August Climate Update 2017

Vanuatu Meteorology & Geo-hazards Department

MCC

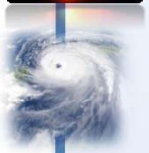
23 August, 2017

Vanuatu Meteorology & Geo-hazards Department

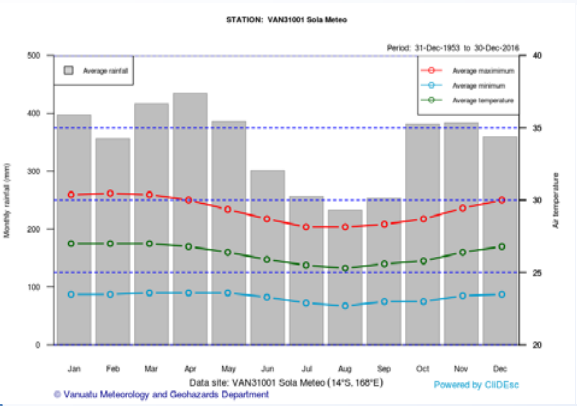
Protecting Lives and Property

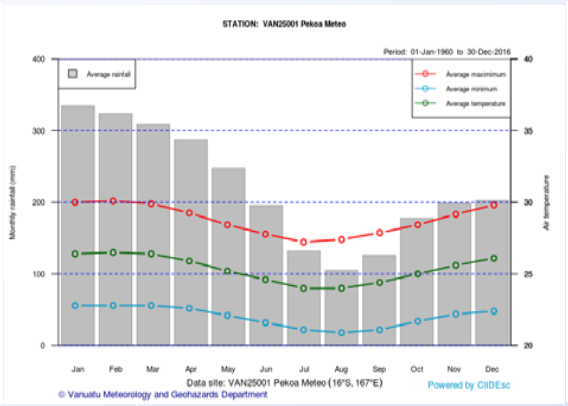
Outline

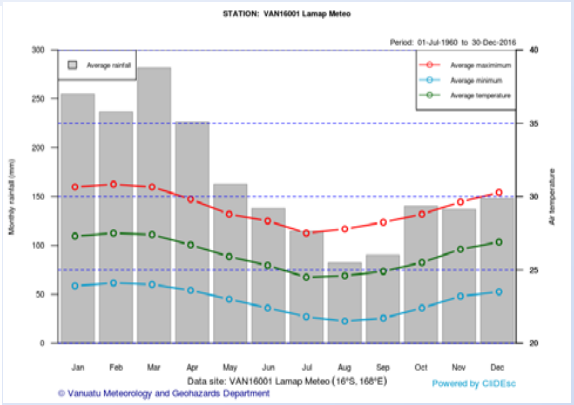
- Past Rainfall
- Circulations (Ocean & Atmosphere)
- ENSO situation & Forecast
- Scopic 3 Month Outlook

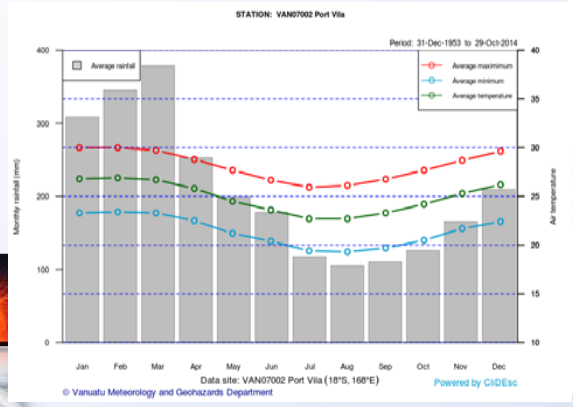


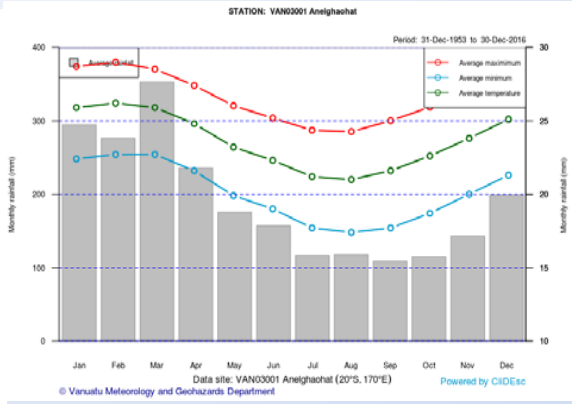
Monthly Mean Rainfall

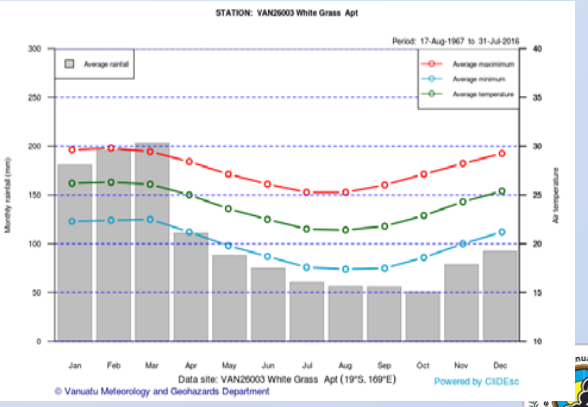














PAST RAINFALL -July rainfall

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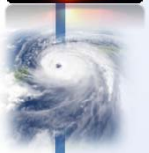
Station (include data period)			July 2017				
	May 2017 Total	June 2017 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	**Ranking**
NORTHERN REGION							
Sola	689.1	166.1	77.5	188.5	317.5	264.4	**7/43**
Pekoa	527.9	36.2	62.8	60.3	125.6	84.0	**18/47**
Lamap	218.6	67.5	10.5	60.0	120.8	85.9	**1/57**
SOUTHERN REGION							
Bauerfield	403.0	74.3	22.1	47.3	93.9	63.2	**6/45**
Port Vila	257.7	47.3	80.8	50.1	127.3	75.6	**35/65**
Whitegrass	121.0	77.3	2.4	30.5	59.6	51.6	**2/45**
Aneityum	330.9	**77.1**	26.7	82.0	142.9	112.5	**3/66**



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Accumulated rainfall for May –July 2017, including outlook verification:

Station	Three-month Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking	Forecast probs.* (include LEPS)	Verification (Consistent, Near-consistent Inconsistent)?
NORTHERN REGION							
Sola	932.7	751.4	1186.0	995.0	21/42	29:35:36(3.60)	**Near-consistent**
Pekoa	626.9	326.3	560.2	464.8	33/47	26:37:37(11.0)	**Near -consistent**
Lamap	296.6	310.6	471.5	386.6	16/56	31:34:35(4.8)	**Near -consistent**
SOUTHERN REGION							
Bauerfield	499.4	310.2	526.7	427.5	27/47	29:36:35(5.5)	**Consistent**
Port Vila	385.8	349.1	488.4	403.2	21/65	24:38:38(15.60)	**Near-consistent**
Whitegrass	200.7	181.2	272.7	222.5	19/45	34:33:33(8.30)	**Near-consistent**
Aneityum	434.7	357.6	522.4	436.0	33/65	31:34:35(4.1)	**Near-consistent**

[1]Forecast is consistent when observed and predicted (tercile with the highest probability) categories coincide (are in the same tercile).
Forecast is near-consistent when observed and predicted (tercile with the highest probability) differ by only one category (i.e. terciles 1 and 2 or terciles 2 and 3).
Forecast is inconsistent when observed and predicted (tercile with the highest probability) differ by two categories (i.e. terciles 1 and 3).

