

Ocean Outlook for June 2019

Samoa Meteorology Division (SMD)

Ministry of Natural Resources and Environment



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Issue Outline:

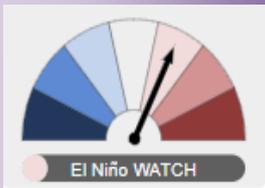
- Ocean Temperature
- Convergence Zone
- Coral Bleaching
- Sea Level Forecast
- Top 10 Highest Tides

Summary

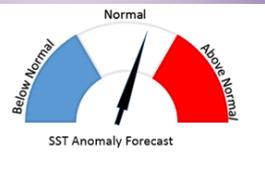
- Warmer sea surface temperatures is expected for the Samoa region.
- The June 2019 Convergence Zone is forecasted to position north of the group.
- Coral bleaching status remains at 'Alert Level 1' for June.
- Models suggest a slight increase in sea level in Central Equatorial region.
- Five of the highest tides have passed with the upcoming to be in late August 2019

Climate Status:

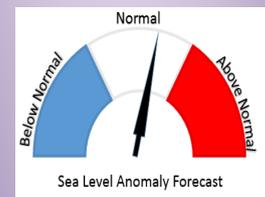
ENSO Update: WATCH



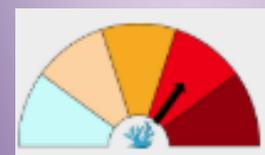
Sea Surface Temperature:



Sea Level Forecast:



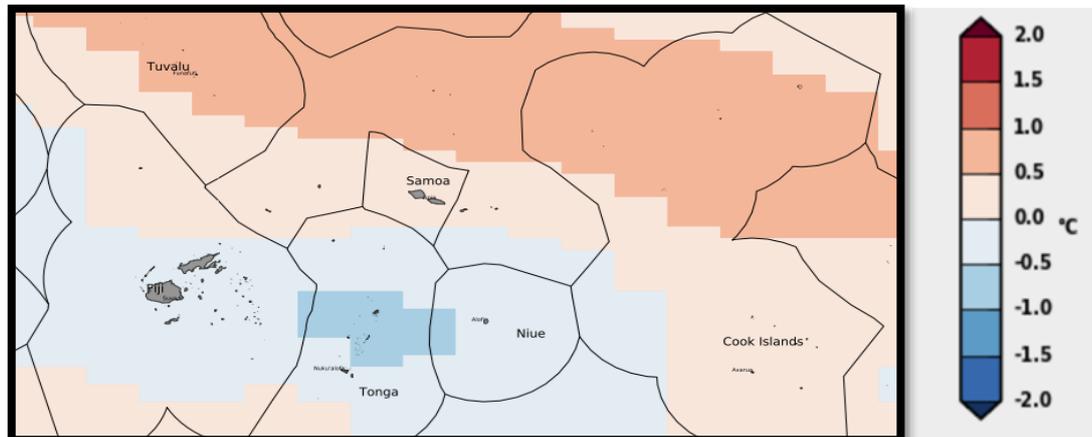
Coral Bleaching Forecast:



Alert Level

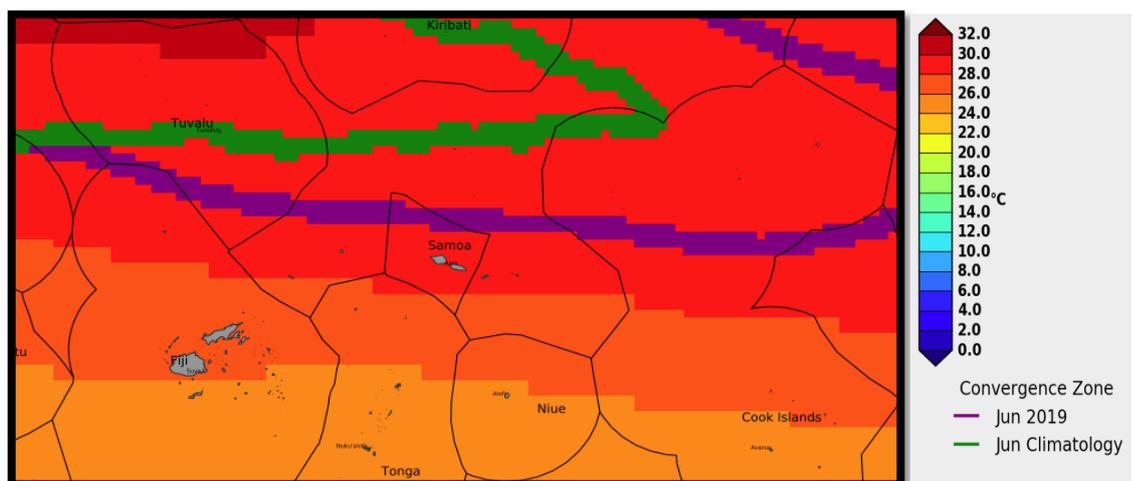
- No Stress
- Bleaching Watch
- Bleaching Warning
- Bleaching Alert Level 1
- Bleaching Alert Level 2

SEA SURFACE TEMPERATURE (SST) ANOMALY OUTLOOK



Within the vicinity of the group, expect a 0.0-0.5°C warmer conditions in June 2019. Further south of the islands, Fiji, Tonga and Niue, as suggested by climate models, will experience cooler SST next month.

