

Ocean Outlook : March 2019

Samoa Meteorology Division (SMD)

Ministry of Natural Resources and Environment



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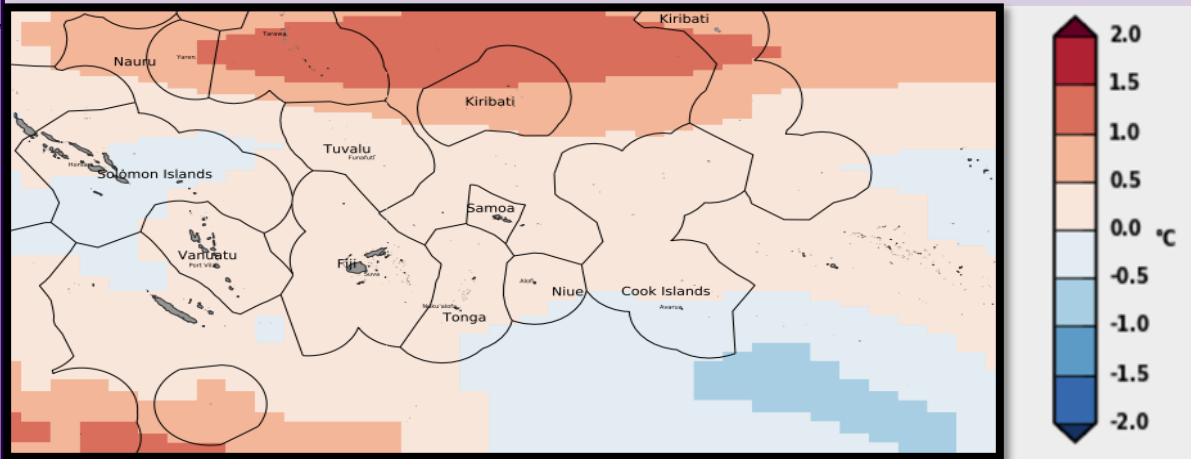
Issue Outline:

- Ocean Summary
- Ocean Temperature
- Convergence Zone
- Coral Bleaching
- Sea Level Forecast

Summary

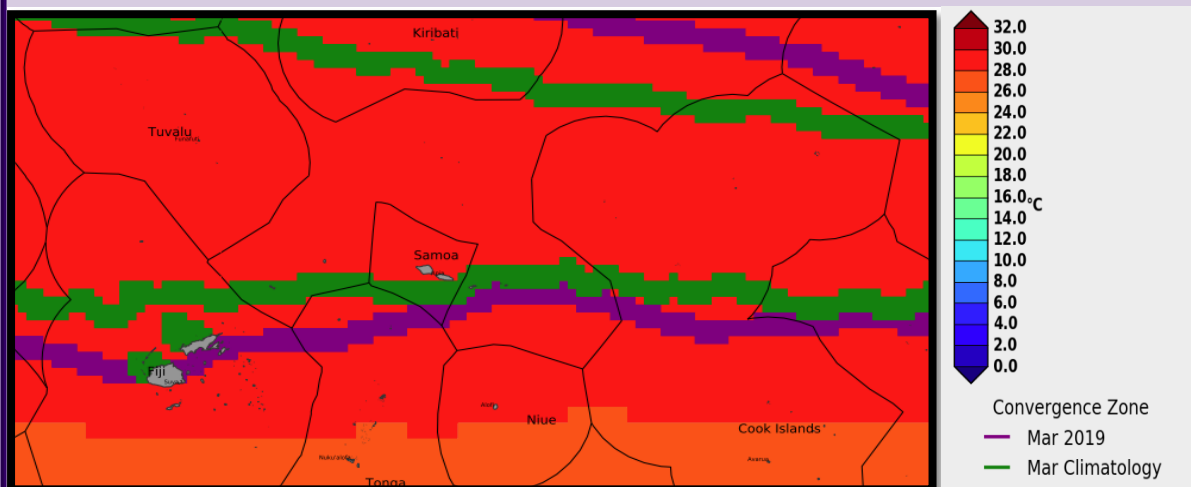
- Sea Surface Temperatures is expecting a 0-0.5°C increase for March 2019.
- The convergence zone is expected to remain south of the islands in the upcoming months.
- Our current Coral Bleaching outlook status is at 'Watch'.
- Samoa anticipates a 0-50mm rise in sea level in the next 3 months.