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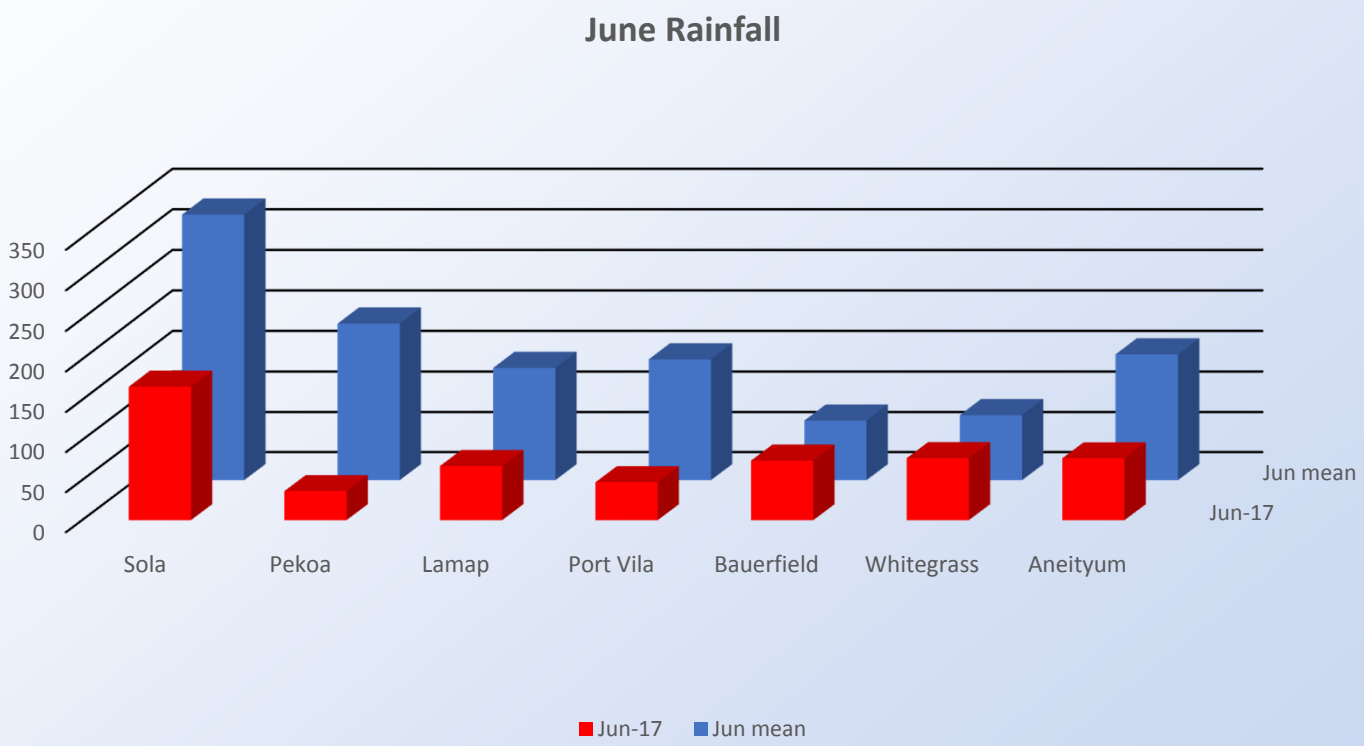
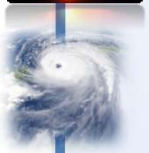
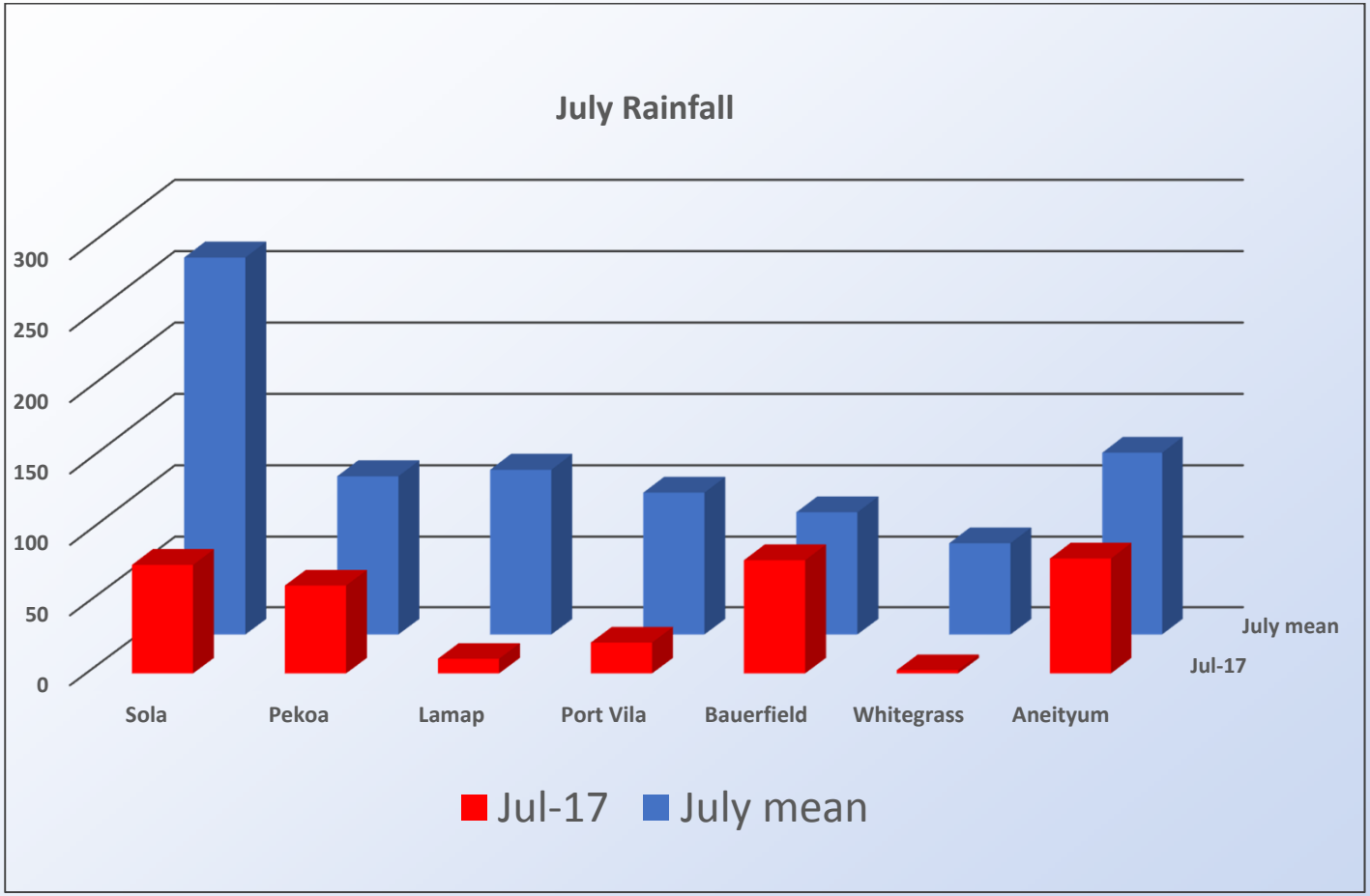
June rainfall

