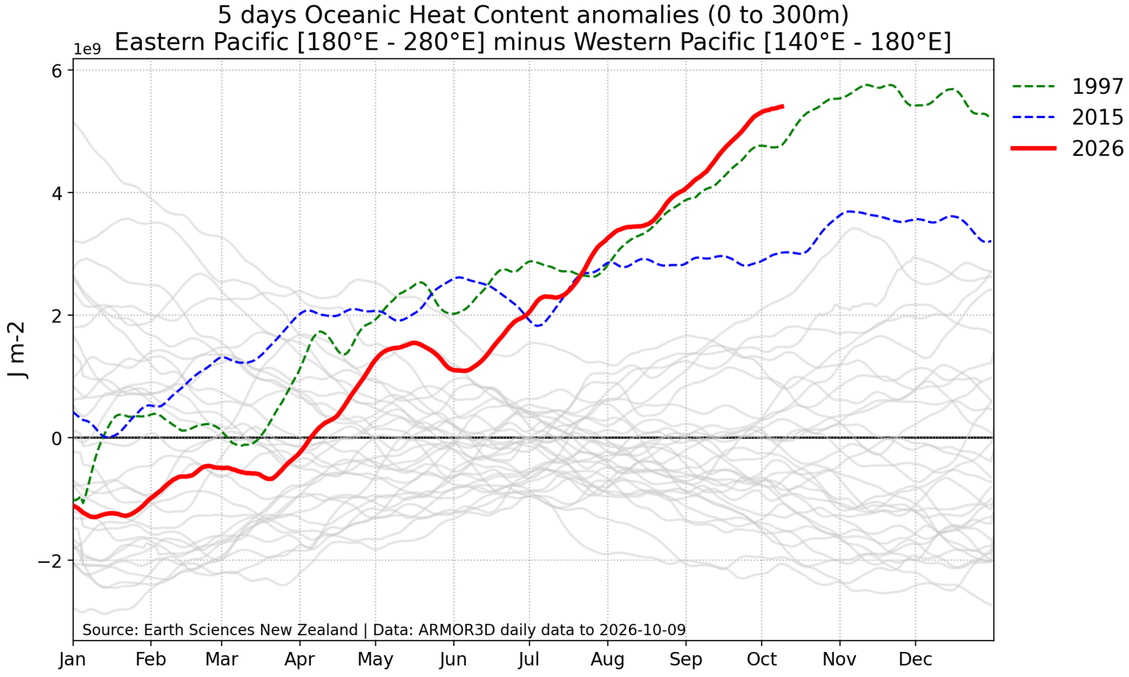


Subsurface temperature anomalies

5-day anomalies from May 2026, ARMOR3D dataset

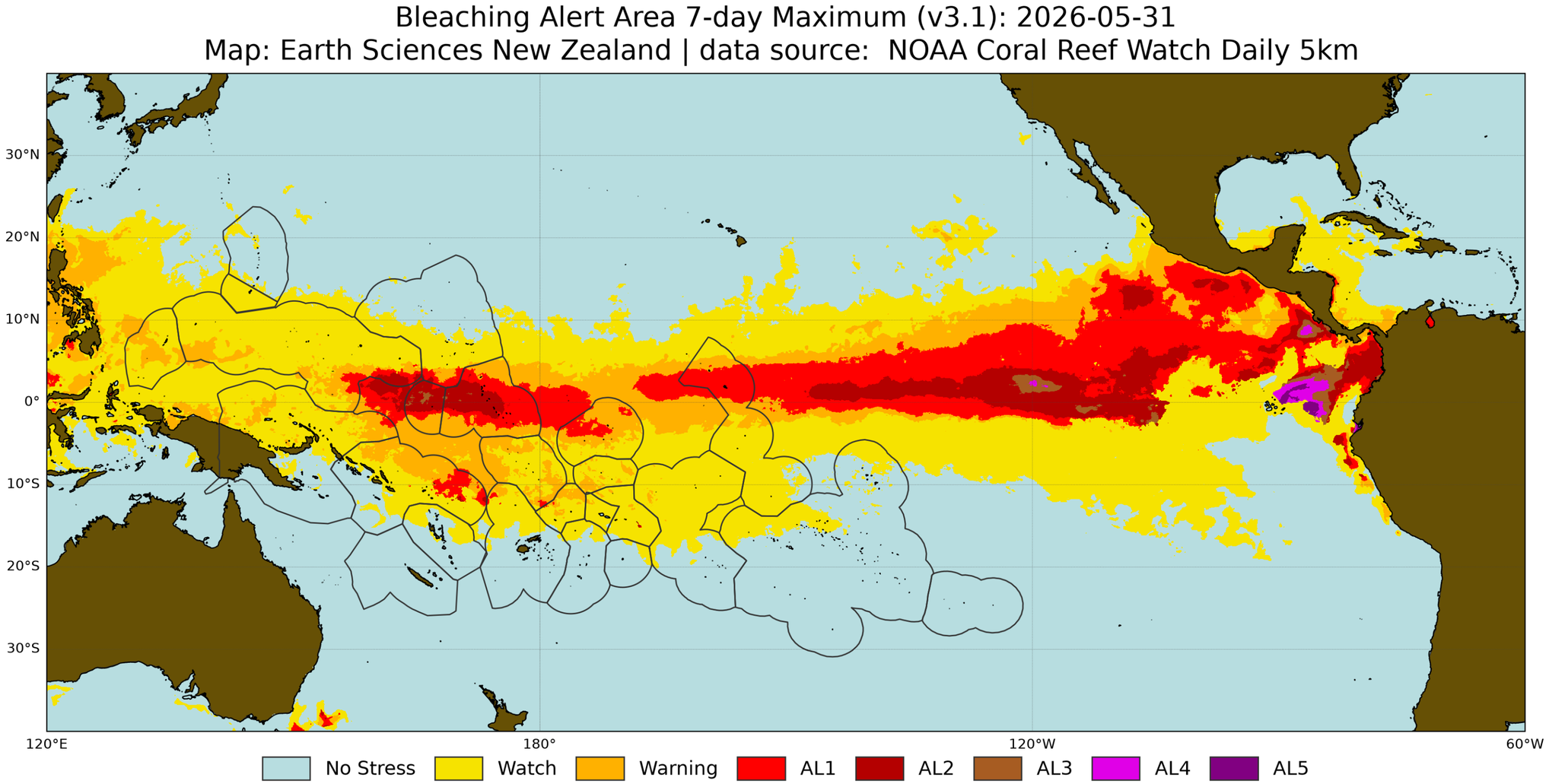






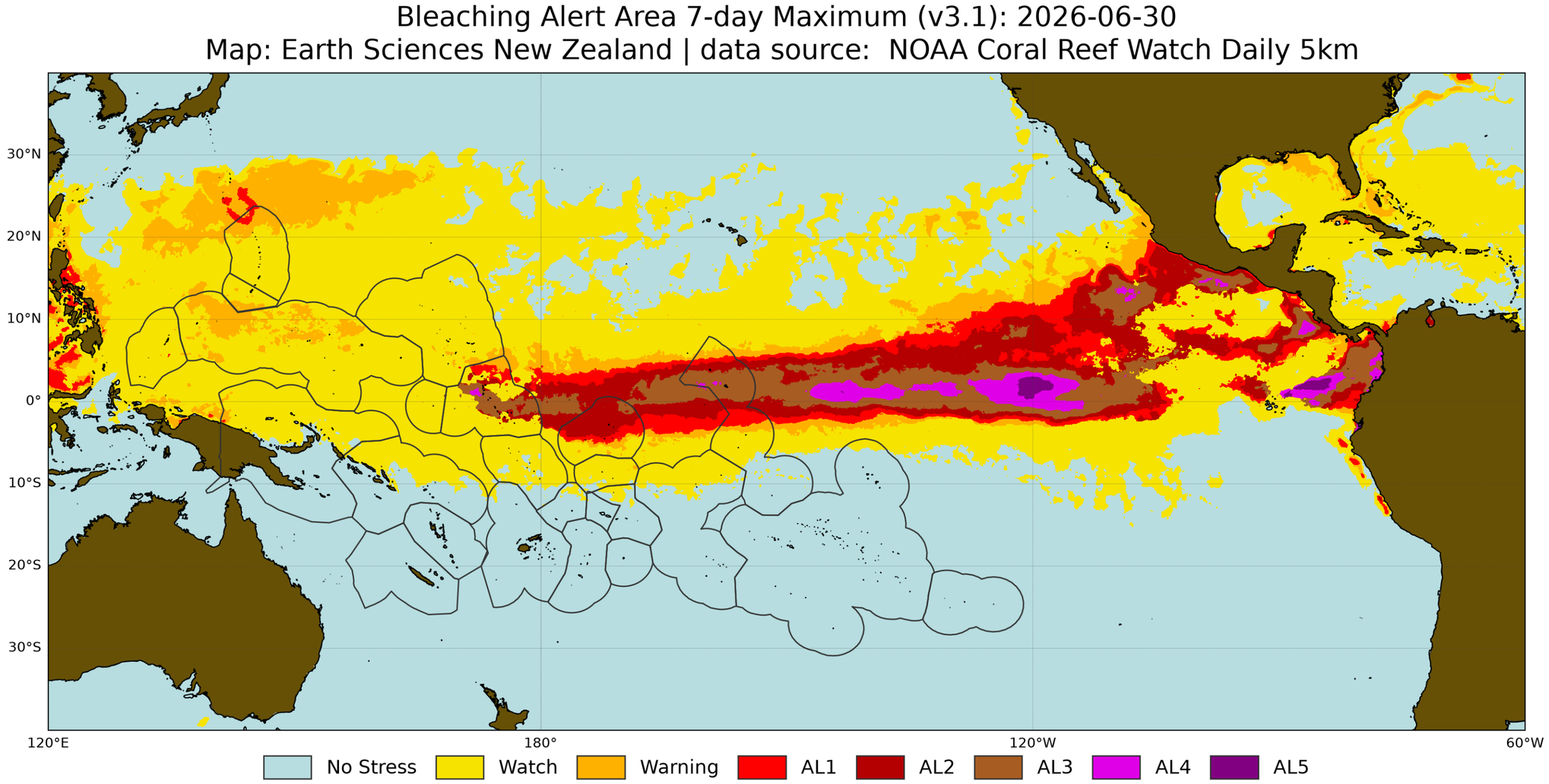
Coral Bleaching

