

15TH SESSION OF THE PACIFIC ISLANDS CLIMATE OUTLOOK & STAKEHOLDER FORUM

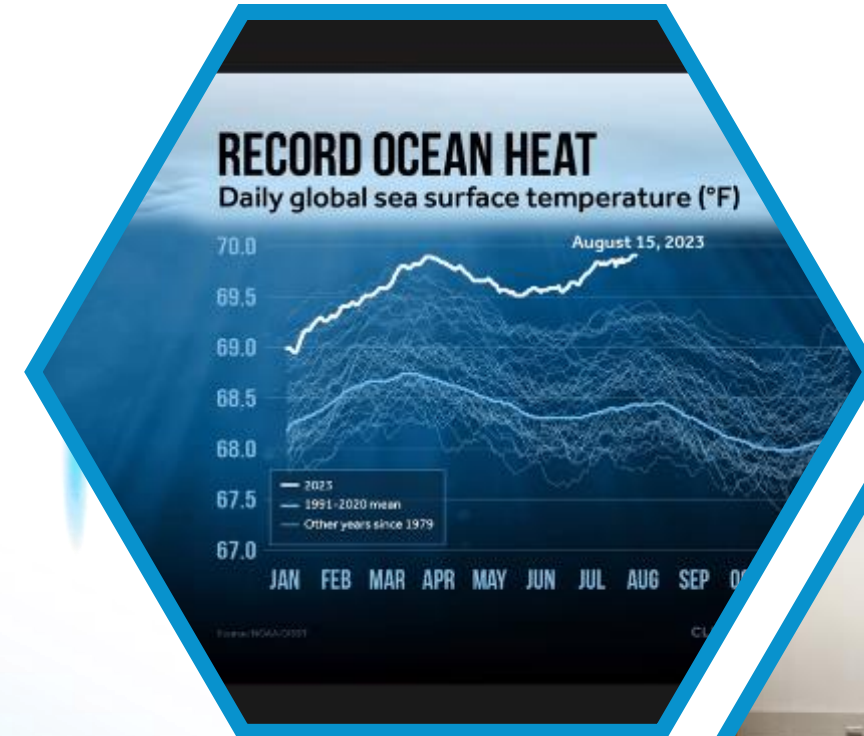
PICOF-15

14 - 15 OCTOBER, 2024

HYBRID

IN-PERSON: NUKU'ALOFA, TONGA

ONLINE: ZOOM



Outlook: Ocean temperature, Coral Bleaching and Sea level

Moleni Tu'uholoaki (SPC), Grant Smith (BoM) and John Marra (NOAA)



Outline of Presentation

- WMO LRFMME SST
- SLA/Tides
- Coral Bleaching
- Fisheries convergence zone
- Key messages

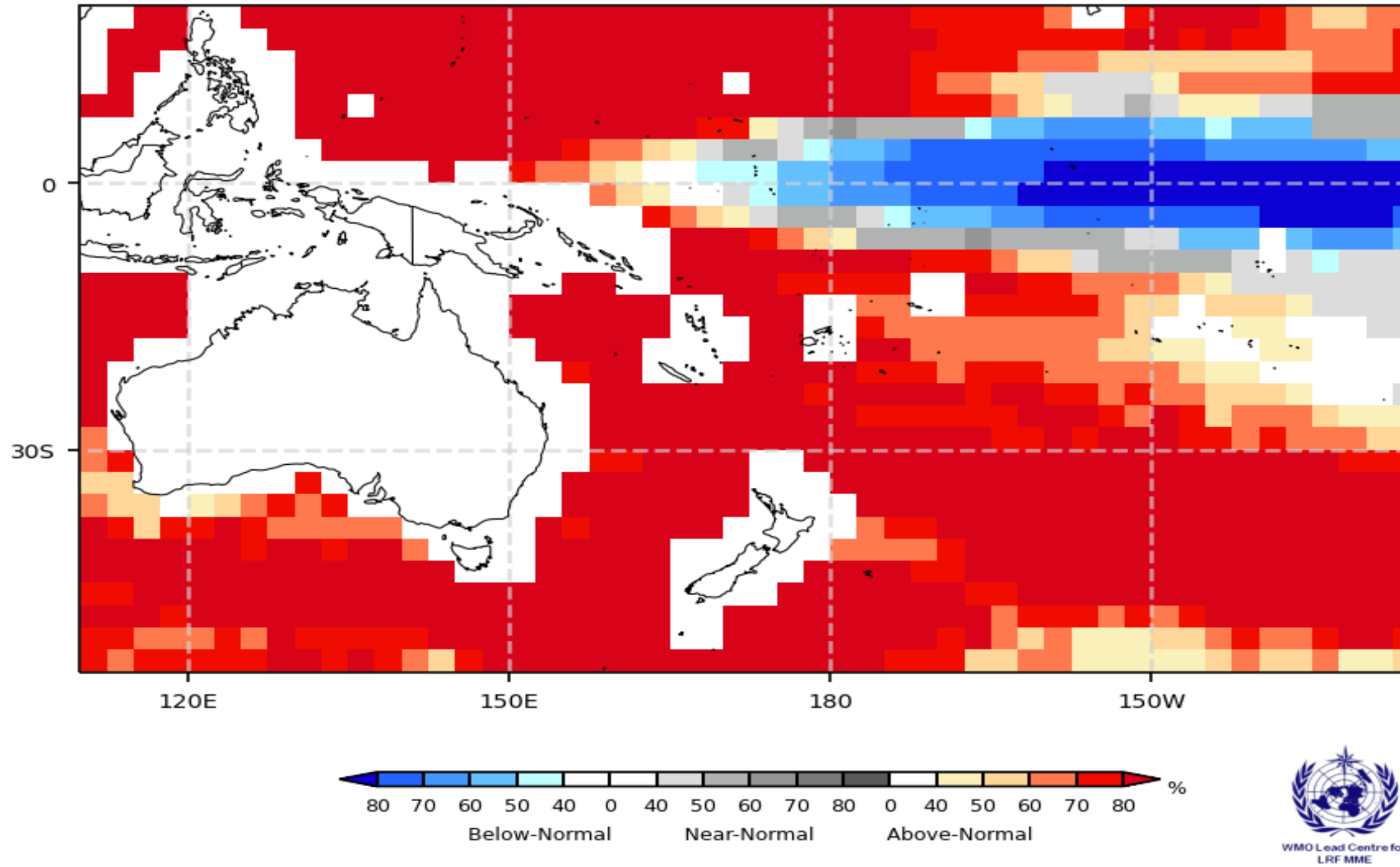
WMO-MME- 3 Month SST

Probabilistic Multi-Model Ensemble Forecast

Beijing, CMCC, ECMWF, Exeter, Melbourne, Montreal, Offenbach, Pretoria, Seoul, Tokyo, Toulouse, Washington

