

Ocean Outlook for May 2019

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Ministry of Natural Resources and Environment



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Issued: April 2019

Issue Outline:

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

Summary

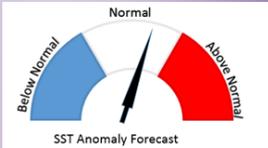
- Warmer sea surface temperatures is expected for the Samoa region.
- The March 2019 Convergence Zone forecasted to position just south of the islands.
- Coral bleaching status shifted from 'warning' to 'Alert Level 1' for May.
- Models suggest a slight increase in sea level in the northern part of the South Pacific.
- Five of the highest tides have passed with the upcoming to be in late August 2019

Climate Status:

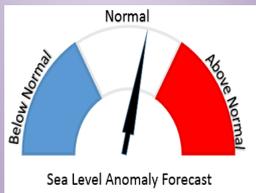
ENSO Update: ALERT



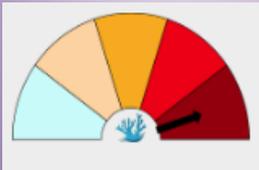
Sea Surface Temperature:



Sea Level Forecast:



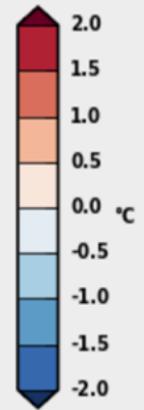
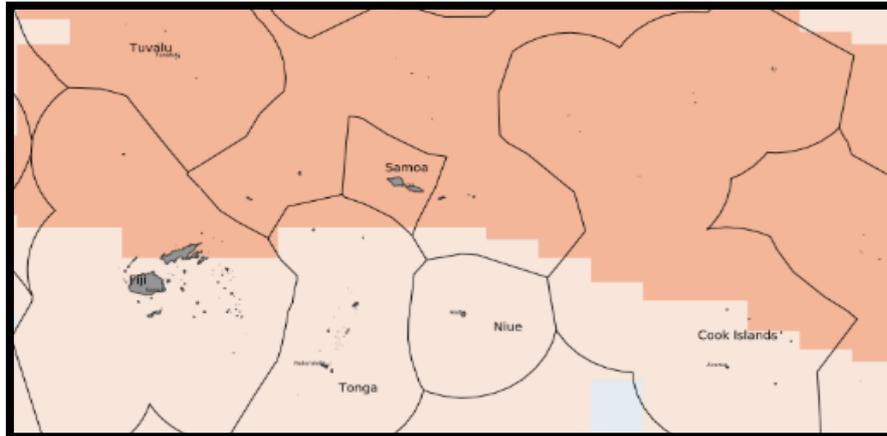
Coral Bleaching Forecast:



Alert Level

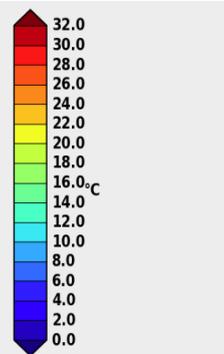
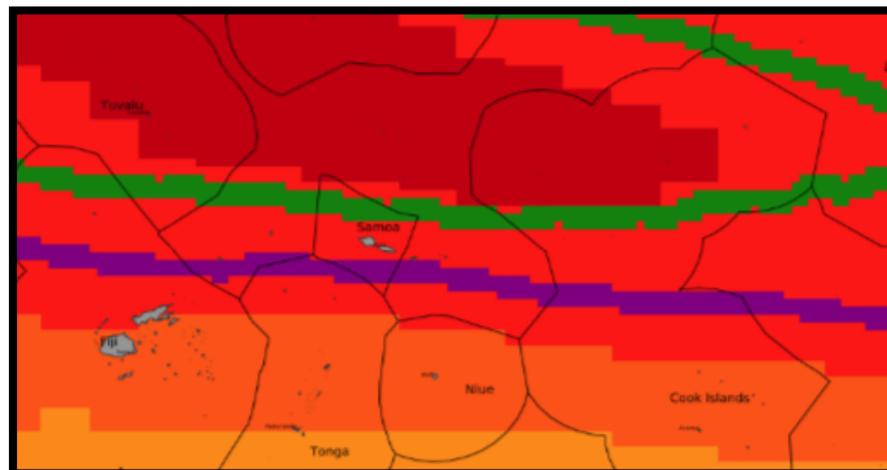
No Stress
Bleaching Watch
Bleaching Warning
Bleaching Alert Level 1
Bleaching Alert Level 2

SEA SURFACE TEMPERATURE ANOMALY OUTLOOK



Along with Tuvalu, the Samoa region is expecting sea surface temperatures to warm by 0.5°C -1.0°C for May 2019. The southern region will also expect a 0.0°C-0.5°C increase in temperature, affecting islands such as the southern parts of Fiji, Tonga and Cook Islands.