NOAA CRC Bleaching Alert Area (BAA) from https://coralreefwatch.noaa.gov/product/5km/index.php



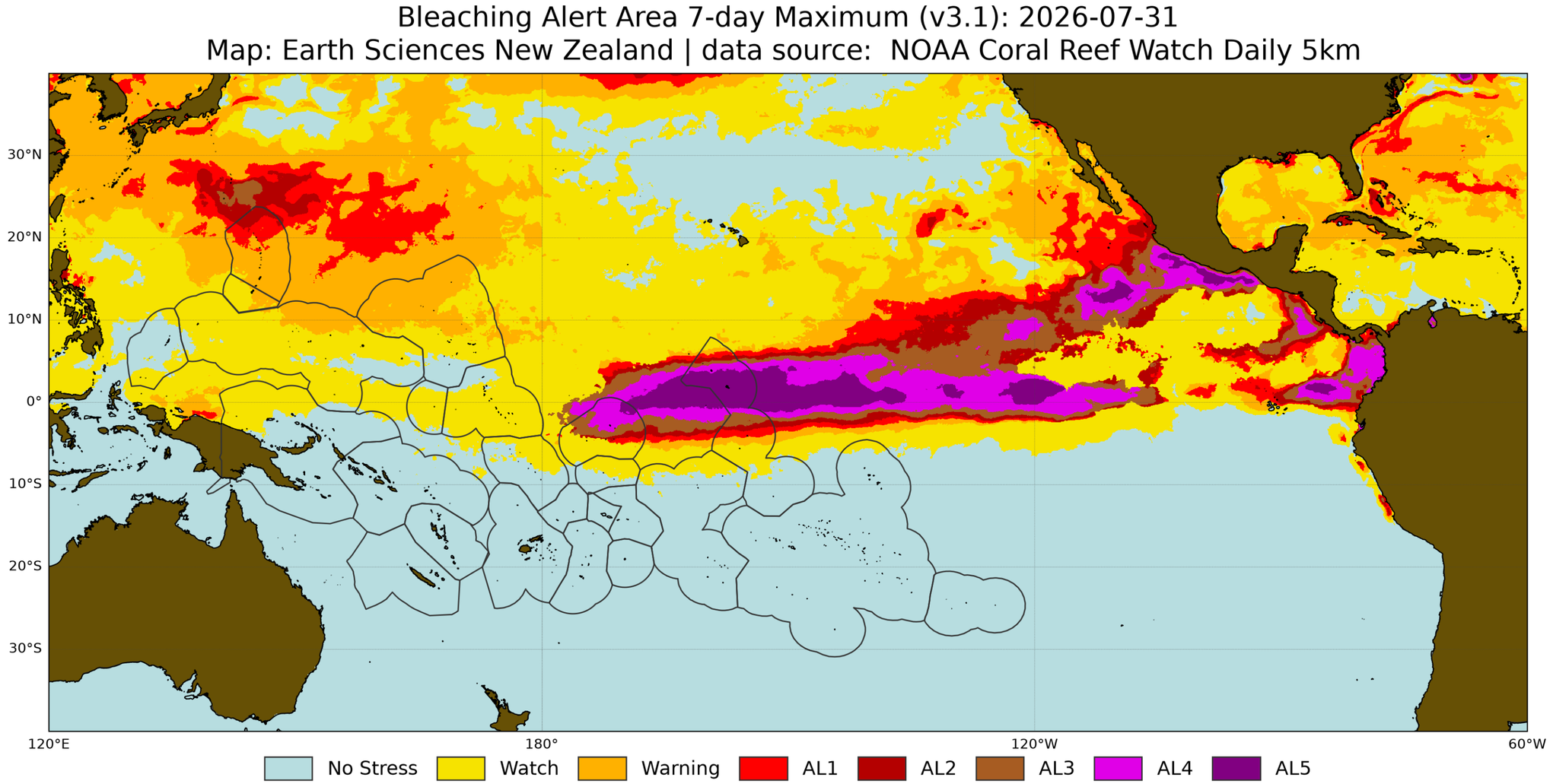
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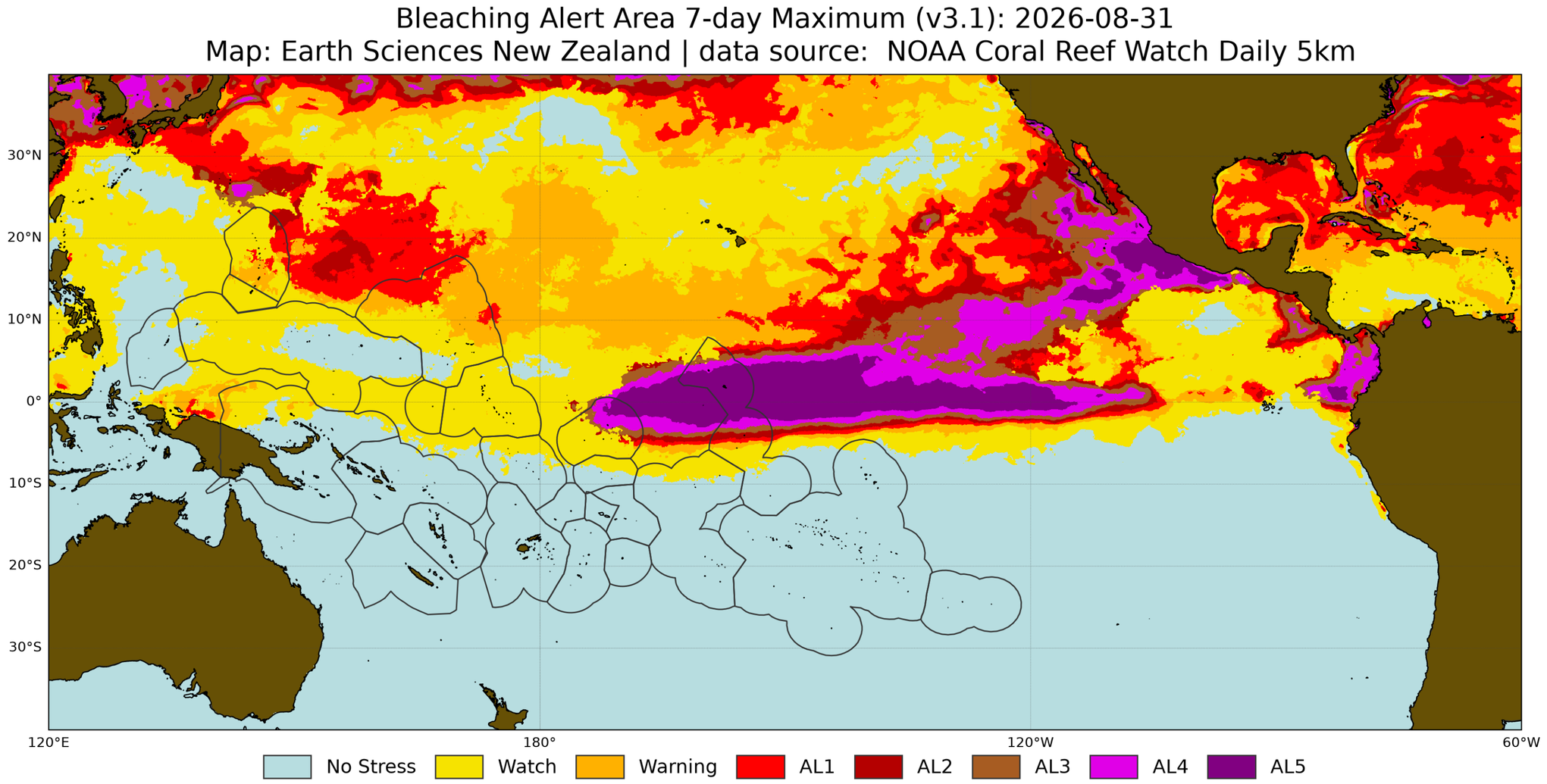