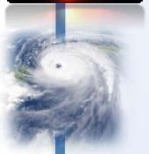




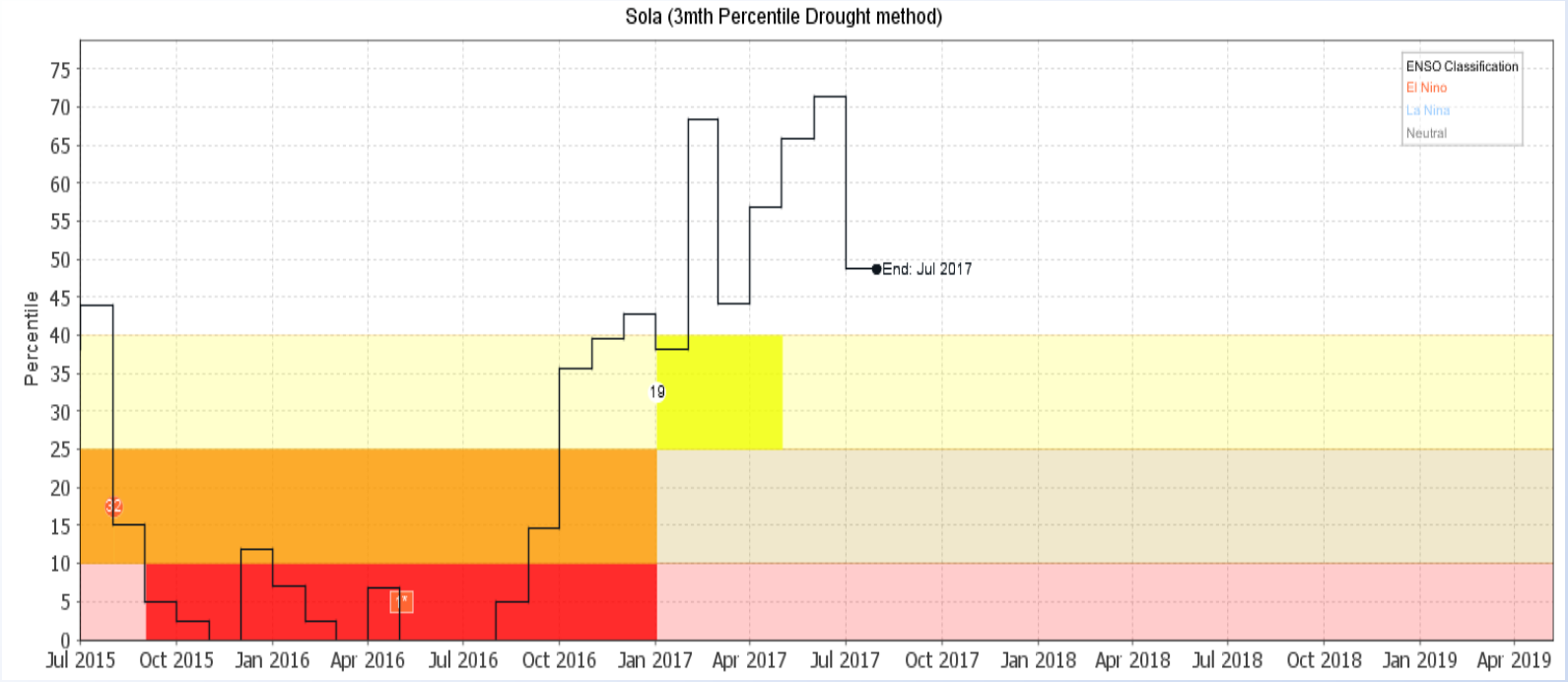
July Rainfall 2017

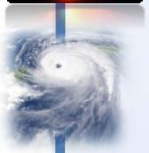


Rainfall for the past Month (July) was *below normal* for most stations, except Pekoa and Port Vila.

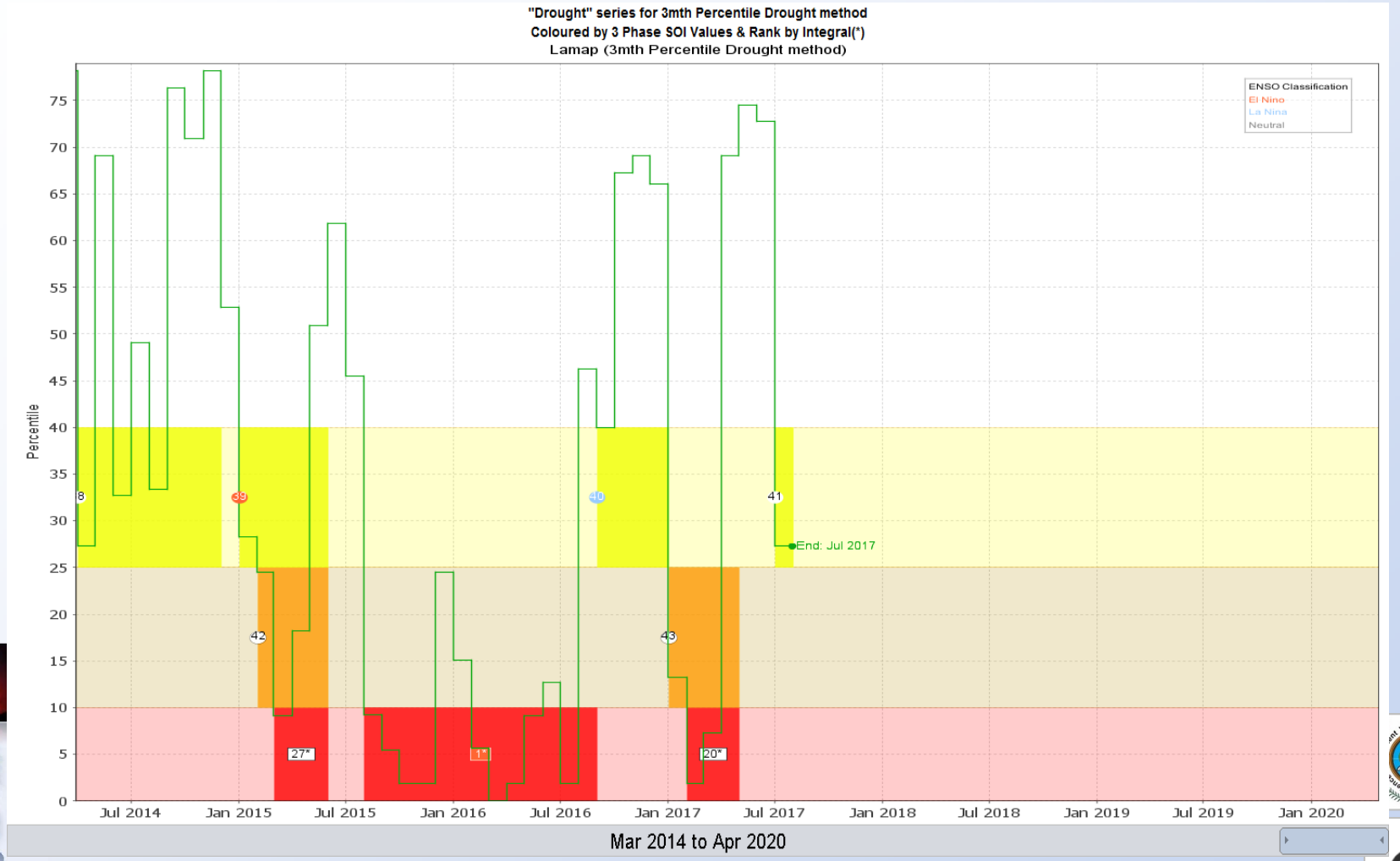




Sola

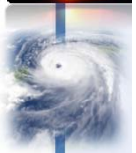

Sola (3mth Percentile Drought method)
Percentile
ENSO Classification
El Nino
La Nina
Neutral
End: Jul 2017
19
Jul 2015
Oct 2015
Jan 2016
Apr 2016
Jul 2016
Oct 2016
Jan 2017
Apr 2017
Jul 2017
Oct 2017
Jan 2018
Apr 2018
Jul 2018
Oct 2018
Jan 2019
Apr 2019