Sea Surface Temperature : OND2024

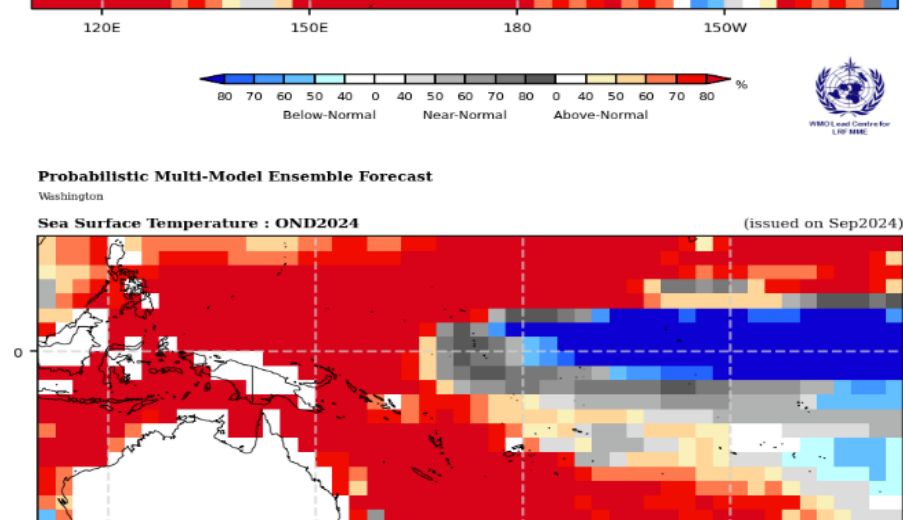
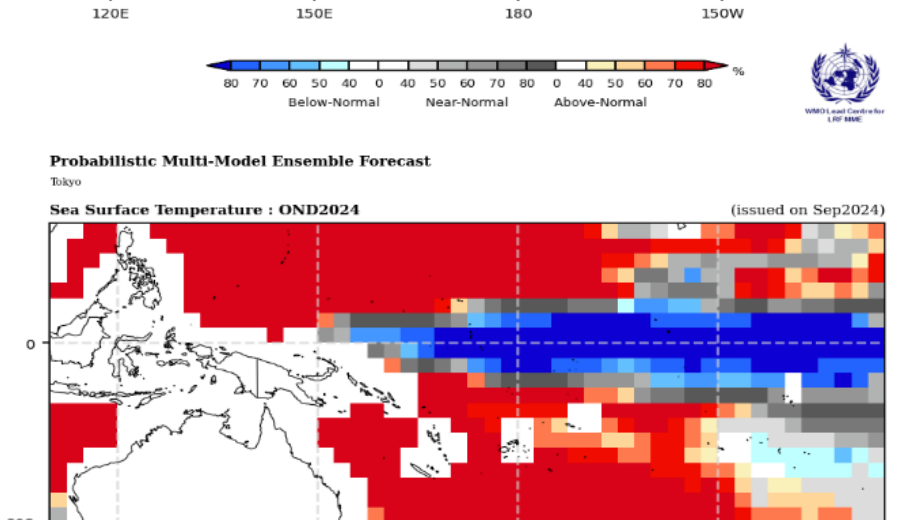
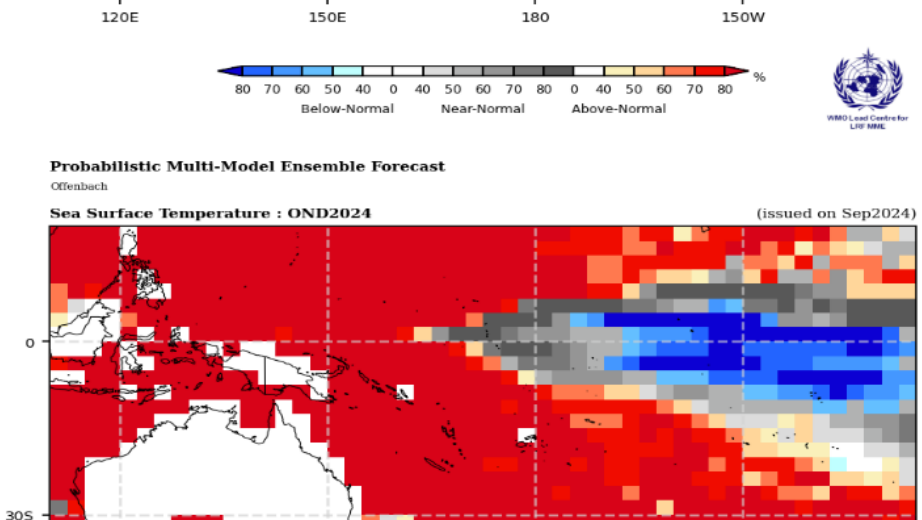
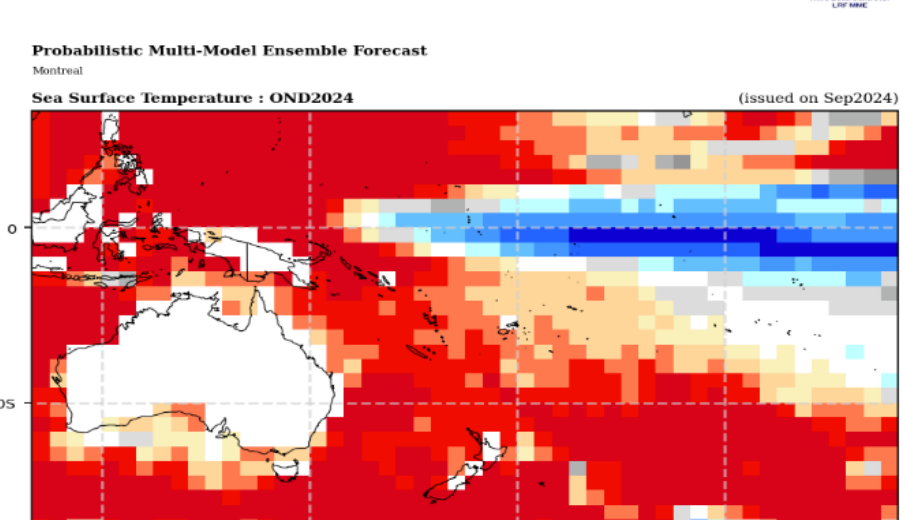
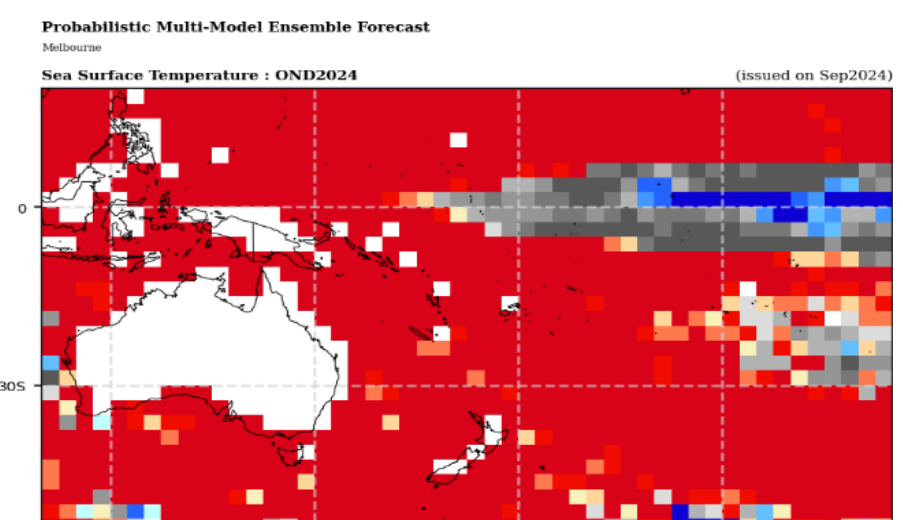
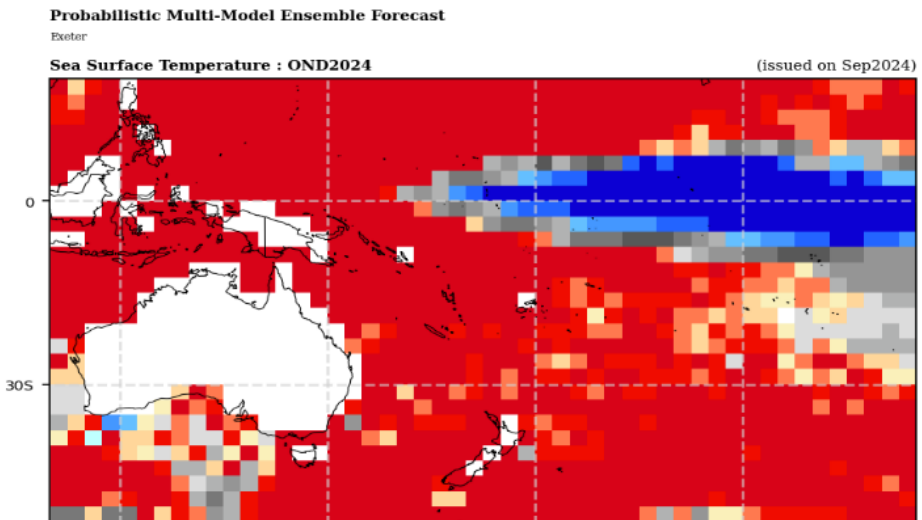
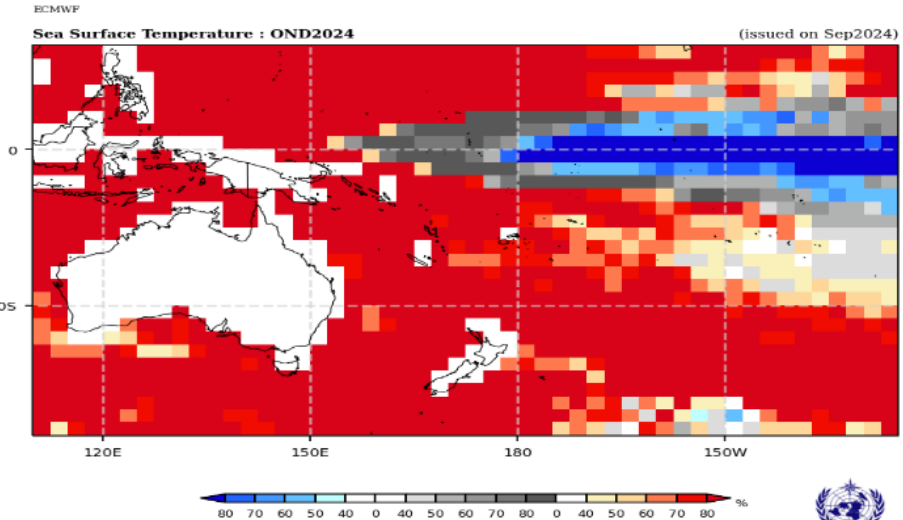
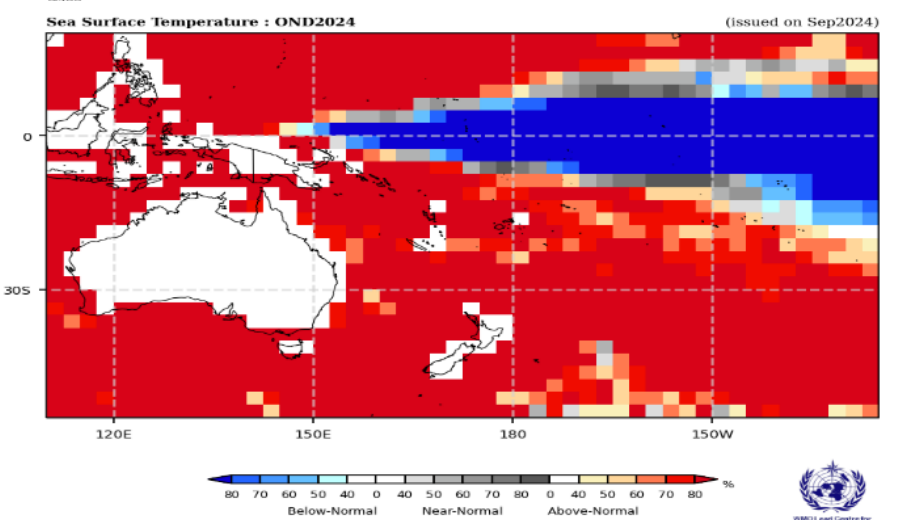
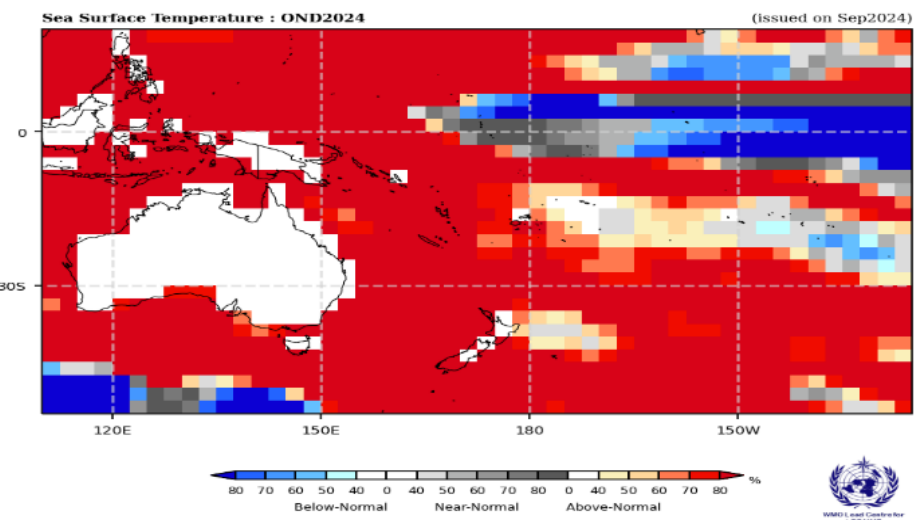
(issued on Sep2024)



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Individual Model-SST: 3 months