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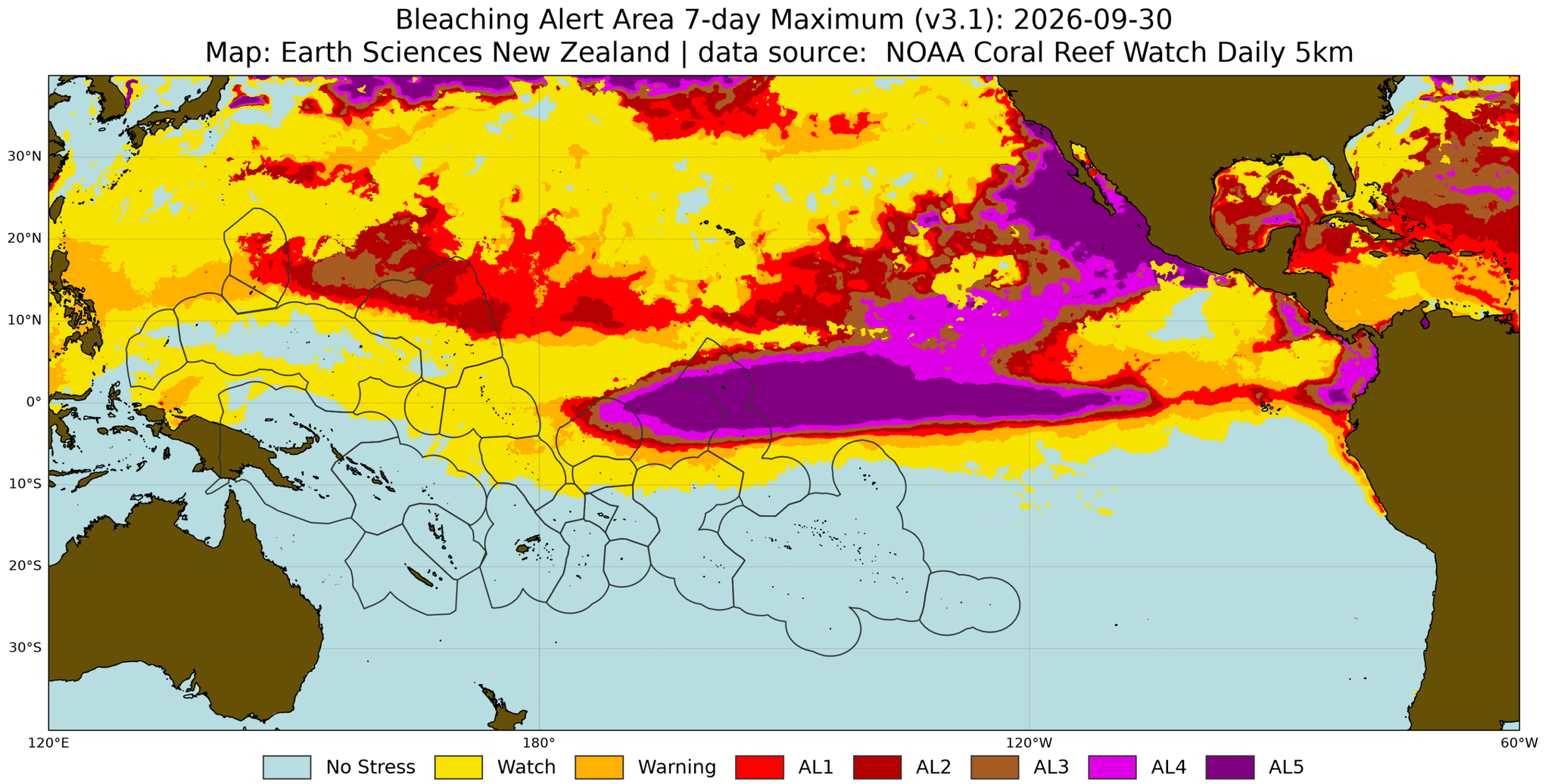
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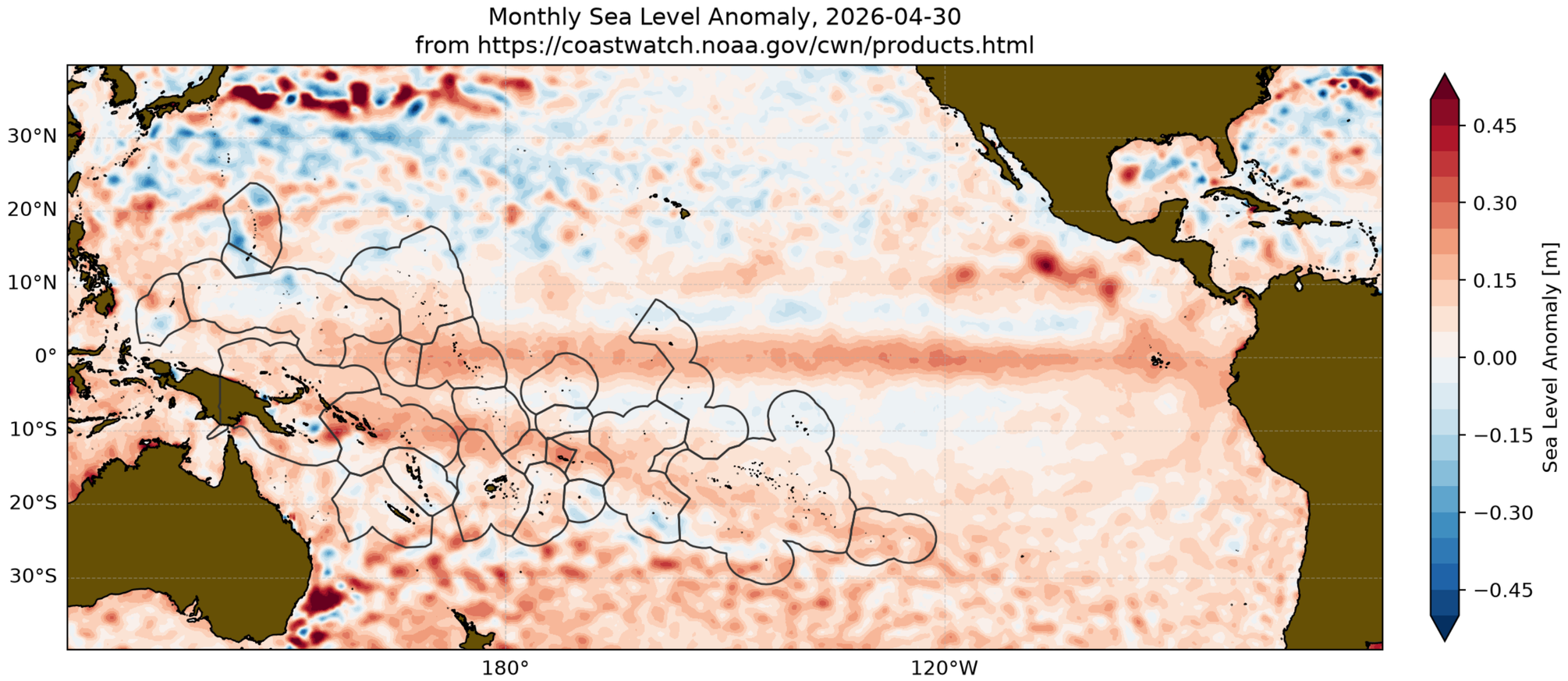
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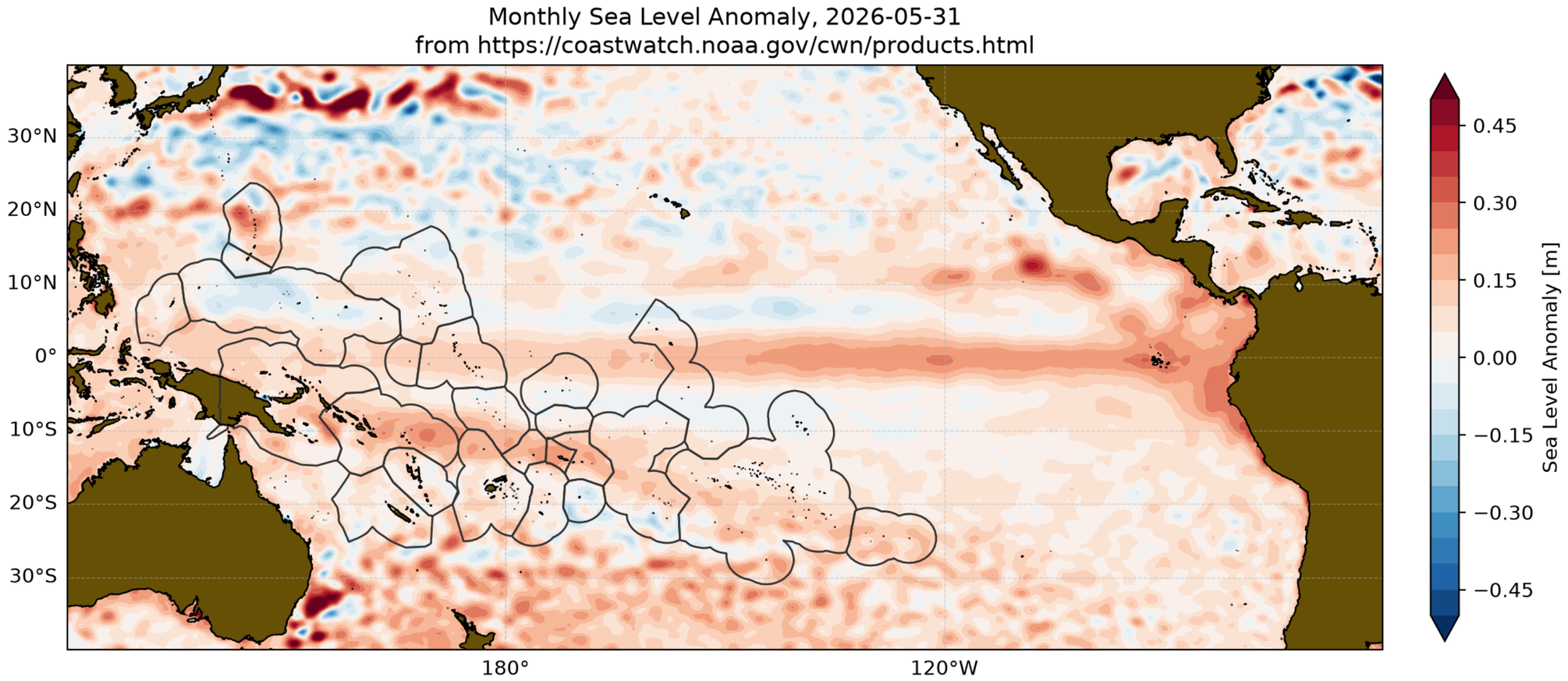