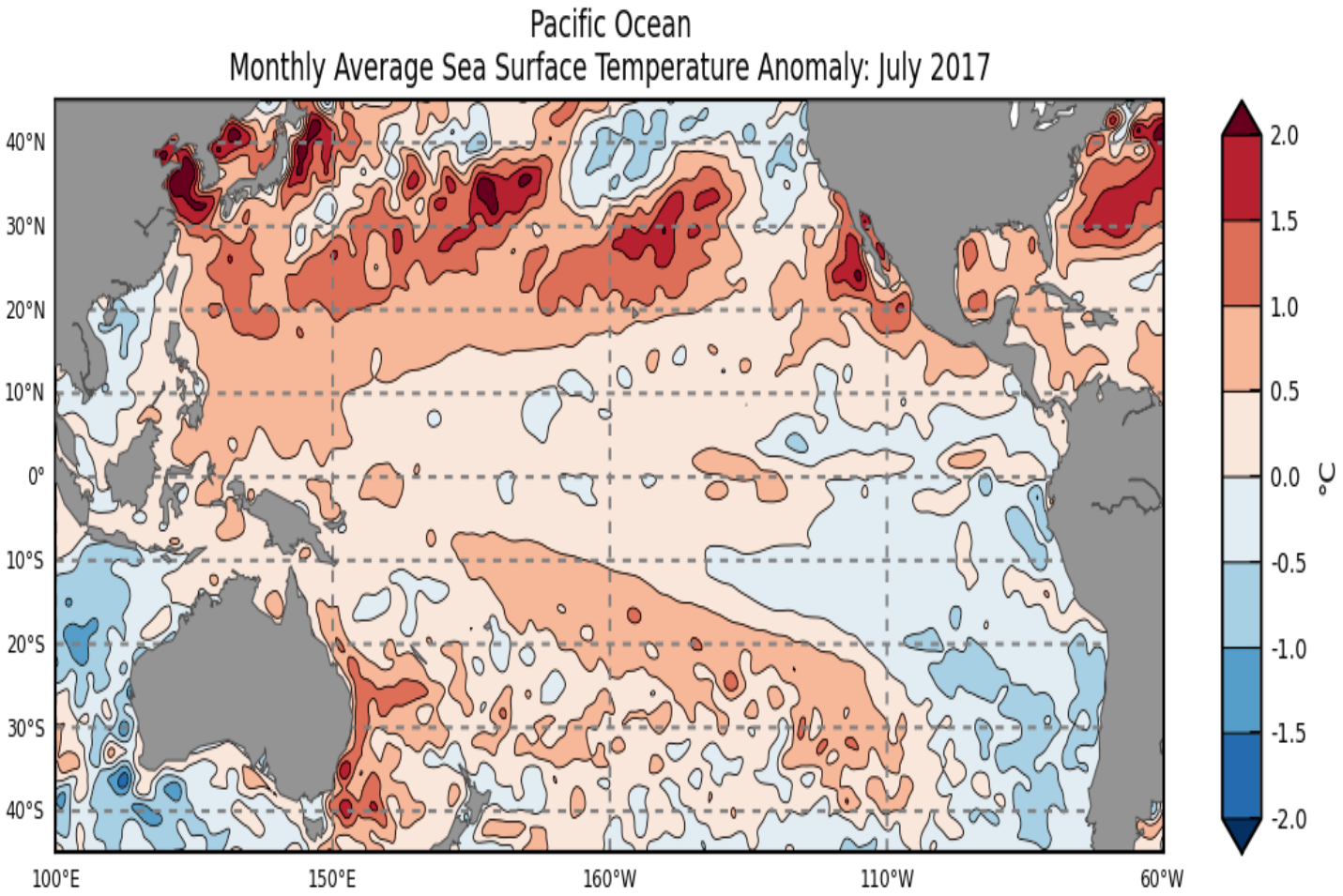




Lamap


"Drought" series for 3mth Percentile Drought method
Coloured by 3 Phase SOI Values & Rank by Integral(*)
Lamap (3mth Percentile Drought method)
ENSO Classification
El Nino
La Nina
Neutral
Percentile
End: Jul 2017
Jul 2014
Jan 2015
Jul 2015
Jan 2016
Jul 2016
Jan 2017
Jul 2017
Jan 2018
Jul 2018
Jan 2019
Jul 2019
Jan 2020
Mar 2014 to Apr 2020