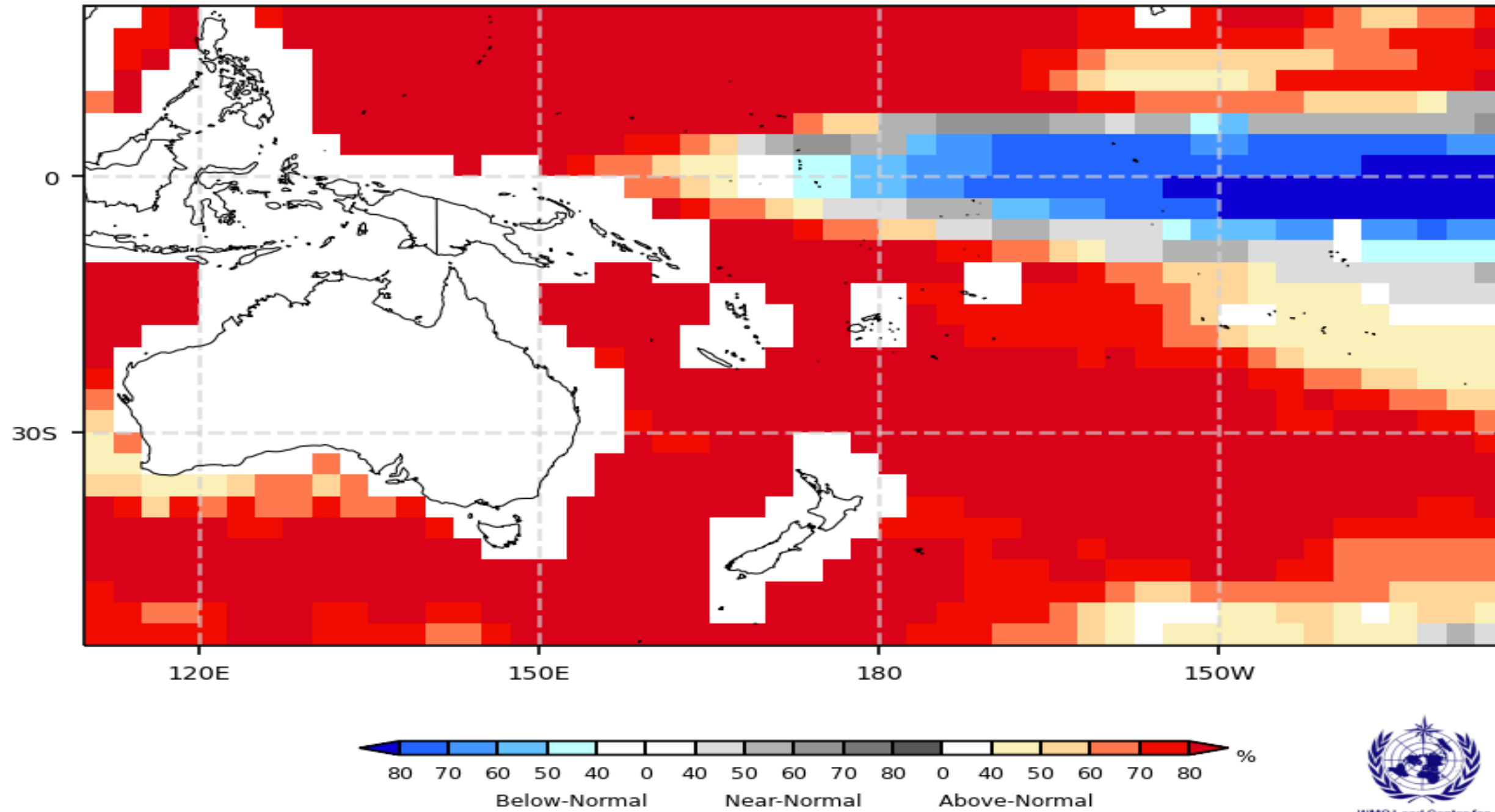
WMO-MME- 6 Month SST

Probabilistic Multi-Model Ensemble Forecast

Beijing, Montreal, Seoul, Tokyo, Washington

Sea Surface Temperature : ONDJFM2024

(issued on Sep2024)



PACIFIC REGIONAL CLIMATE CENTRE NETWORK



SPREP
Secretariat of the Pacific Regional Environment Programme



Pacific Community
Communauté du Pacifique



COSPPac

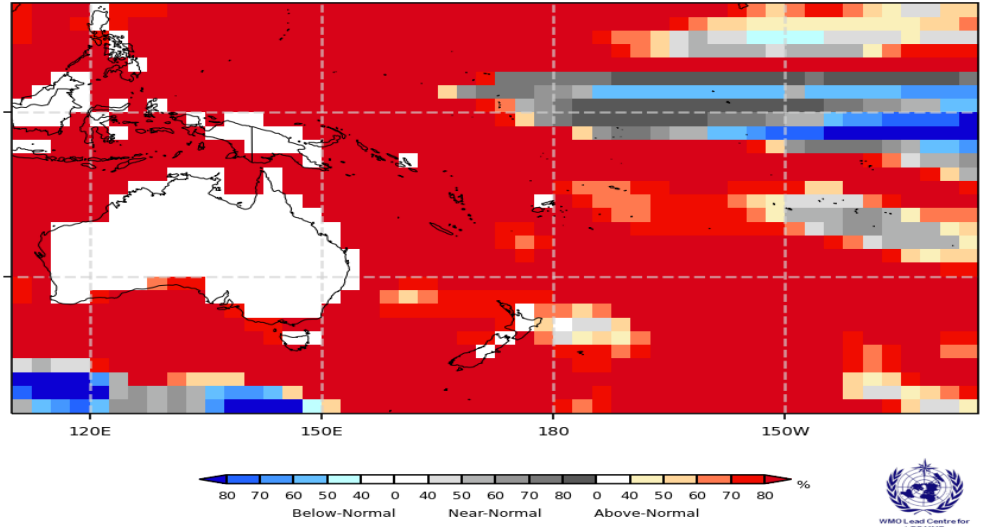


NIWA
Taihoro Nukurangi



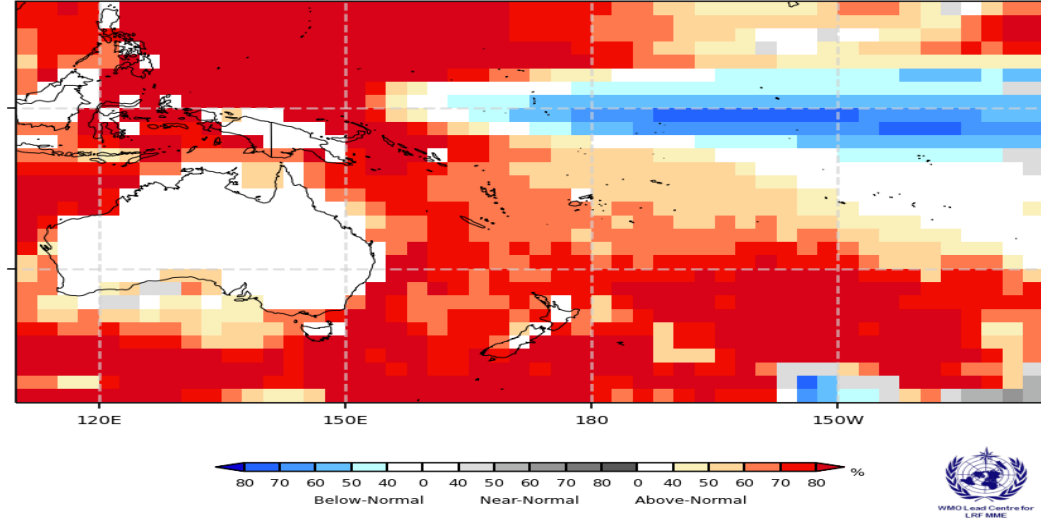
Probabilistic Multi-Model Ensemble Forecast

Beijing
Sea Surface Temperature : ONDJFM2024 (issued on Sep2024)



Probabilistic Multi-Model Ensemble Forecast

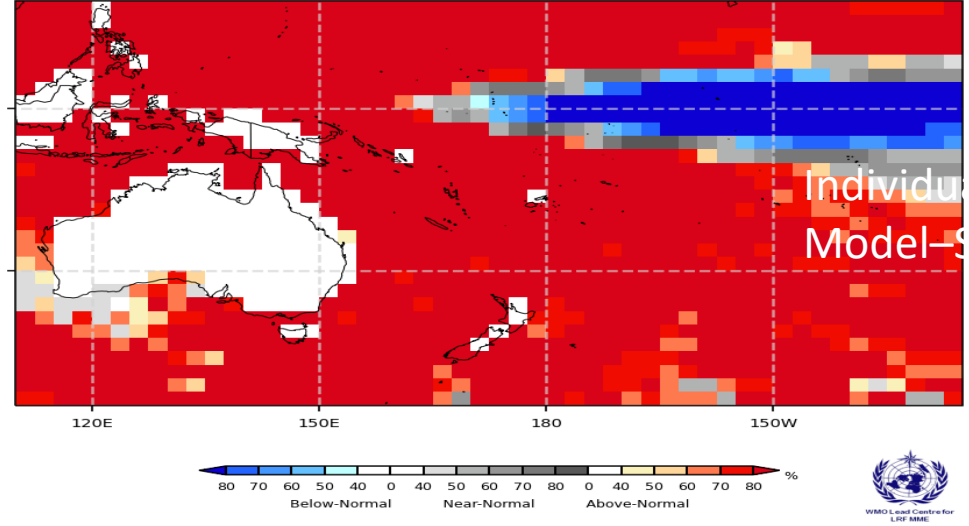
Montreal
Sea Surface Temperature : ONDJFM2024 (issued on Sep2024)



Individual Model-SST 6 months

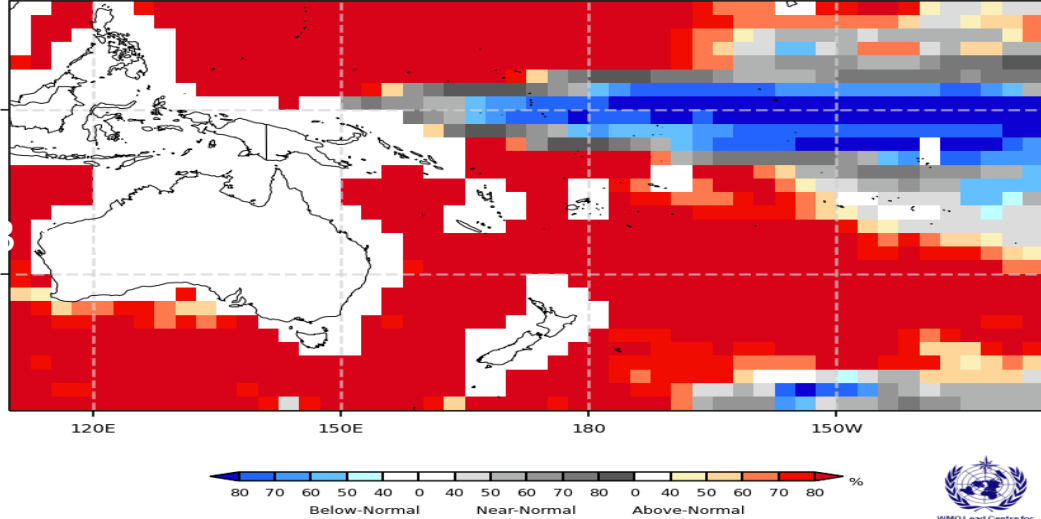
Probabilistic Multi-Model Ensemble Forecast

Seoul
Sea Surface Temperature : ONDJFM2024 (issued on Sep2024)