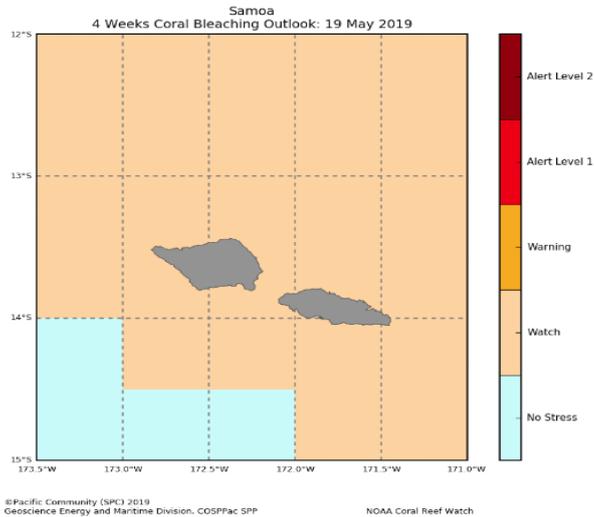
SEA SURFACE TEMPERATURE WITH CONVERGENCE ZONE



Although the average June position of the Convergence Zone (Green line) places farther north of Samoa, models predict that for June 2019, it will position just north of the island. Moreover, SSTs are forecasted to be within 28°C and 30°C in the upcoming months.

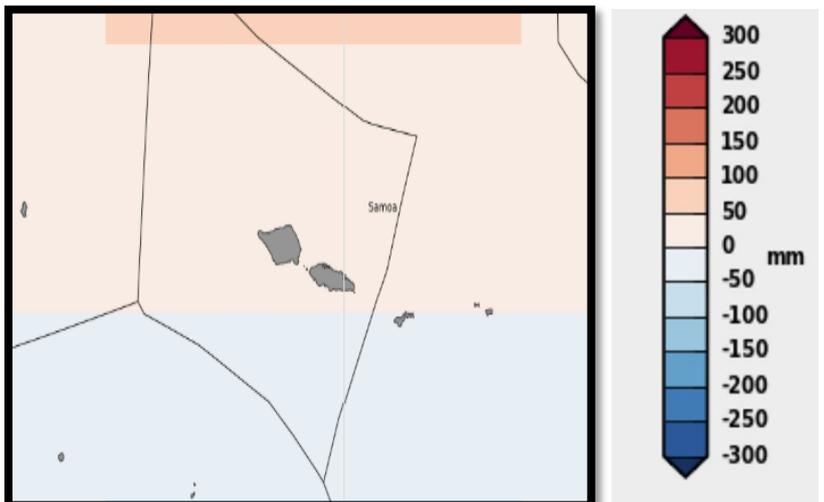
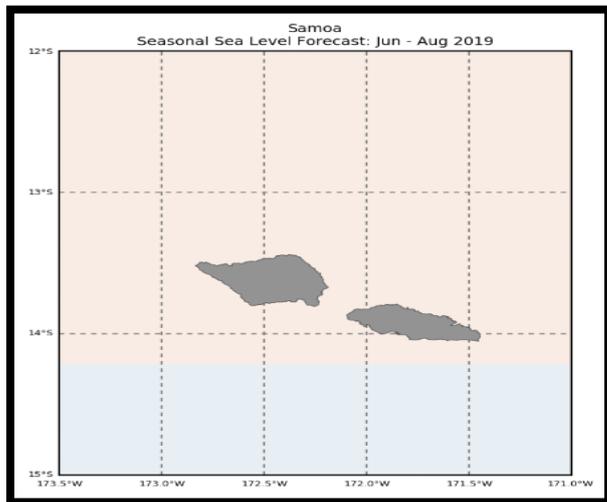
N.B Convergence zones are where cold and warm water meet, and are rich in nutrients, attracting lots of fish.

CORAL BLEACHING STATUS



Although Sea Surface Temperatures are expected to cool in the next few weeks, the Coral Bleaching status remains at 'Alert Level 1. Responsible sectors are advised to continue monitoring and take precautionary actions where possible.

SEASONAL SEA LEVEL OUTLOOK



The equatorial region is expected to experience elevated sea levels, where the Samoa region is predicted a 0-50mm rise in, while further south island countries such as Fiji, Tonga and the Cook Island region are expecting sea levels to drop in June, 2019.

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			10 lowest tides for 2019		
Date	Time	Height (m)	Date	Time	Height (m)
31-Aug	6:33	1.56	20-Feb	0:30	0.12
20-Feb	19:01	1.55	21-Feb	1:18	0.13
19-Feb	18:11	1.55	21-Mar	0:08	0.14
29-Sep	6:15	1.54	22-Jan	0:49	0.15
28-Sep	5:25	1.54	23-Jan	1:40	0.15
01-Sep	7:25	1.53	18-Feb	23:42	0.15
30-Aug	5:44	1.53	19-Mar	23:21	0.16
22-Jan	19:19	1.53	22-Mar	0:55	0.17
20-Mar	17:54	1.53	31-Aug	12:49	0.17
21-Jan	18:27	1.53	30-Aug	12:01	0.17

These tables shows the ten (10) highest tides and 10 lowest tides that will take place this year.

- The next high tide expected for 2019 falls on 30th August with its height of 1.53m followed by the highest tide of 2019 on the following day 31st August anticipating 1.56m height.
- The 9th and 10th lowest tides are predicted to occur on the 31st and 30th of August respectively.

Major Contributors:

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