Sea Surface Temperature Forecast Anomaly



The above diagram shows warm Sea Surface Temperatures (SSTs) mostly concentrating along the Central Equatorial region. For Samoa, a 0.0-0.5°C warmer than average temperatures is anticipated for March 2019.

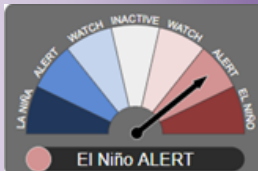
Sea Surface temperature forecast with convergence zone



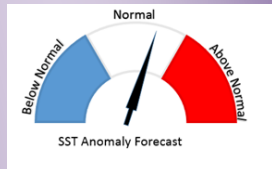
The normal March position for the convergence Zone is just to the south of Samoa, but for its position in March 2019 (Purple), models suggest that it would lie further south of the Island. *N.B* Convergence zones are where cold and warm water meet, and are rich in nutrients, attracting lots of fish.

Climate Status:

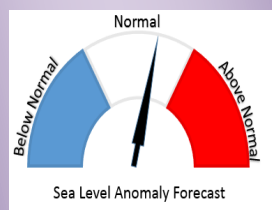
ENSO Update: **ALERT**



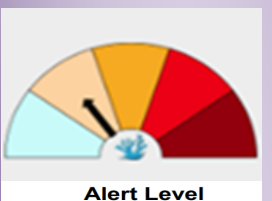
Sea Surface Temperature:



Sea Level Forecast:

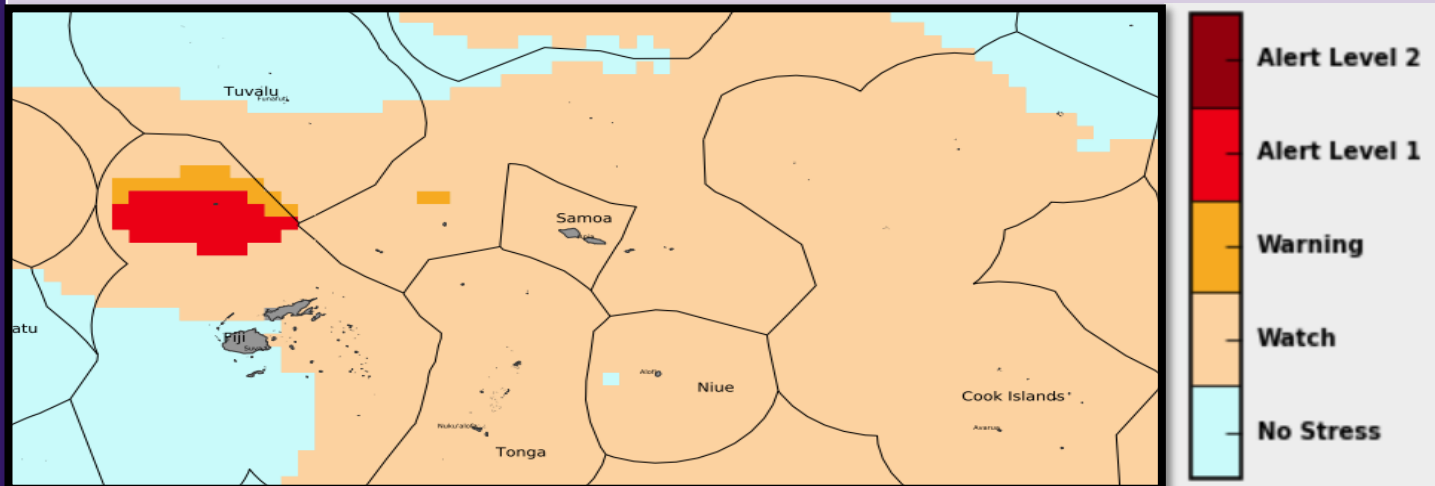


Coral Bleaching Forecast:



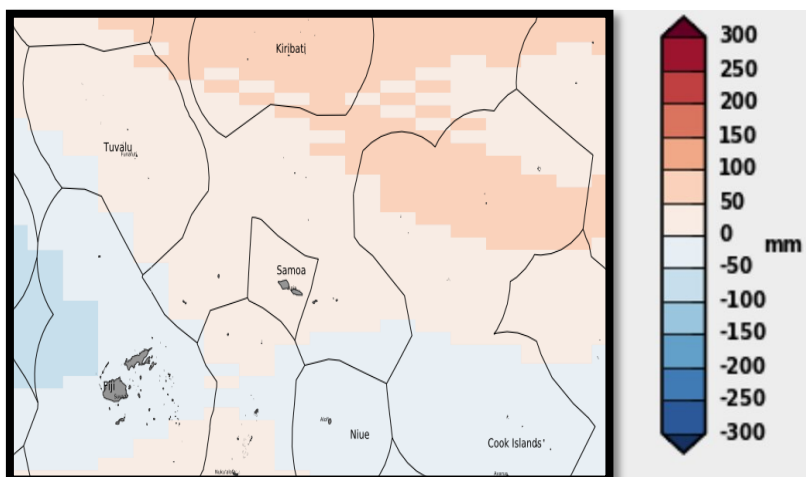
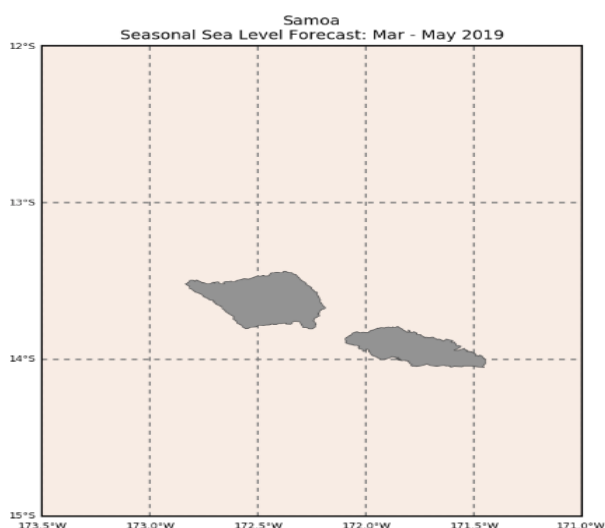
Alert Level
No Stress
Bleaching Watch
Bleaching Warning
Bleaching Alert Level 1
Bleaching Alert Level 2

Coral Bleaching



The cooling of Sea Surface Temperatures in recent weeks has now shifted the status back Coral Bleaching Watch. Responsible sectors are advised to take precautionary actions and continue monitoring.

Seasonal Sea Level Forecast



For Samoa, sea levels are predicted to remain normal with a slight increase of 0-50mm in the upcoming three month period of March to May 2019. the Southern parts however will experience a slight drop in sea level during this period.

This forecast is based on the combined long-term effects of temperature, salinity and wind on the water levels and do not include daily changes in tide or weather.

10 highest tides for 2019

Date	Time	Height (m)
31-Aug	6:33	1.56
20-Feb	19:01	1.55
19-Feb	18:11	1.55
29-Sep	6:15	1.54
28-Sep	5:25	1.54
01-Sep	7:25	1.53
30-Aug	5:44	1.53
22-Jan	19:19	1.53
20-Mar	17:54	1.53
21-Jan	18:27	1.53

This table shows the ten (10) highest tides that will take place in the Samoan region for the year 2019. in the last few days, you may have noticed some elevated tides, as predicted by the tide calendar. These events were mainly influenced by the phase and positioning of the moon.

Major Contributors:

- Pacific Ocean Portal: oceanportal.spc.int
- Bureau of Meteorology: <http://www.bom.gov.au/climate/enso/>