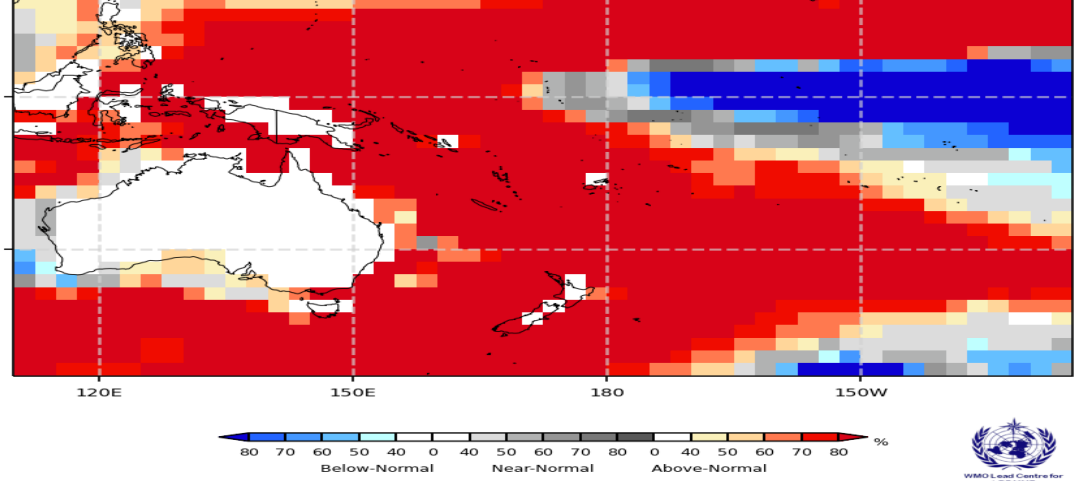
Probabilistic Multi-Model Ensemble Forecast

Tokyo
Sea Surface Temperature : ONDJFM2024 (issued on Sep2024)

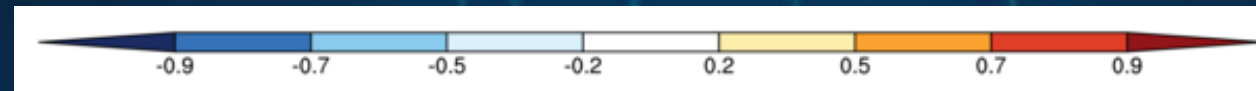
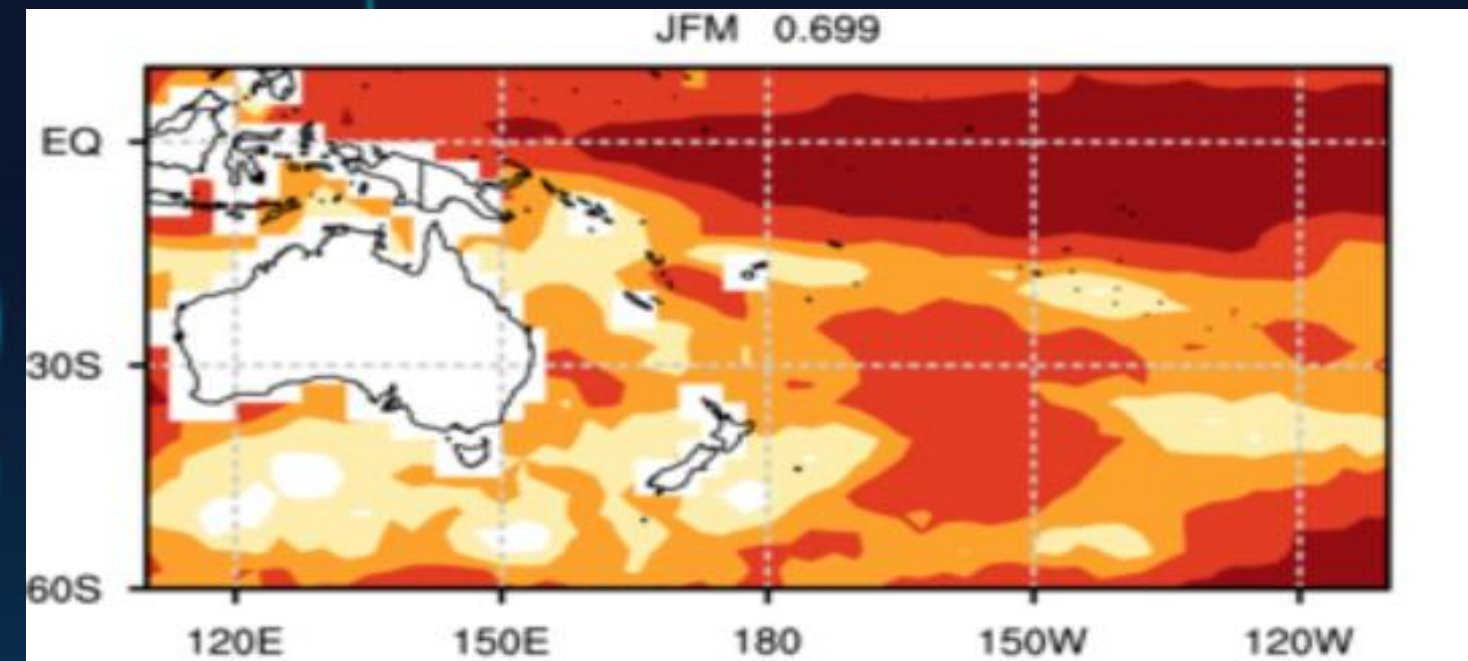
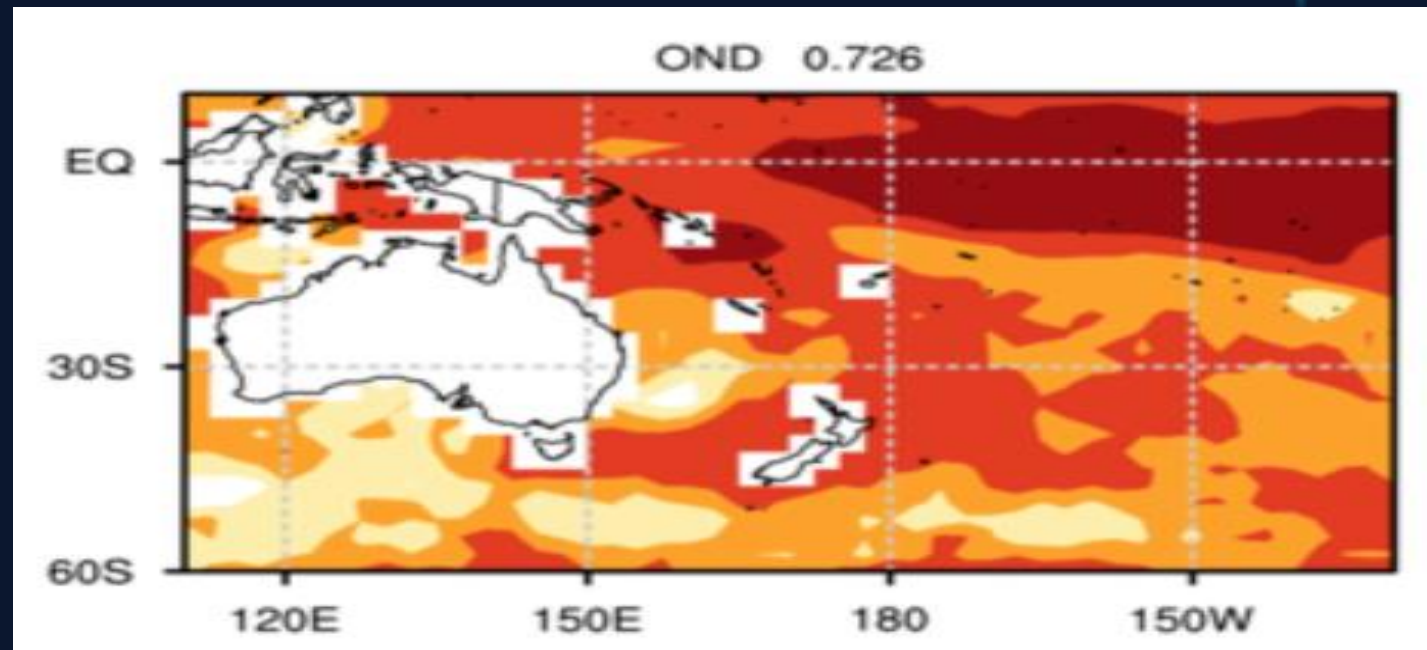


Probabilistic Multi-Model Ensemble Forecast

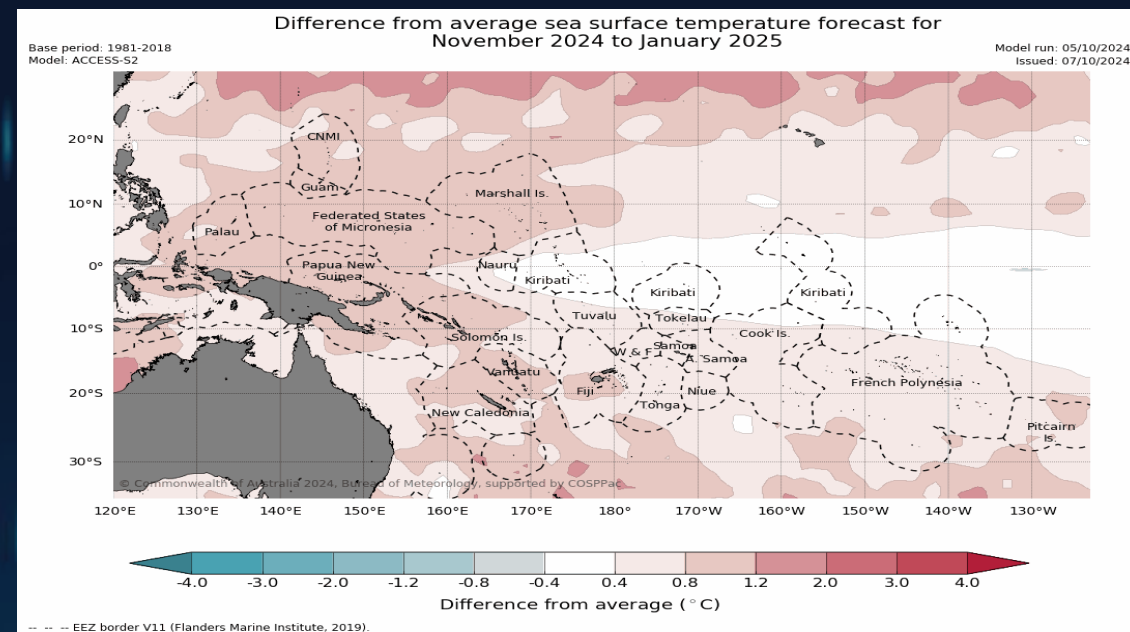
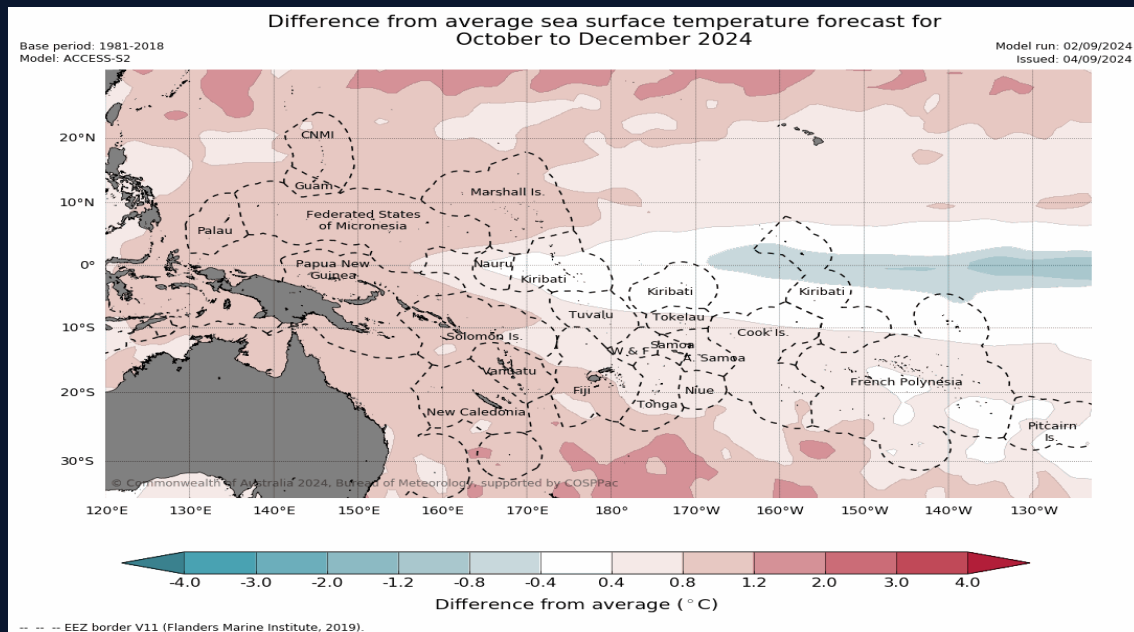
Washington
Sea Surface Temperature : ONDJFM2024 (issued on Sep2024)