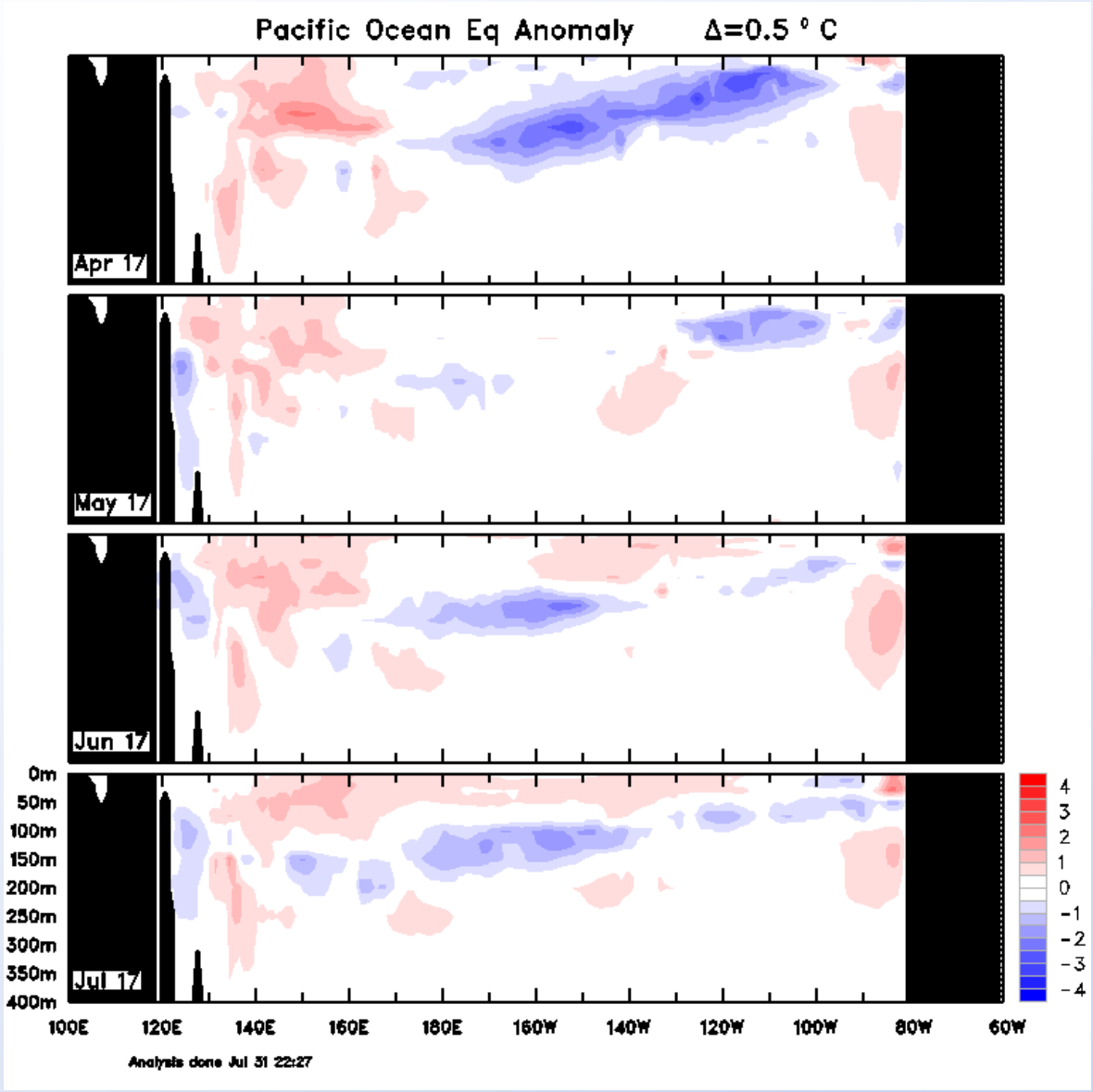
Circulation -ocean and atmosphere

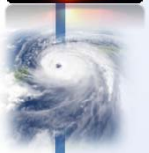



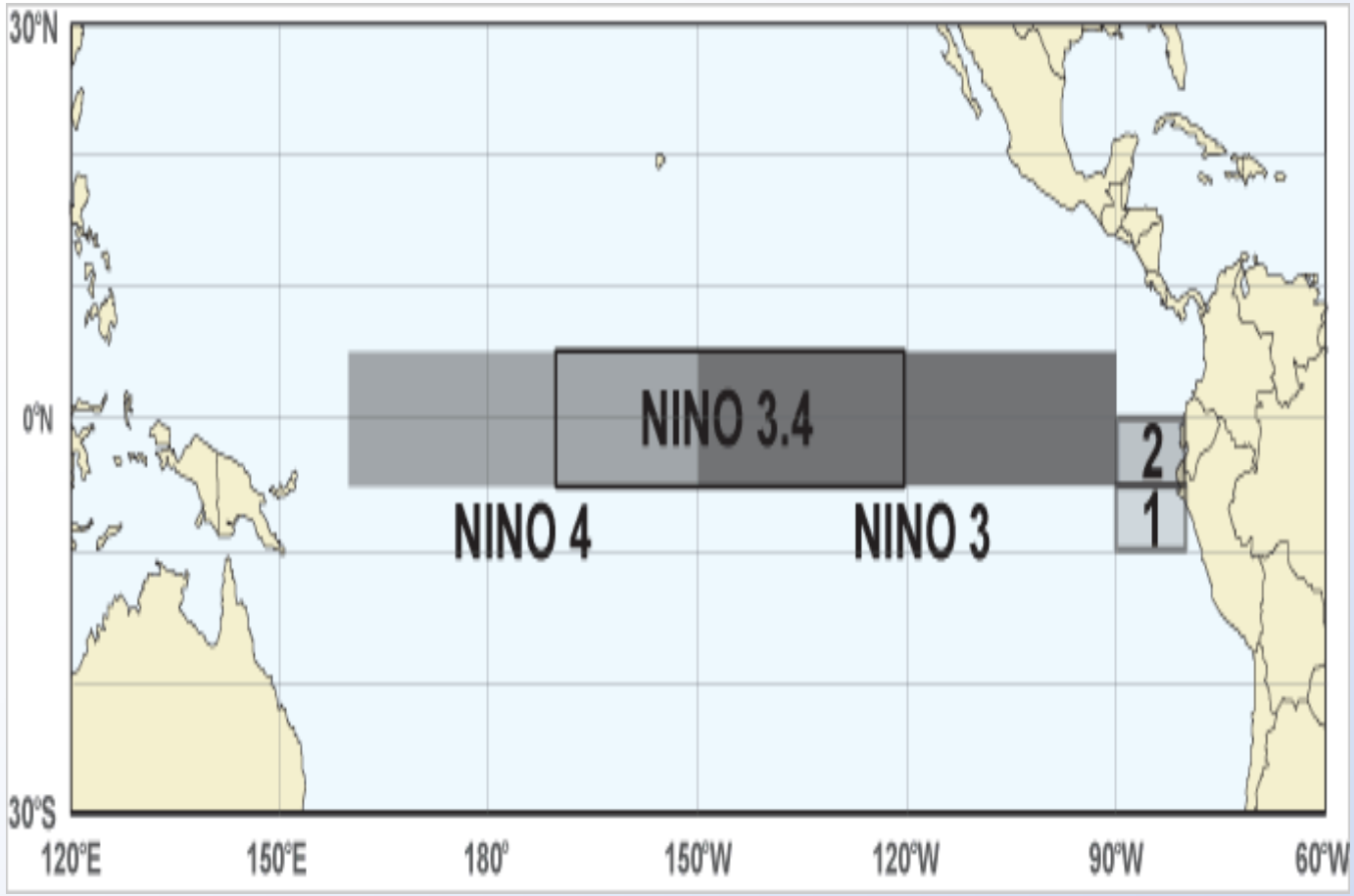



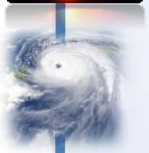
Reynolds SST

Equatorial Pacific sub-surface profile Bureau of Meteorology



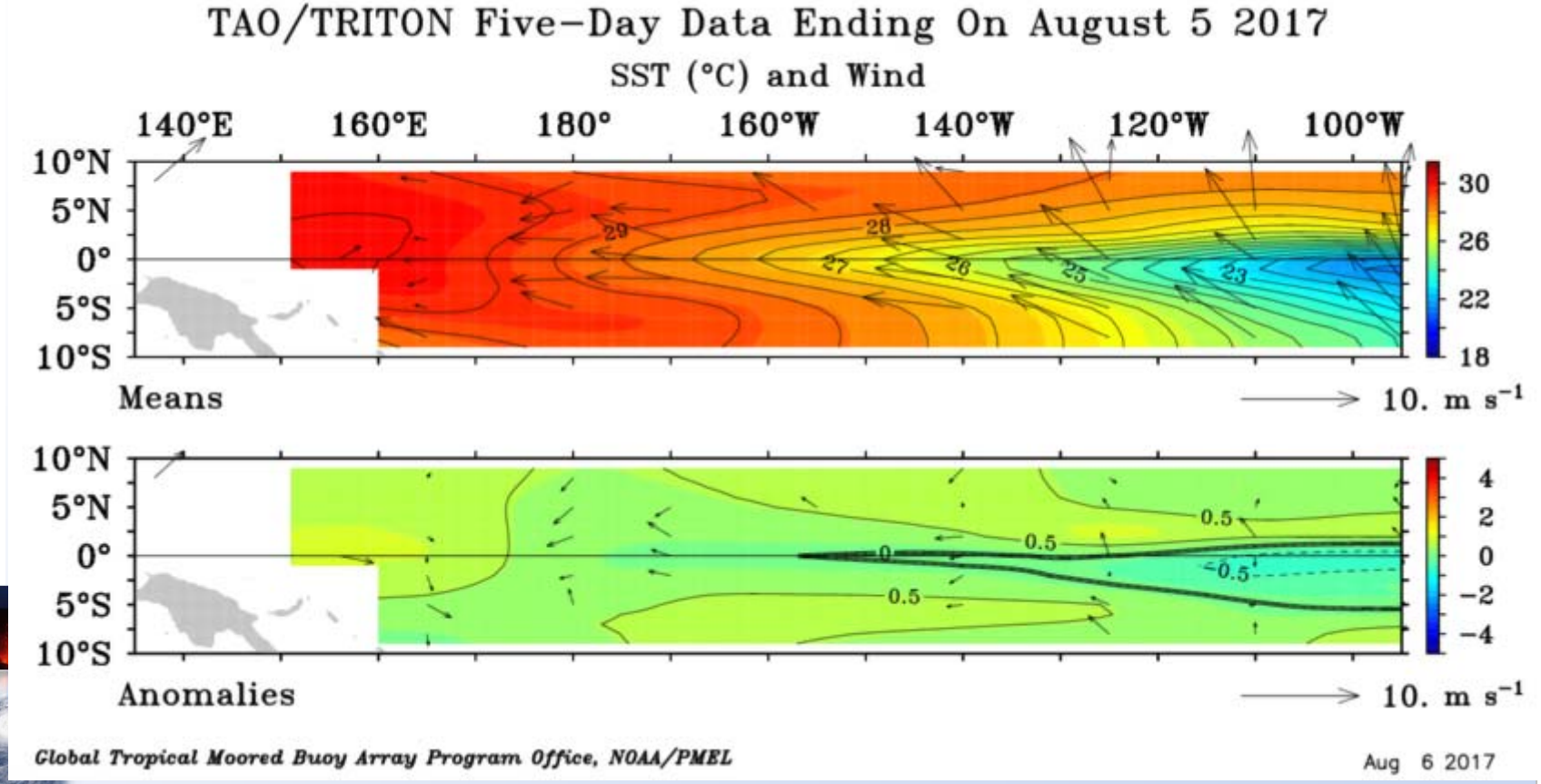



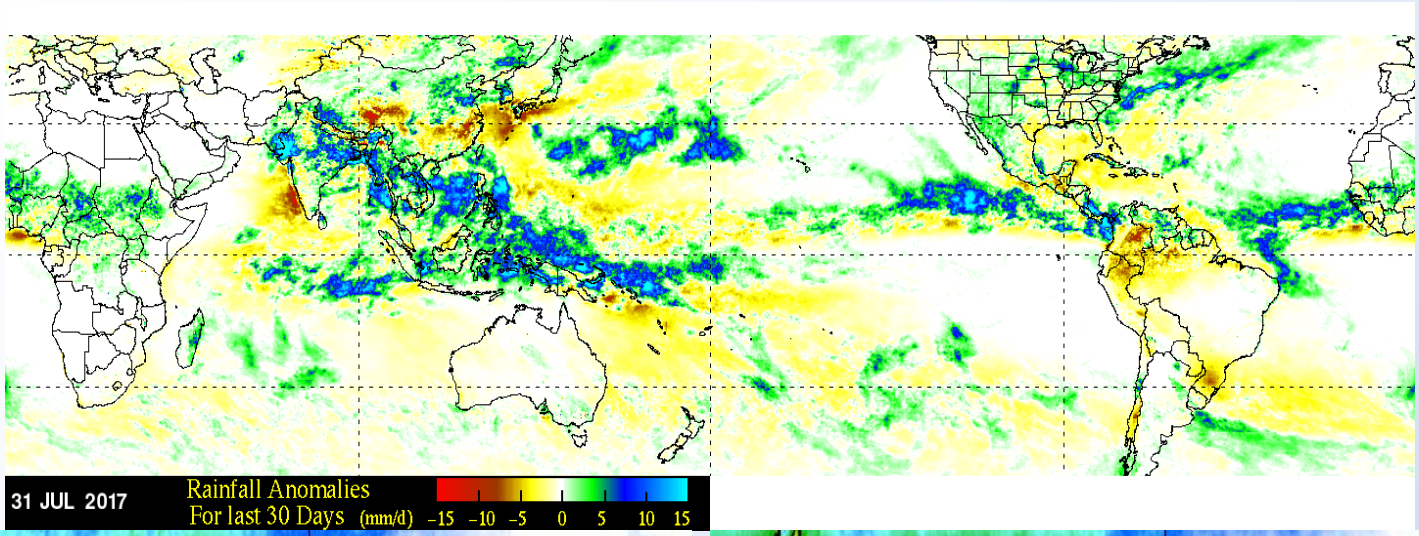


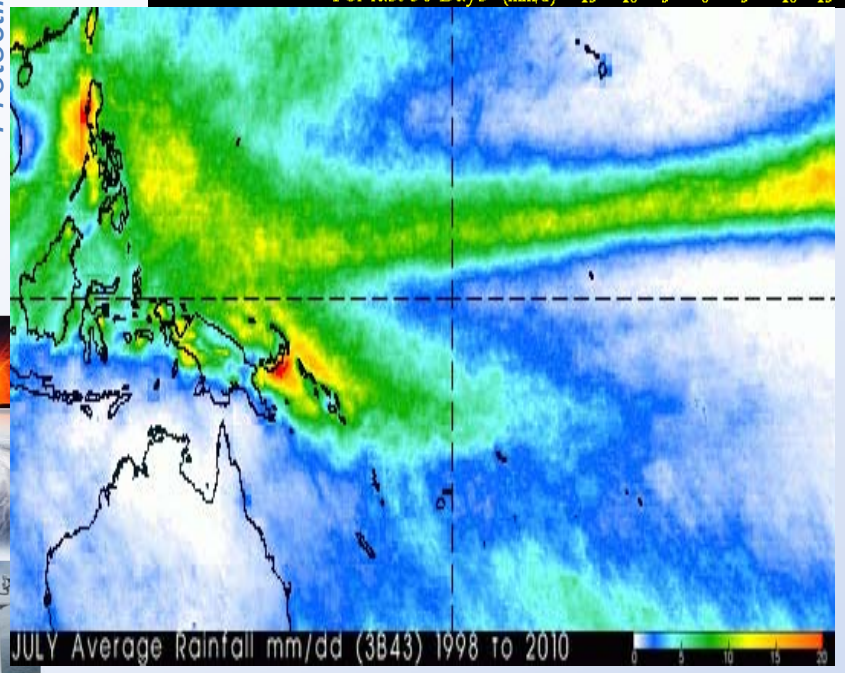
Index	June 2017	July 2017	Latest weekly