SEA SURFACE TEMPERATURE WITH CONVERGENCE ZONE

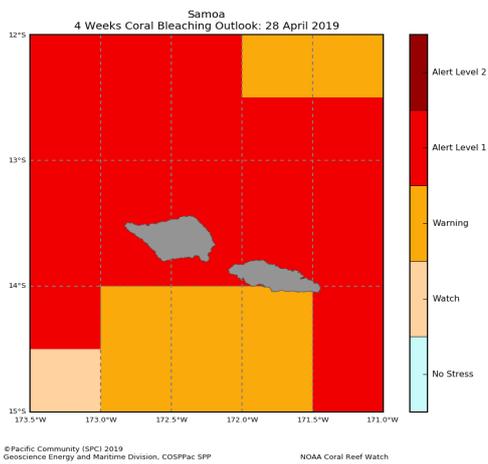


Convergence Zone
 — May 2019
 — May Climatology

The May 2019 Convergence Zone (purple line) position is predicted to displace south of the group, which is a southward displacement from its average May position (green line). The sea surface temperature for the coming month is expected to range from 28.0°C-30.0°C.

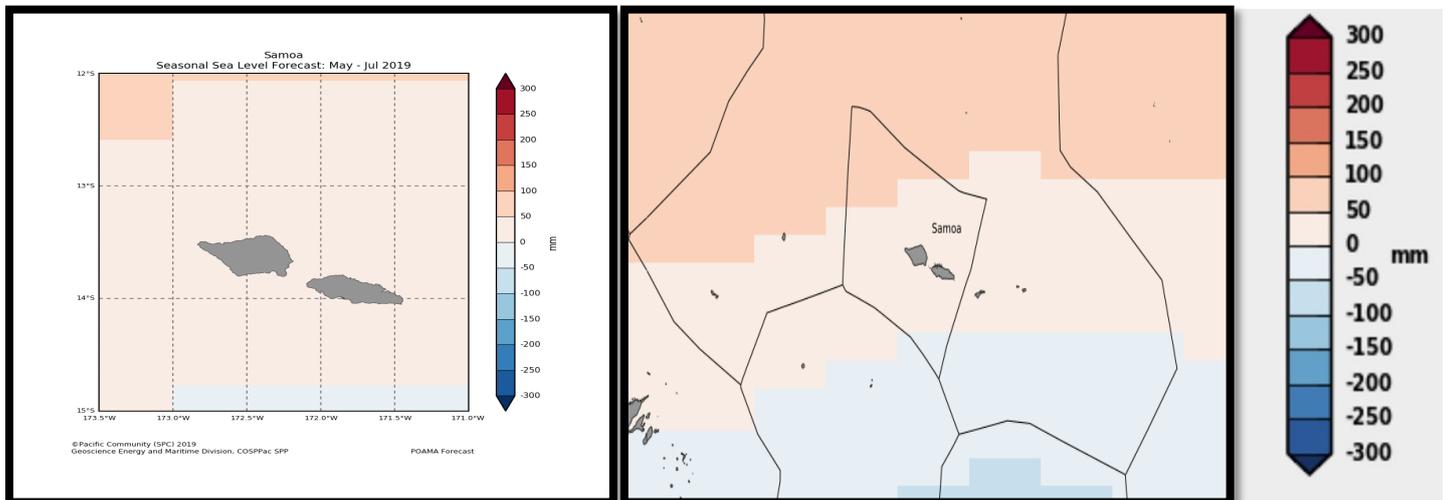
N.B Convergence zones are where cold and warm water meet, and are rich in nutrients, attracting lots of fish.

CORAL BLEACHING STATUS



As seen in Page 1, extreme warm sea surface temperatures are expected, hence the Coral Bleaching Outlook at “Alert Level 1”. Therefore, it is highly recommended that responsible sectors are advised to continue monitoring and take precautionary actions.

SEASONAL SEA LEVEL OUTLOOK



For the Samoa region, a 0-50mm rise is anticipated for the period May-July 2019, while the southern region is expecting sea levels to drop, which can affect groups such as Fiji, Tonga and Niue.

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 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.
- Five (5) of the highest tides have come to pass with the recent one on March 20th.

Major Contributors:

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