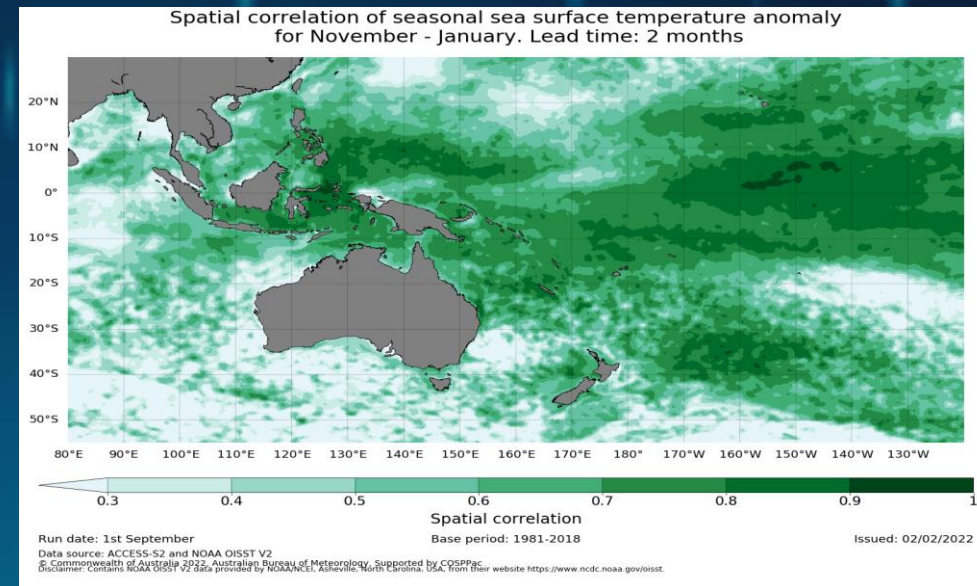
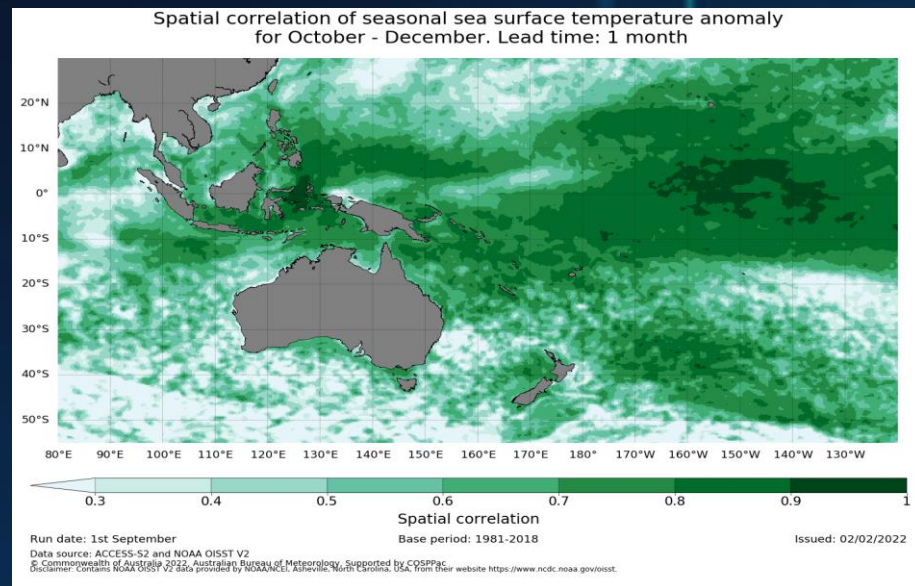
Skill



ACCESS-S: SST Anomalies

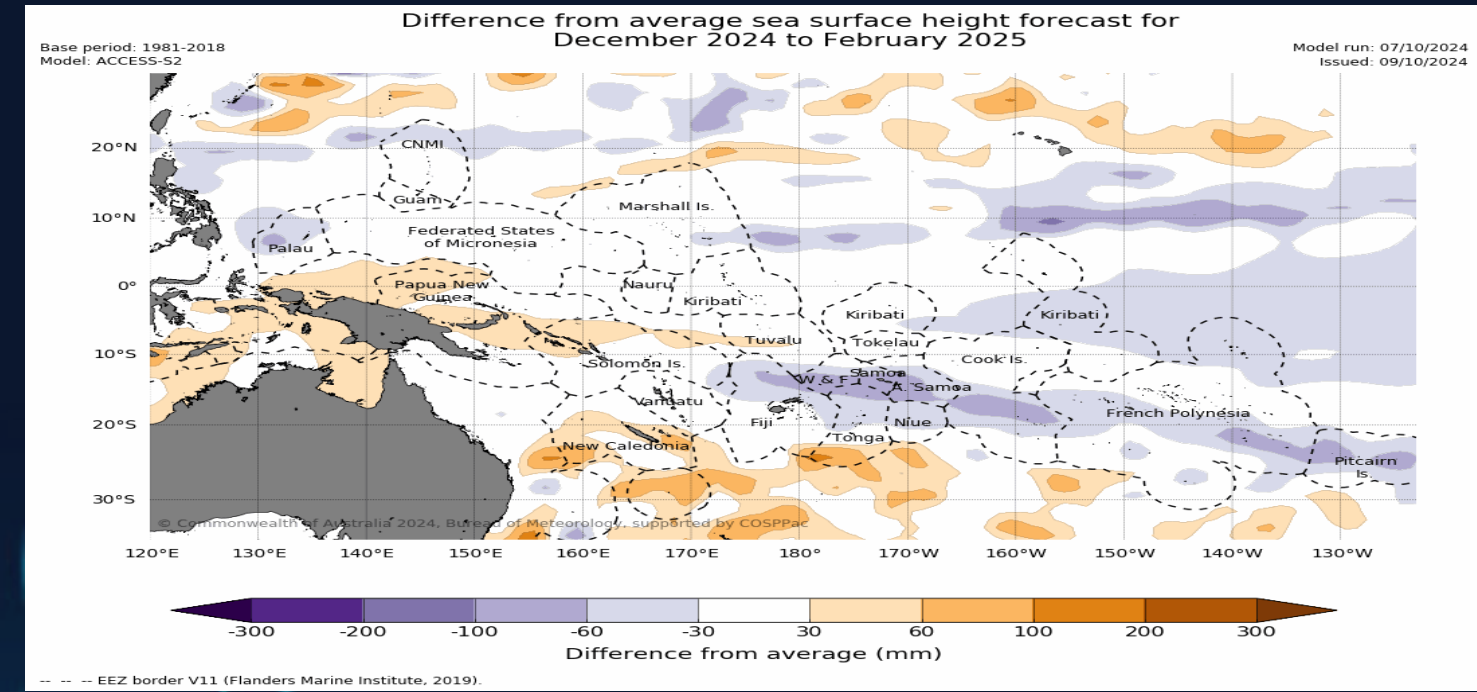
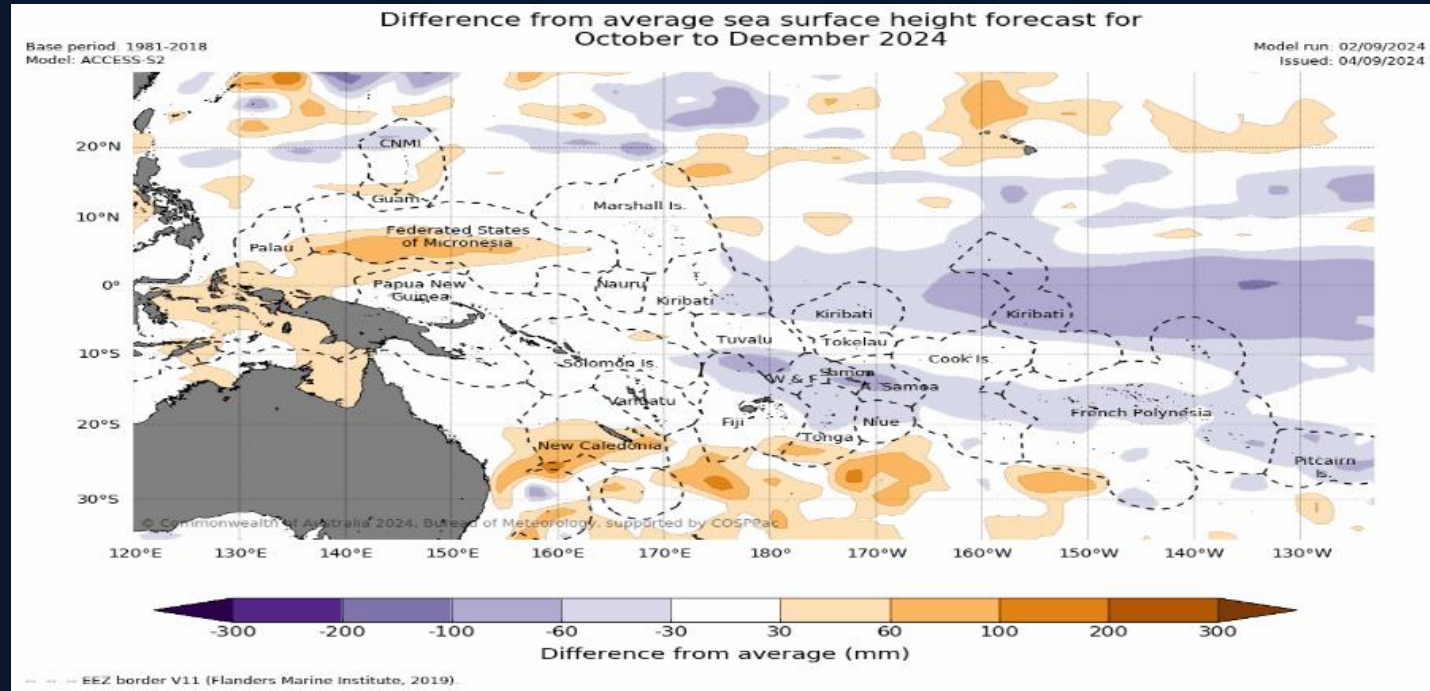