NINO3	+0.3	+0.3	+0.2
NINO3.4	+0.5	+0.4	+0.1
NINO4	+0.5	+0.5	+0.3

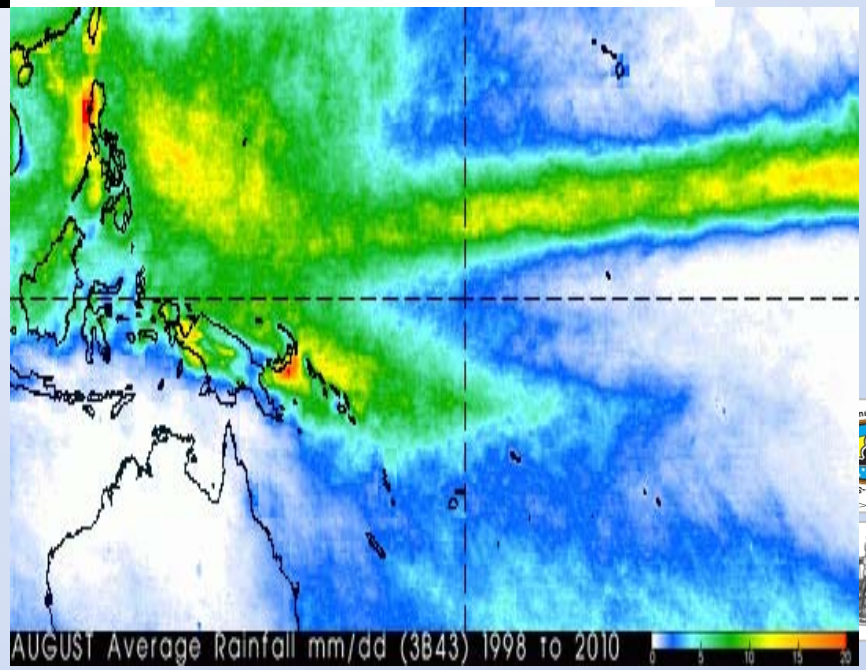
trade winds


TAO/TRITON Five-Day Data Ending On August 5 2017
SST (°C) and Wind
140°E
160°E
180°
160°W
140°W
120°W
100°W
10°N
5°N
0°
5°S
10°S
29
28
27
26
25
23
30
26
22
18
Means
10. m s⁻¹
0.5
0
0.5
0.5
0.5
4
2
0
−2
−4
Anomalies
10. m s⁻¹
Global Tropical Moored Buoy Array Program Office, NOAA/PMEL
Aug 6 2017