Sea Level Anomalies

Source data: https://coastwatch.noaa.gov/data/pub0015/coastwatch/rads/sla/2026/



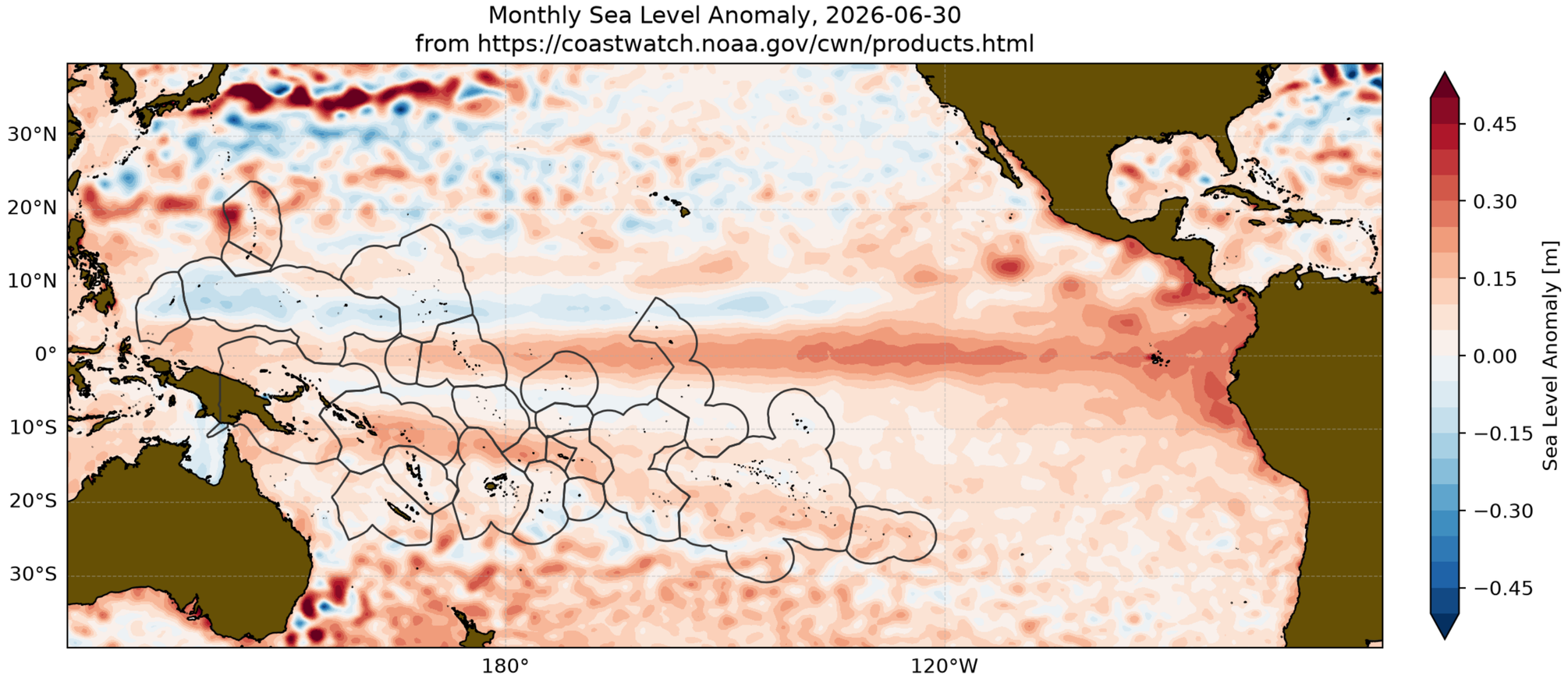
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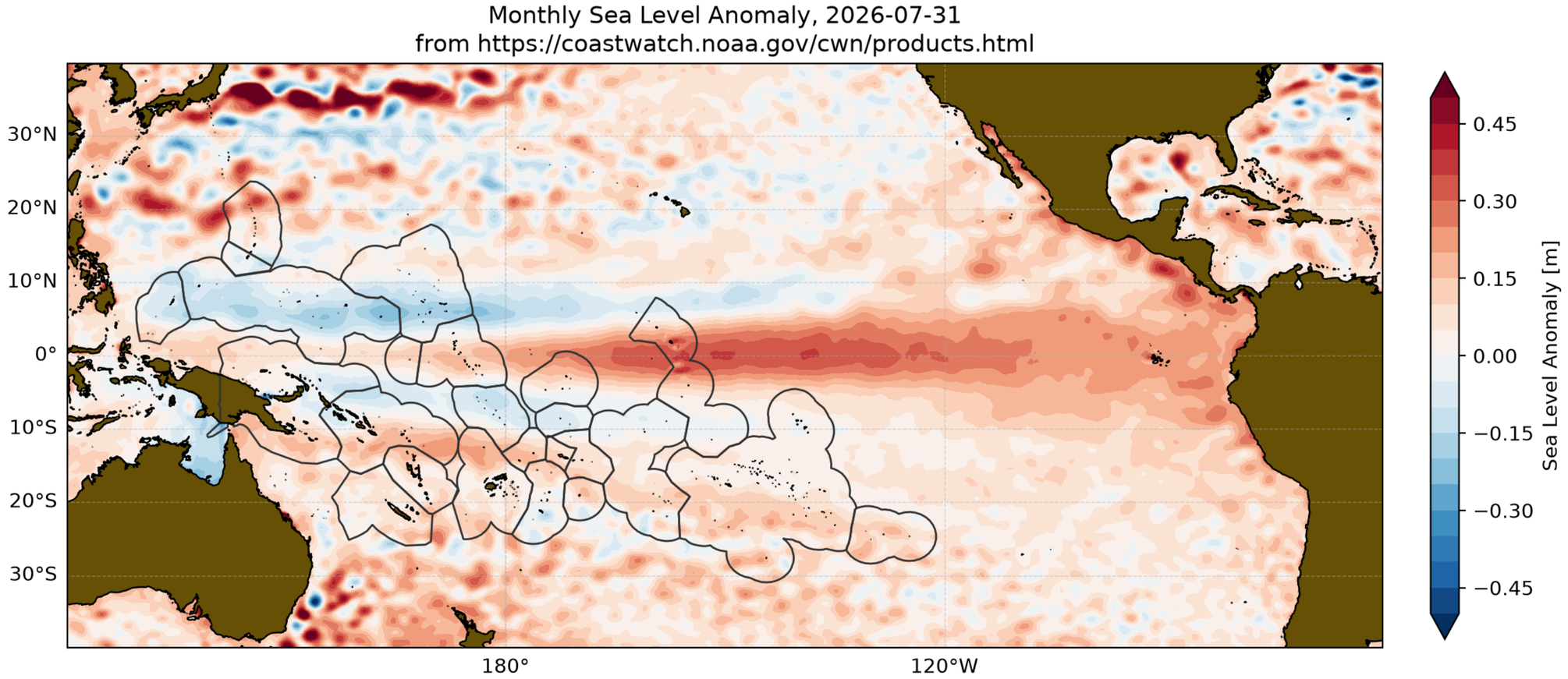