Skill

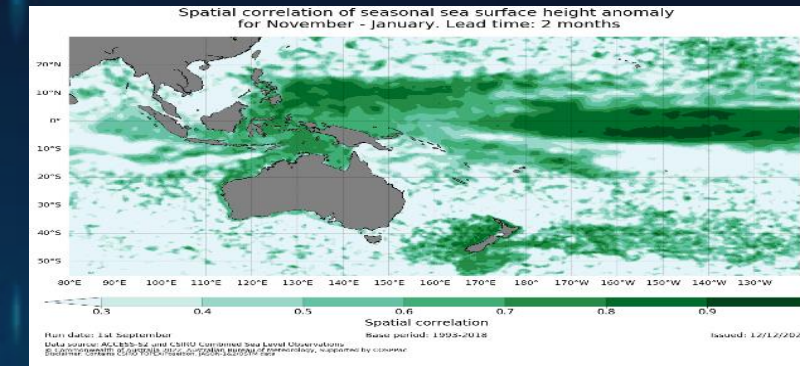
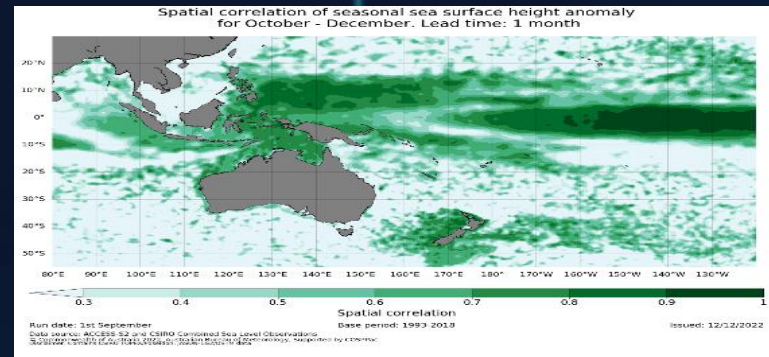


Sea Level Anomaly

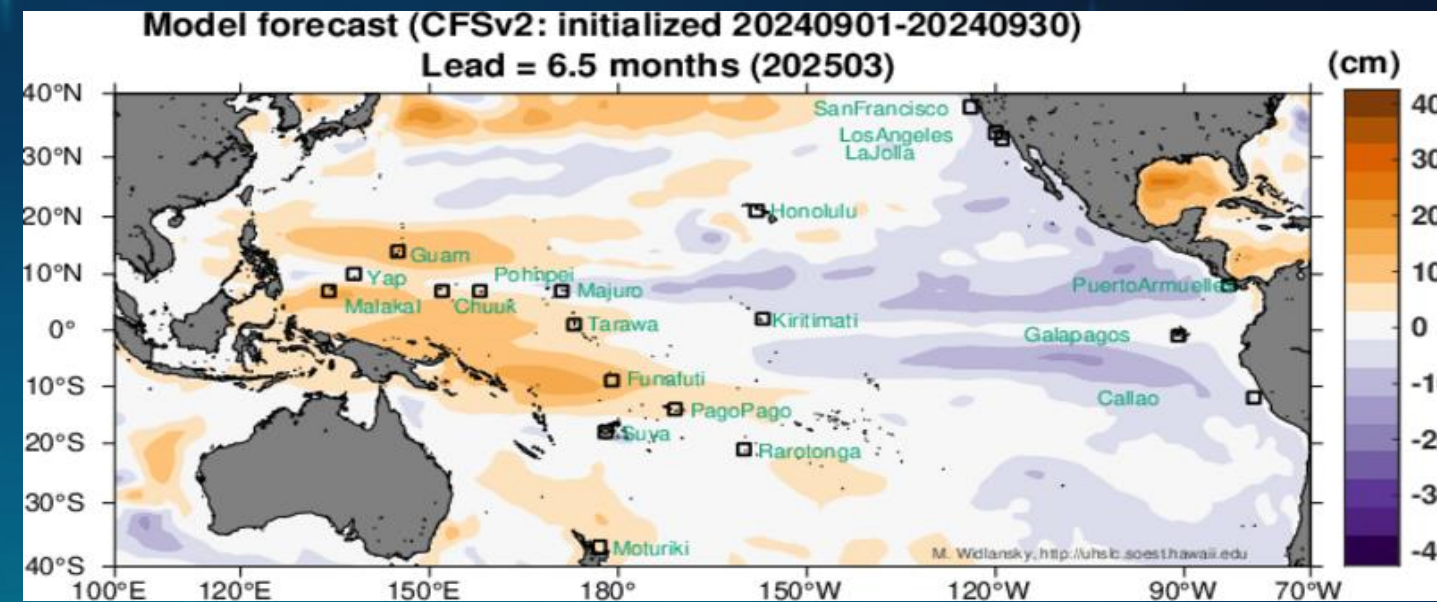
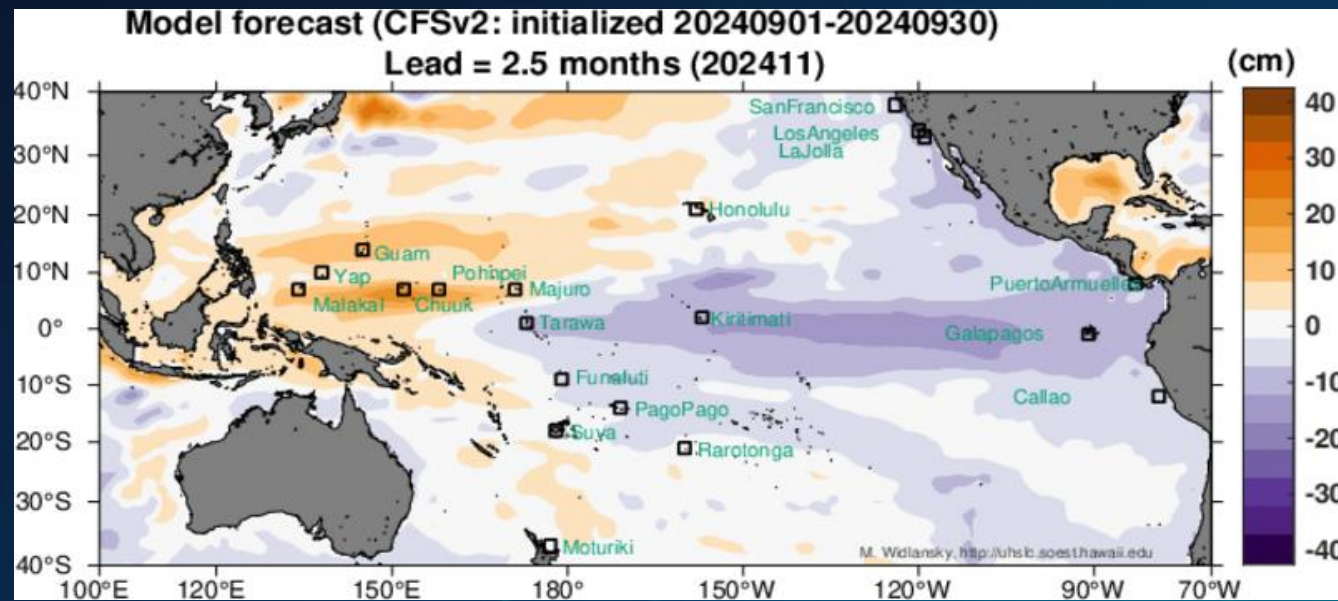
ACCESS-S



Skill



UoH



Highest Tides

Rarotonga, Cook Is

Honiara, Solomon Is

Lombrum, PNG

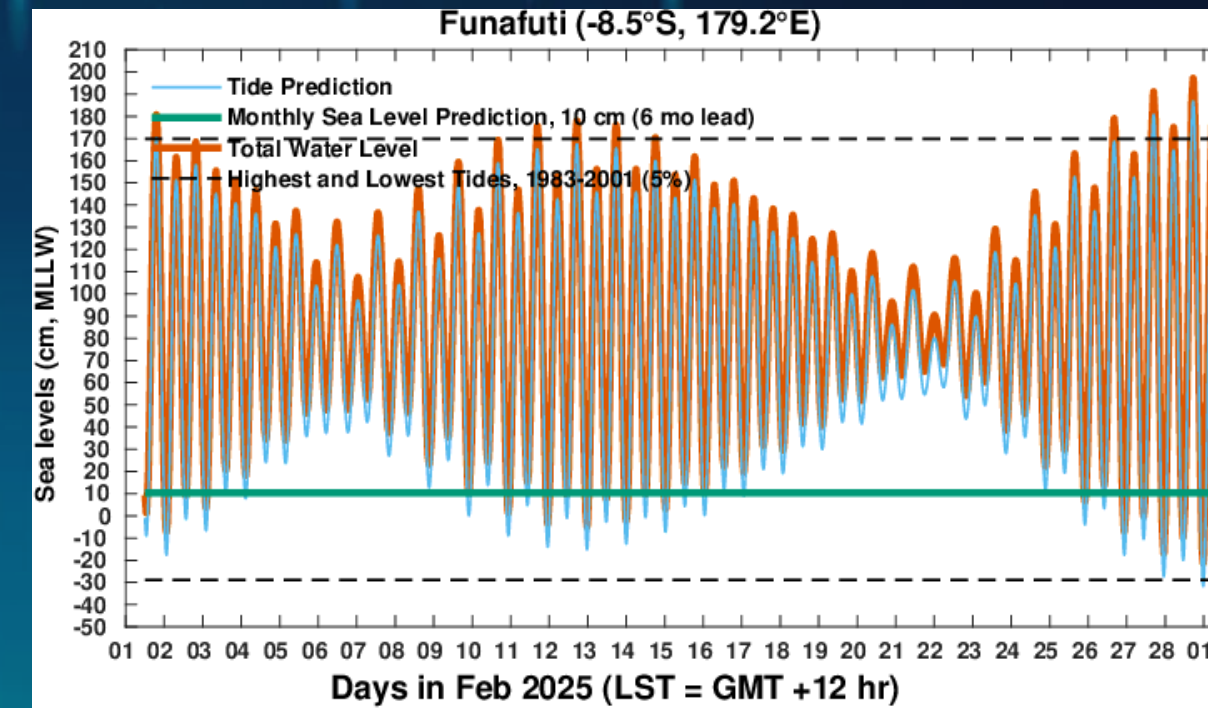
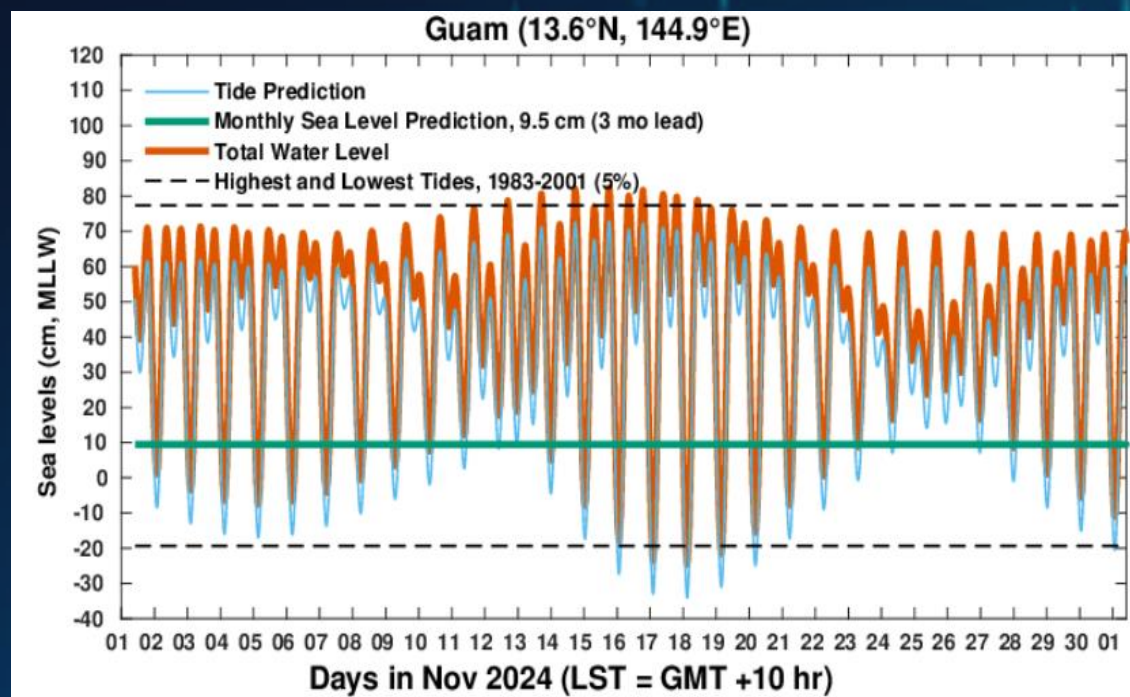
Nauru