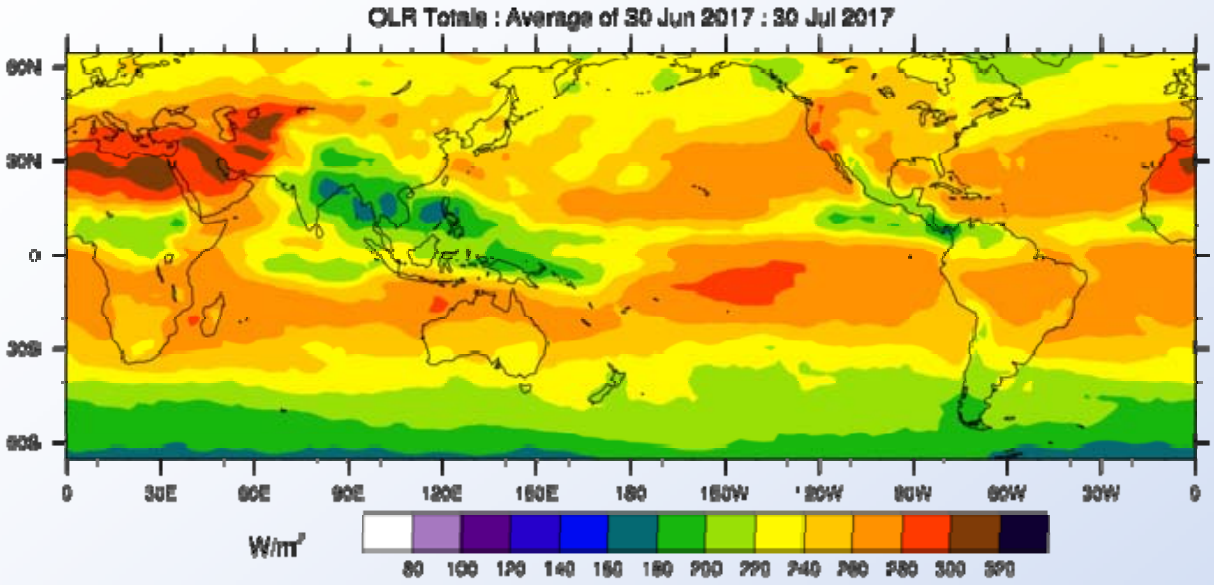
Satellite Rainfall TRMM

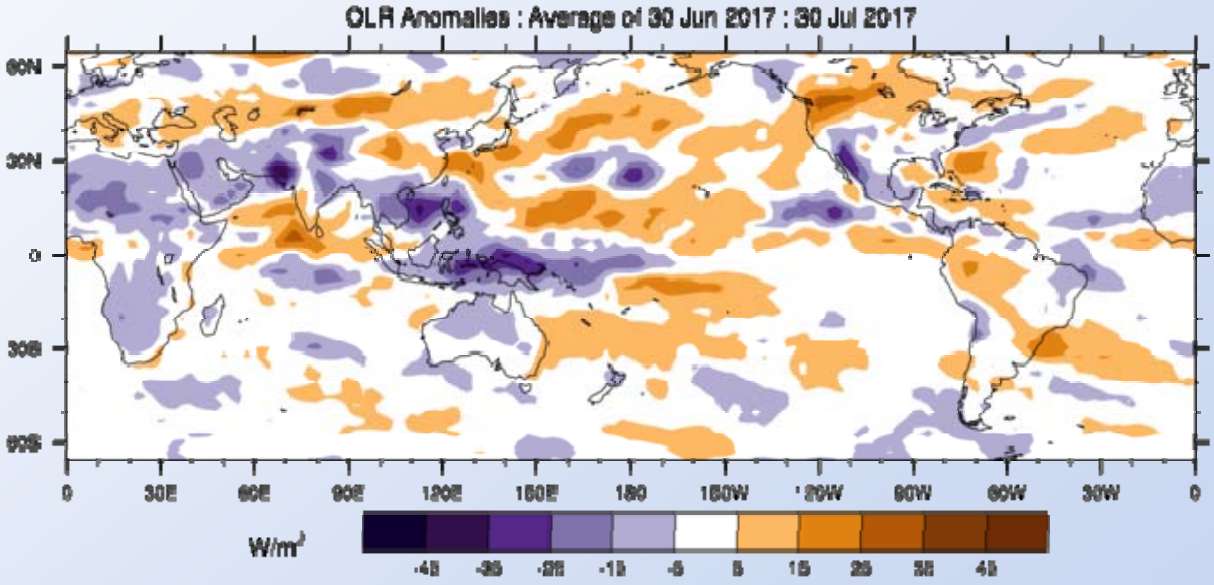


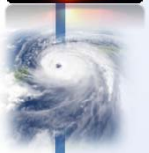




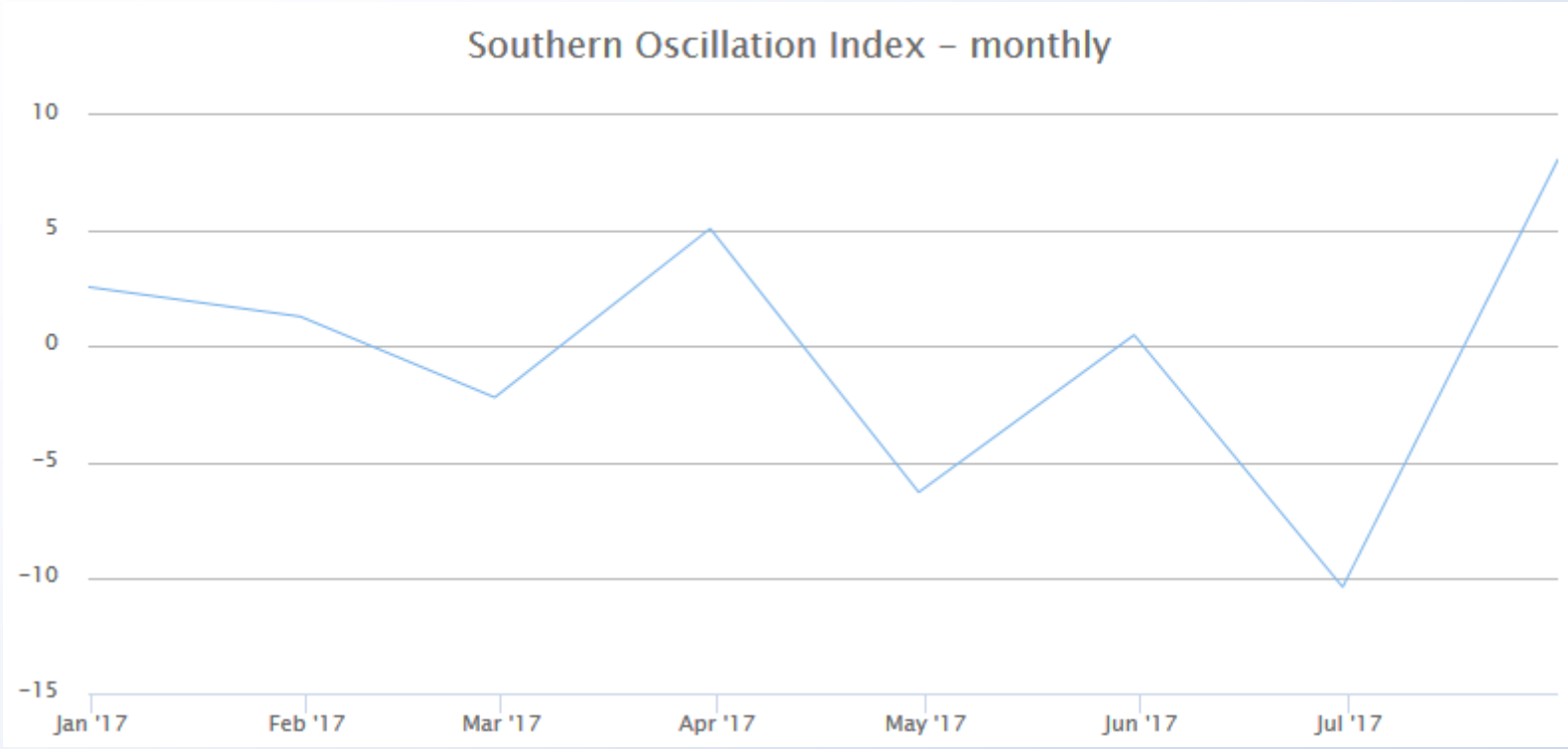
Outgoing-longwave(OLR) radiation







ENSO Situation and Forecast



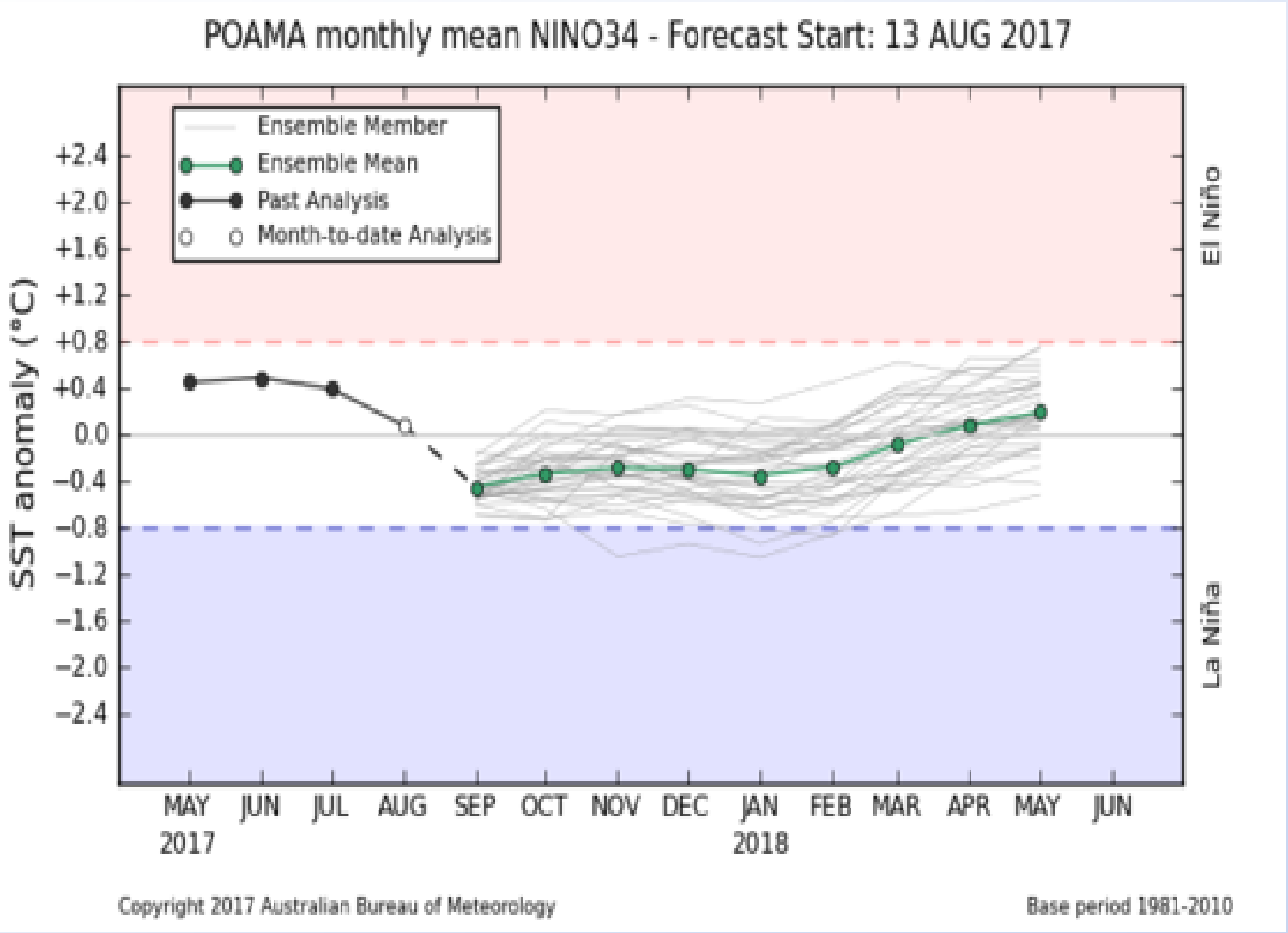
Southern Oscillation Index monthly data

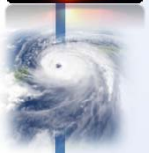
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017	+1.3	−2.2	+5.1	−6.3	+0.5	−10.4	+8.1	-	-	-	-	-
2016	−19.7	−19.7	−4.7	−22.0	+2.8	+5.8	+4.2	+5.3	+13.5	−4.3	−0.7	+2.6