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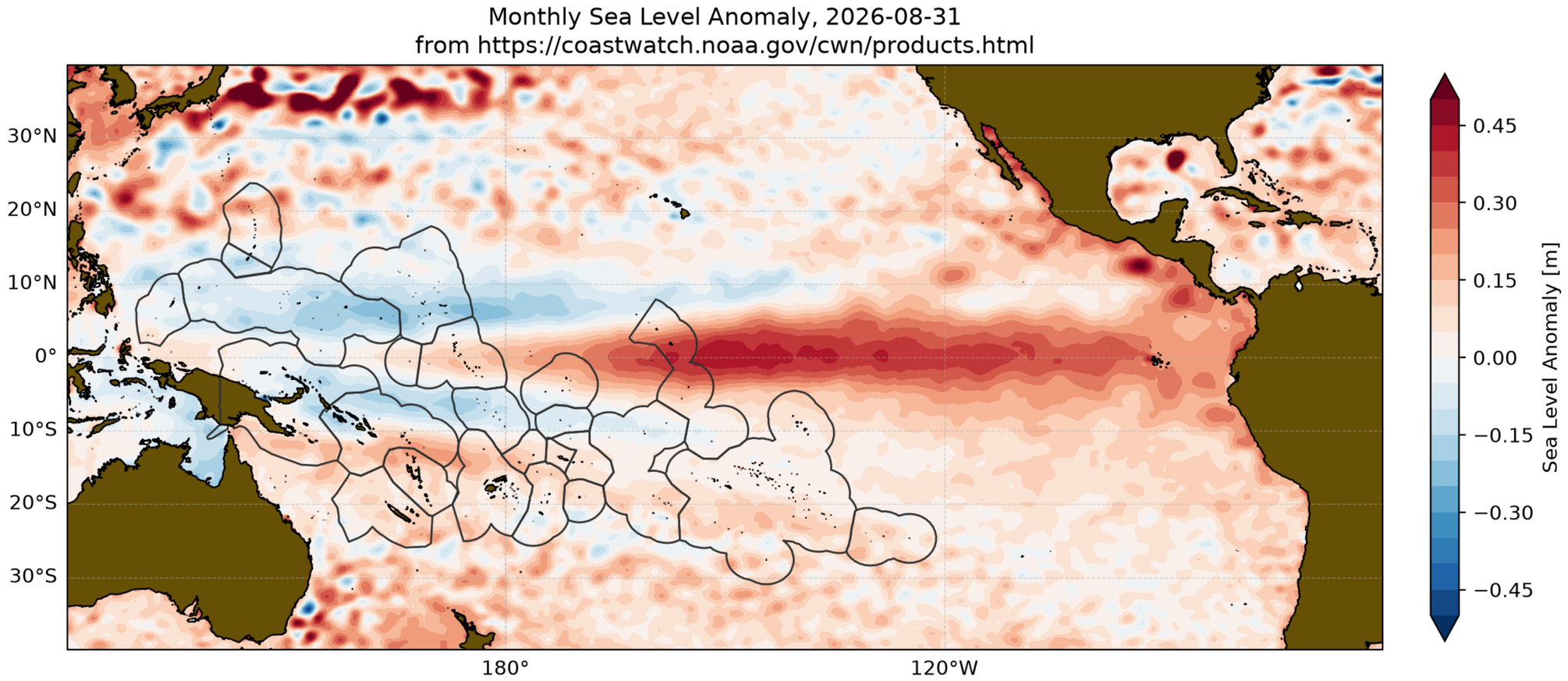
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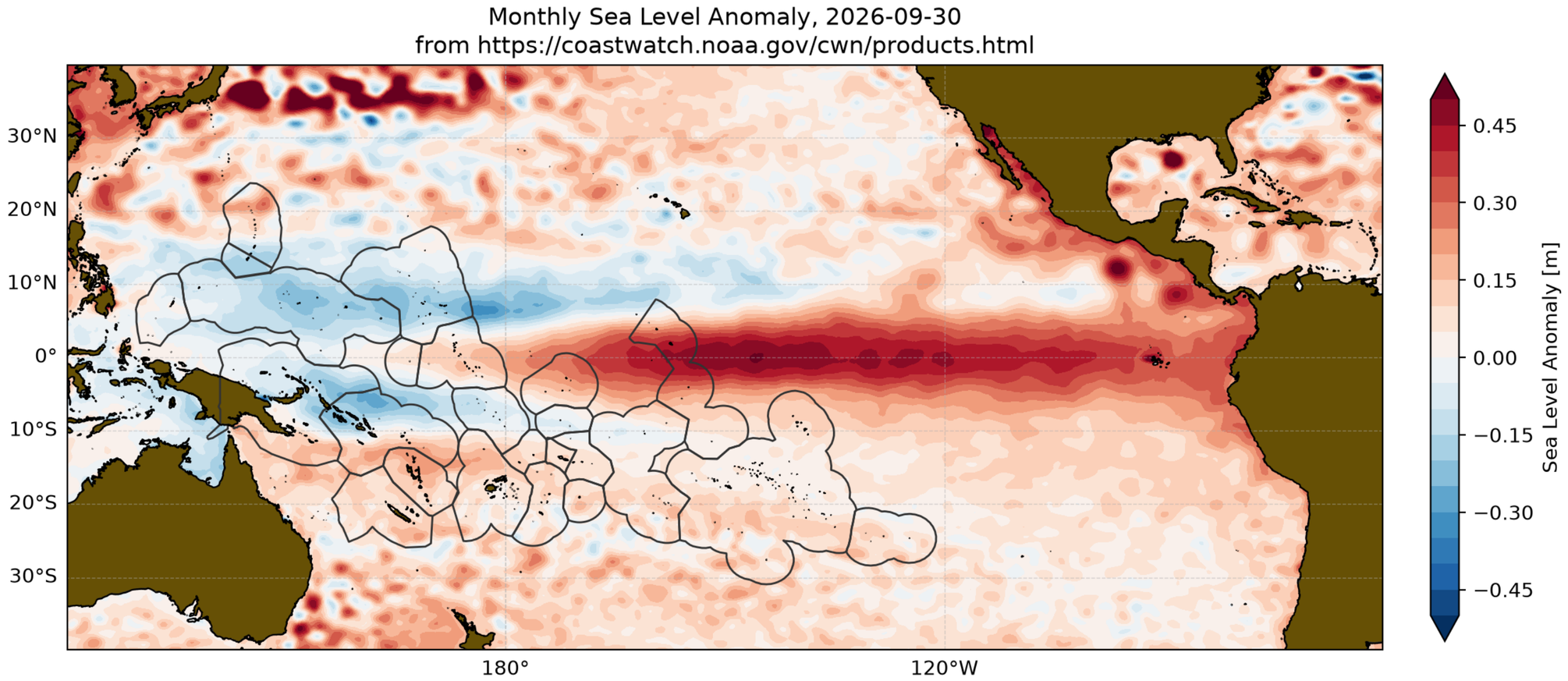
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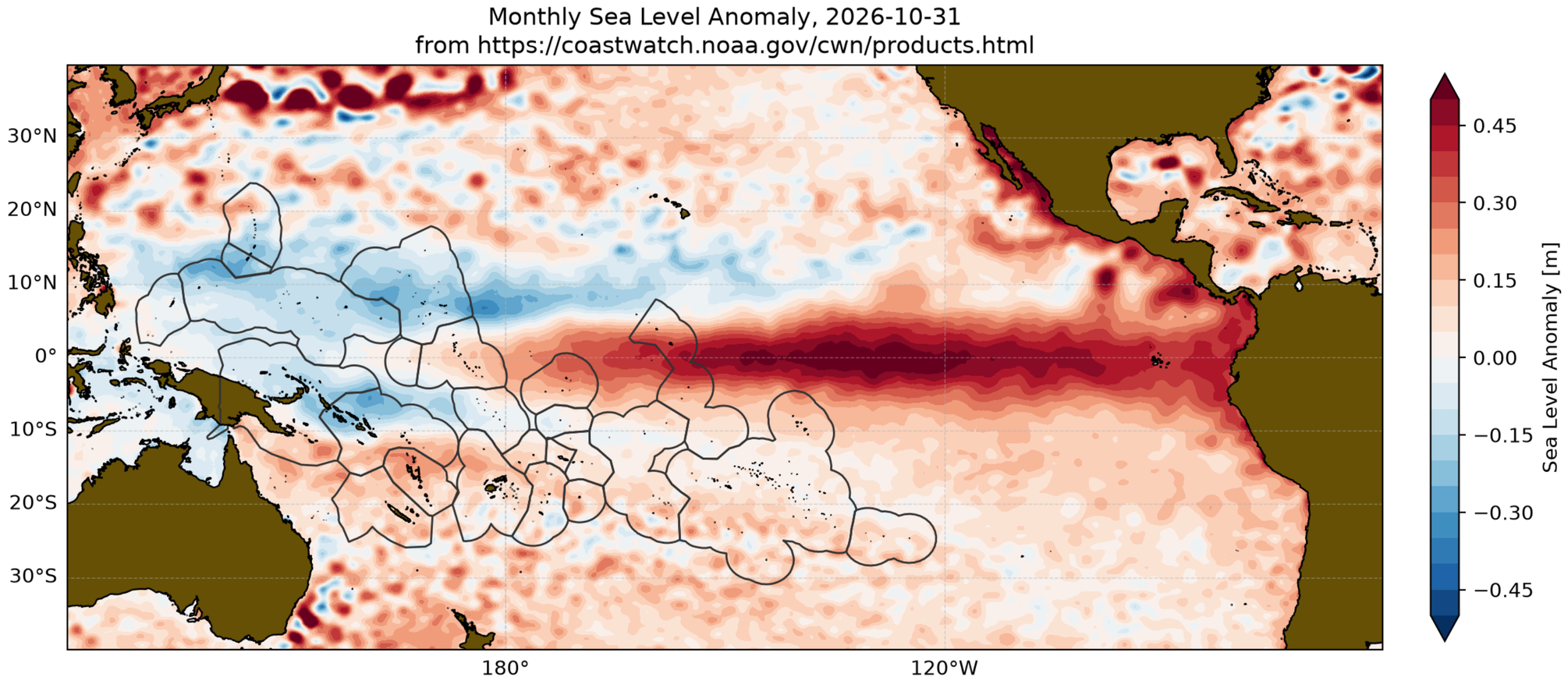
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Preliminary October 2026 value, using data to 15 October

Summary

- El Niño pattern and broader SST anomalies pattern correctly forecast from the April 2026 PICOF (May 2026 to September 2026)
- But intensity of El Niño underestimated by most models, especially towards the end of the forecast period (September 2026)
- Spatial patterns of Coral Bleaching Alerts Areas and Mean Sea Level Anomalies also broadly correctly forecast from the April 2026 PICOF
- → Shows that El Niño and associated oceanic variables, tends to be very predictable, especially past the “spring predictability barrier”

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