10 highest tides for 2024		
Date	Time	Height (m)
13-Mar	12:04	1.15
12-Mar	11:18	1.14
14-Mar	12:49	1.13
13-Feb	12:30	1.13
14-Feb	13:15	1.13
10-Apr	10:52	1.12
11-Apr	11:38	1.12
20-Sep	23:34	1.11
19-Oct	23:09	1.11
18-Oct	22:22	1.11

10 highest tides for 2024		
Date	Time	Height (m)
16-Nov	15:30	1.71
17-Nov	16:02	1.7
10-Feb	16:14	1.7
12-Jan	16:17	1.68
13-Jan	16:58	1.67
09-May	3:52	1.67
11-Feb	16:51	1.67
15-Nov	14:57	1.67
19-Oct	16:27	1.66
15-Dec	15:17	1.65

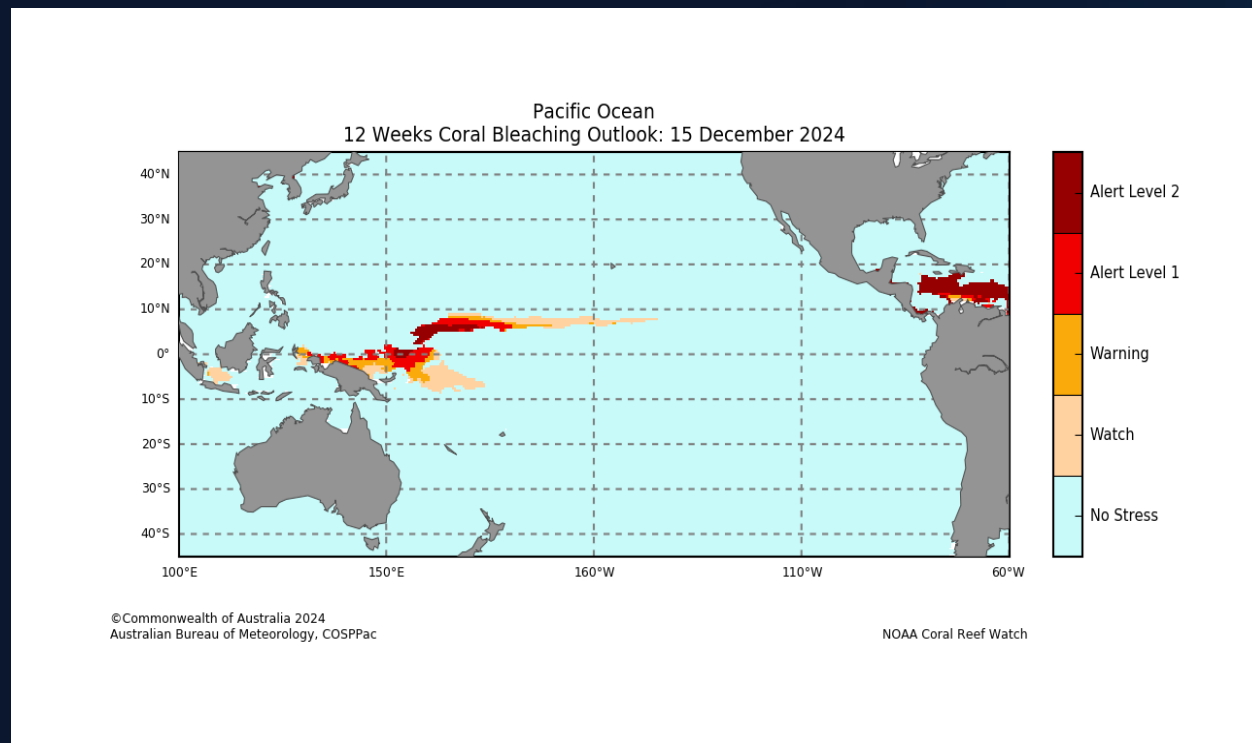
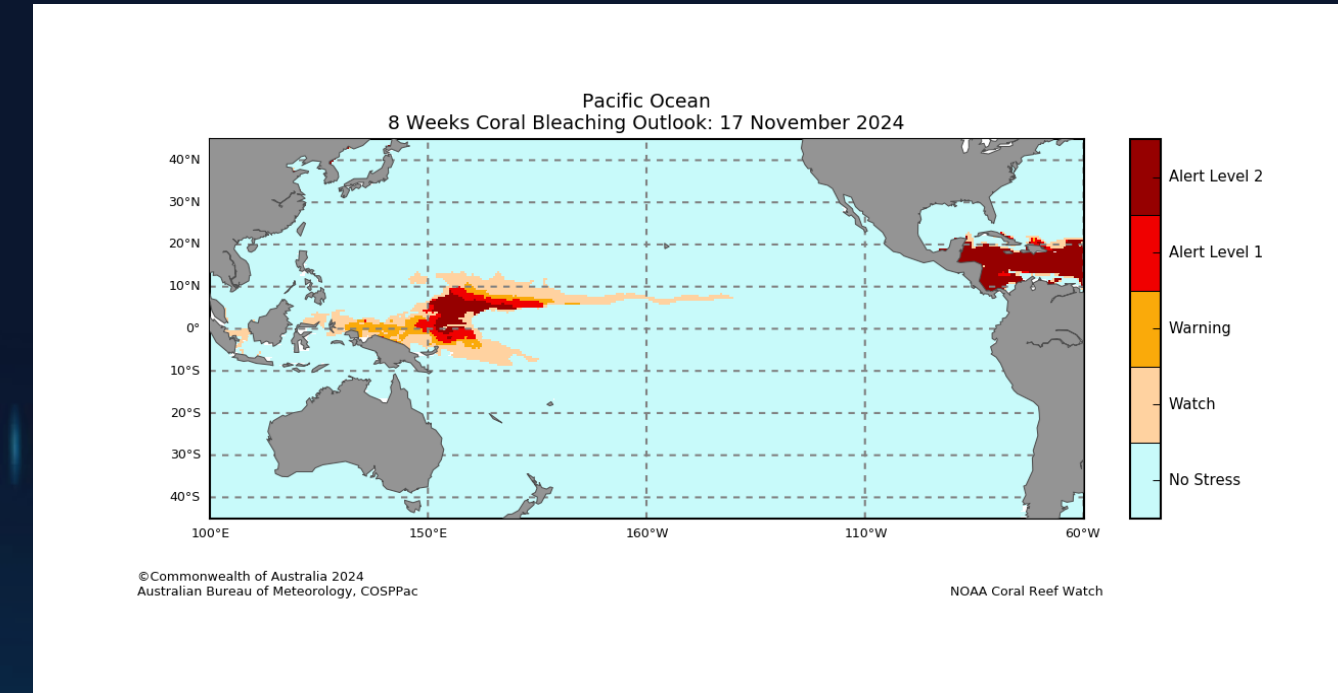
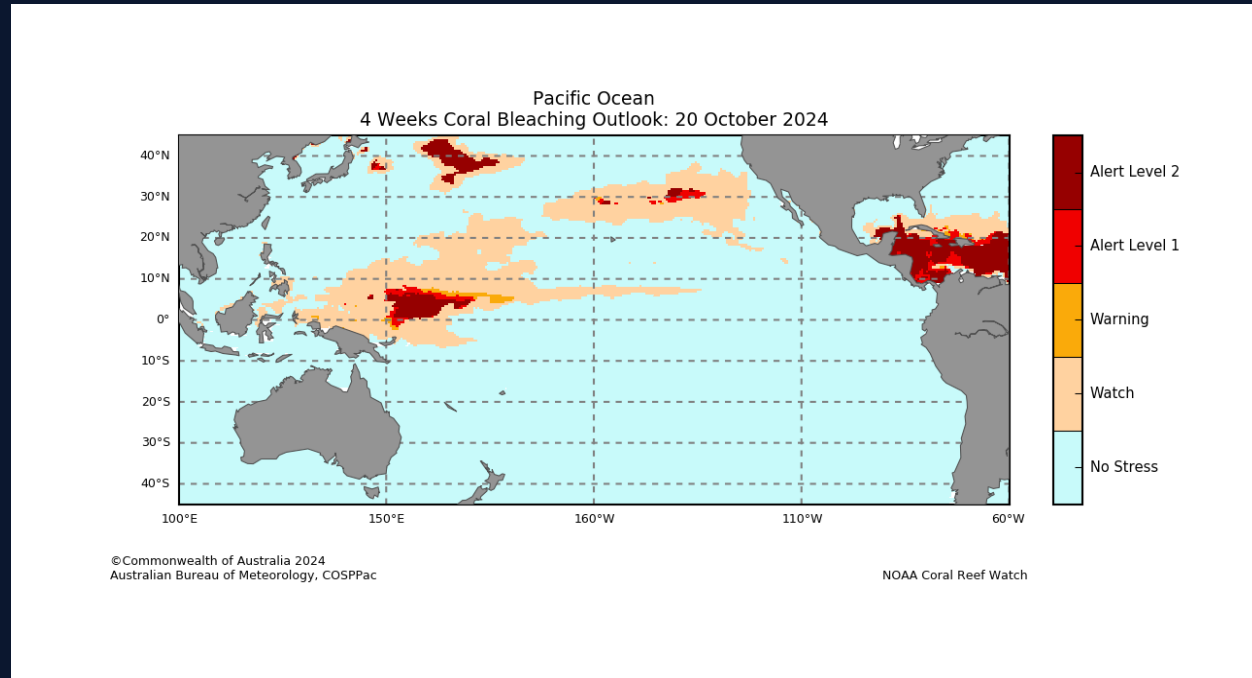
10 highest tides for 2024		
Date	Time	Height (m)
11-Jan	15:15	1.28
12-Jan	15:51	1.27
09-Feb	15:29	1.27
08-Feb	14:48	1.27
10-Jan	14:40	1.26
14-Dec	15:14	1.24
15-Dec	15:17	1.24
31-Dec	14:57	1.24
18-Nov	14:06	1.24
07-Feb	14:11	1.23