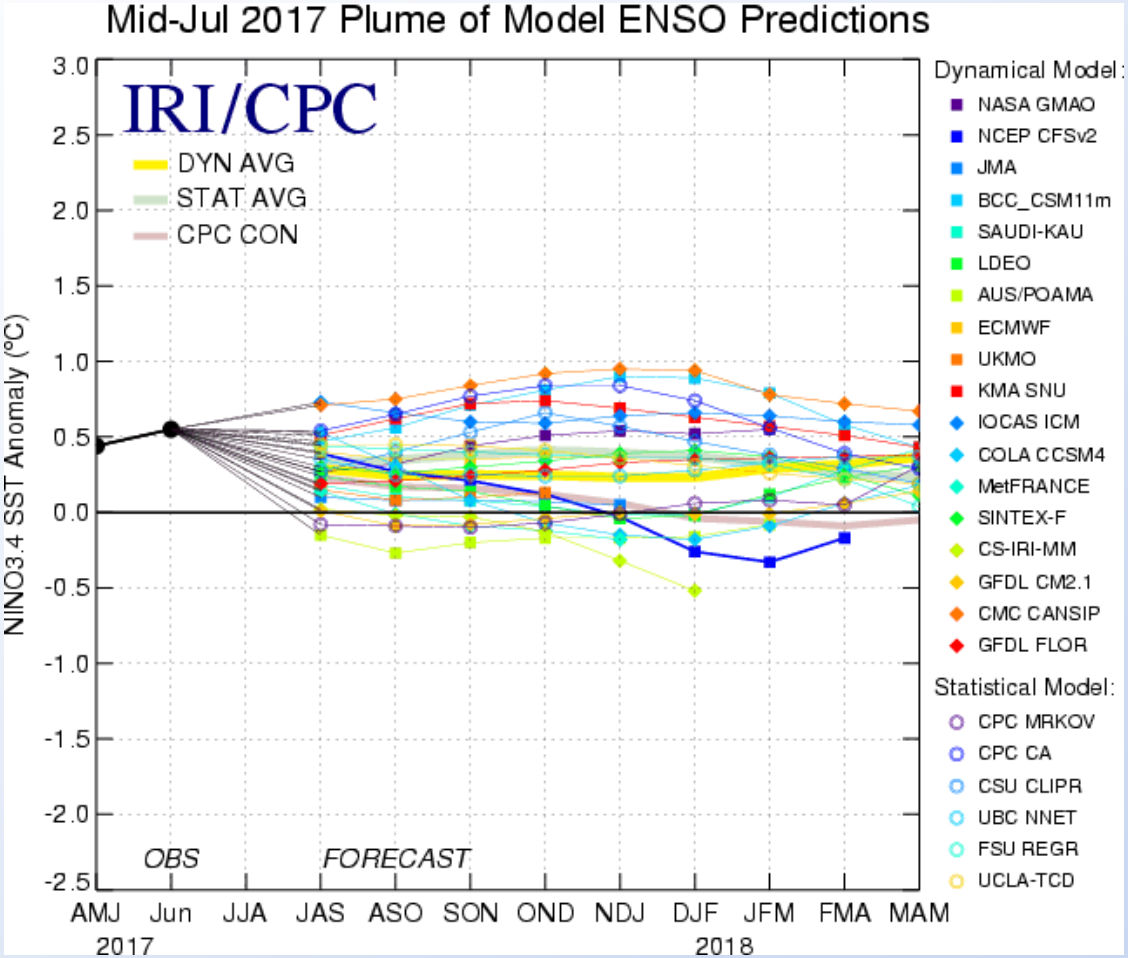
At 05 August 2017: 30-day SOI = +7; 90-day SOI = +1

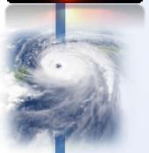
POAMA monthly mean (NINO3.4)



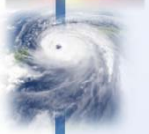




ENSO Predictions



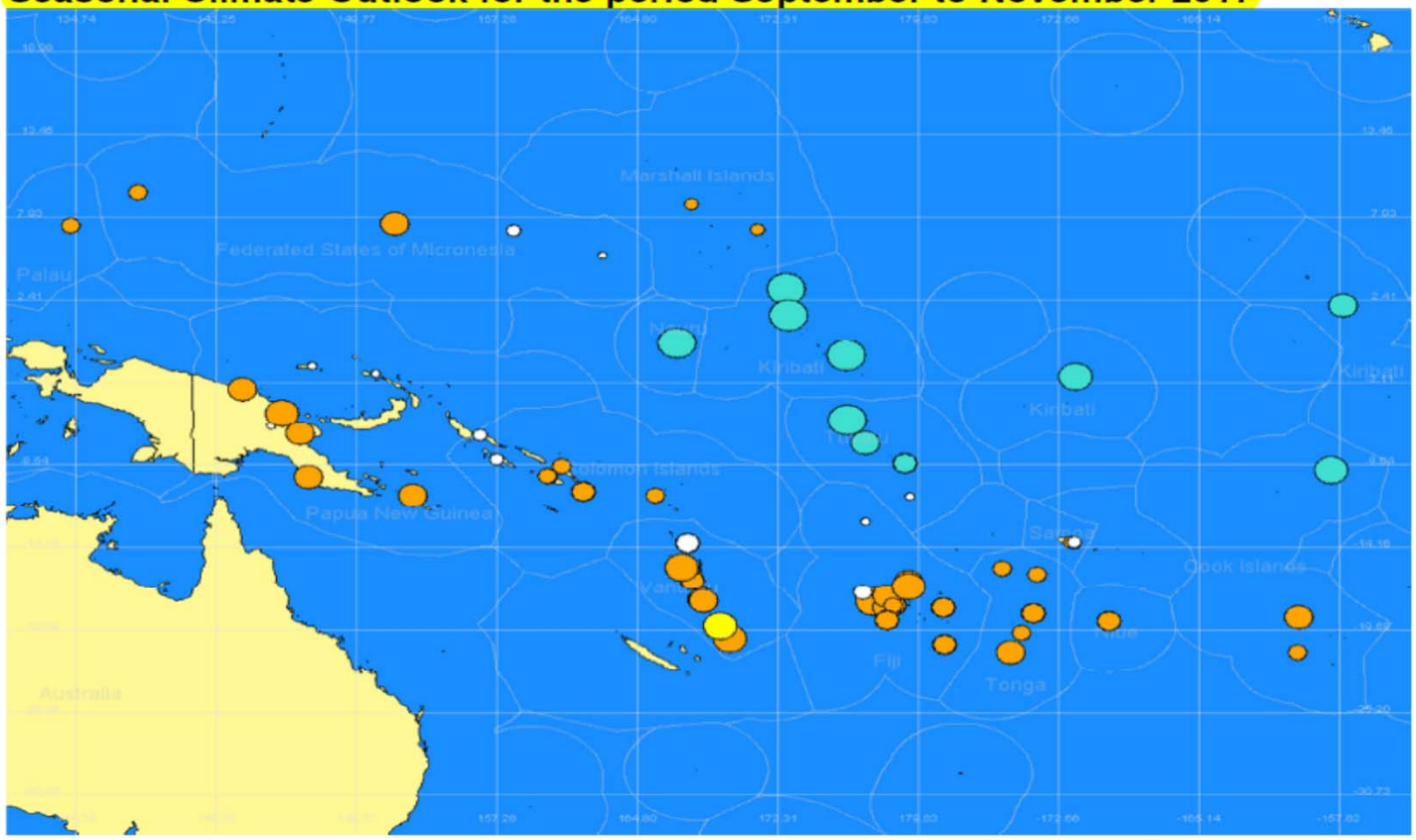








scopic Spatial Summary

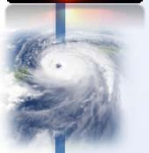
Seasonal Climate Outlook for the period September to November 2017



Legend
- Bias towards below-normal rainfall
- Bias towards normal rainfall
- Bias towards above-normal rainfall
- No bias in forecast (Climatology)

Summary

- **SCOPIC (SST) - Below normal to normal rainfall is favored for the period Sep – Nov 2017.**
- **POAMA - B*elow normal* rainfall is favoured for all stations for the coming three months.**
- **ENSO remains neutral for the next 3 months**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Thank you Tumas.