10 highest tides for 2024		
Date	Time	Height (m)
11-Feb	17:46	2.74
10-Feb	17:08	2.73
10-Mar	16:48	2.72
18-Oct	16:52	2.69
11-Mar	17:25	2.68
21-Aug	5:21	2.67
16-Nov	16:32	2.67
18-Sep	4:21	2.66
15-Nov	15:54	2.65
17-Oct	16:17	2.65



UoH

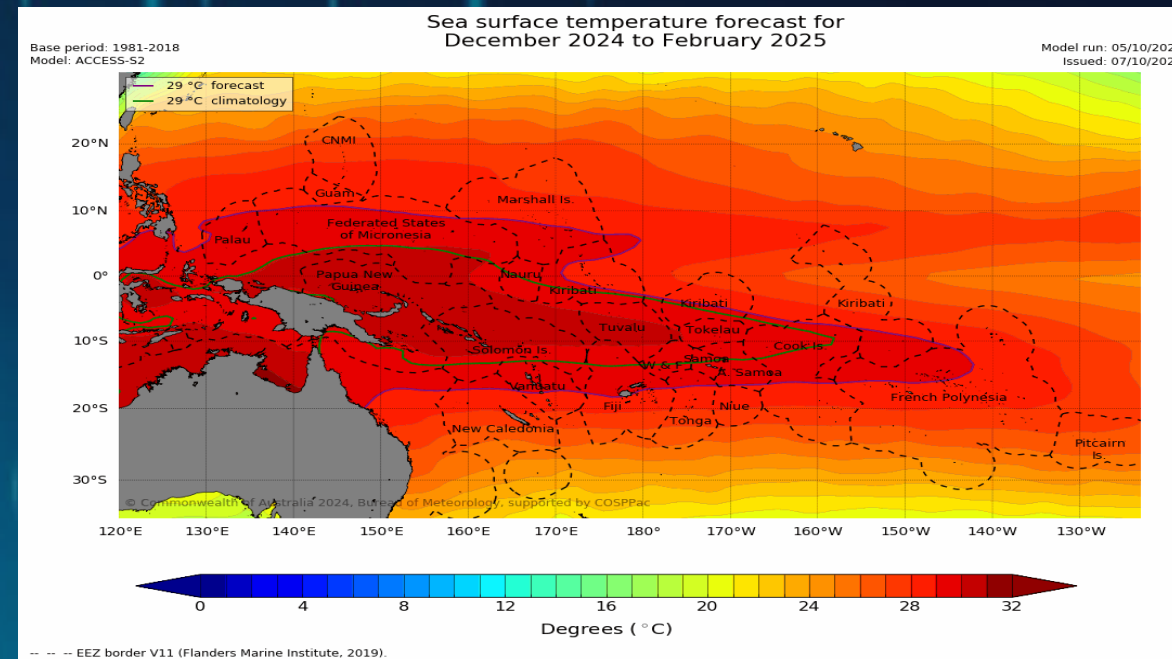
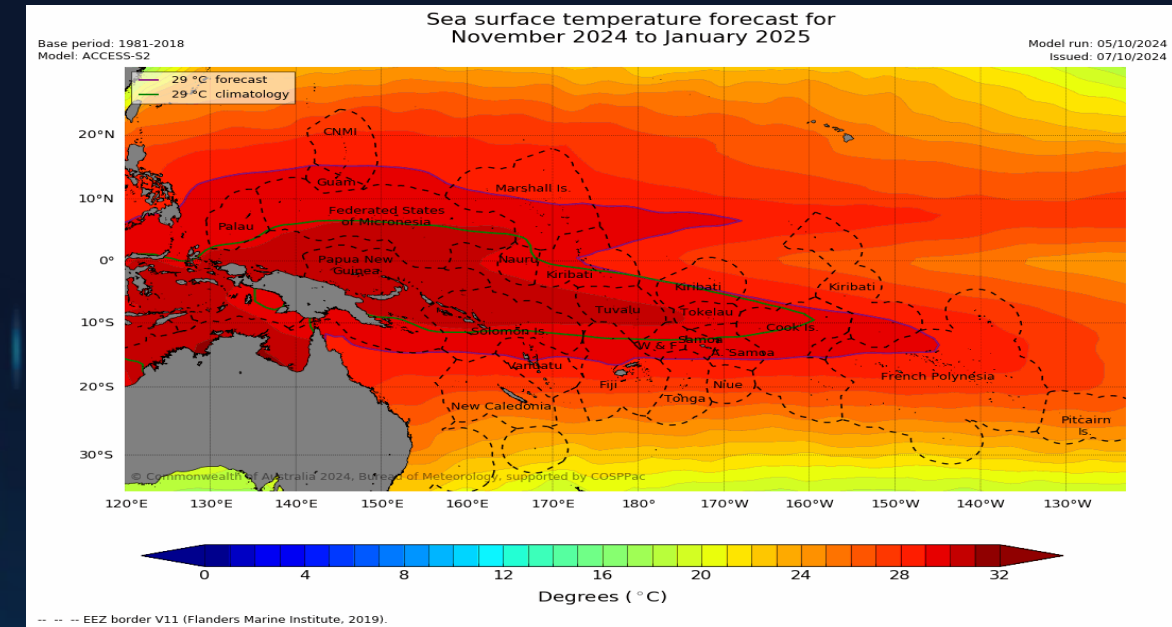
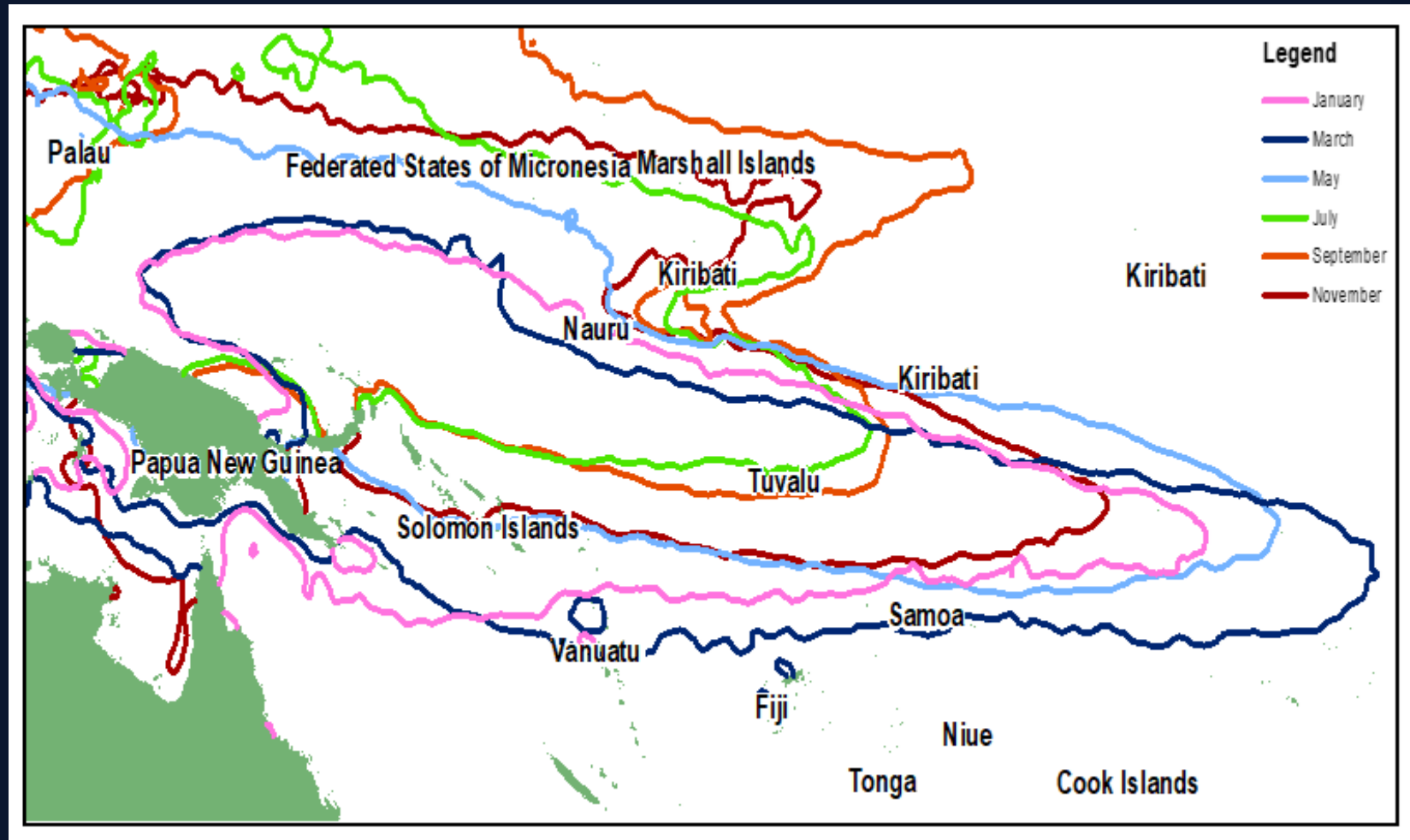
Coral Bleaching



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

Coral Bleaching Alert

Fisheries Convergence zone



Summary-Key Messages

- Near-normal to above normal SST for most countries in the west, including COSPPac partner countries in the south. Cooler along the equator towards the east.
- Sea Level favoured to be below normal around Kiribati islands, southern part of Tuvalu, Samoa, northern Fiji, northern Tonga, Niue, part of Cook islands, part of French Polynesia and Pitcairn Islands. Near-normal to above normal for remainder.
- Countries to be aware of higher tides
- Coral Beaching on alert levels for PNG, FSM, RMI, Palau and Nauru
- Fisheries convergence zone slightly expands eastward



THANK YOU!

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