



Tuvalu Ocean Outlook

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Summary

January 2018

- Tuvalu oceans are likely to be warmer than normal from February to April 2019.
- The Fisheries Convergence Zone is expected to lie outside of the EEZ.
- Coral bleaching outlook for the next three months show that **bleaching and mortality is likely**.
- Sea level is predicted to be higher than normal in the next 3 months.

Issue Outline:

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

Climate Status:

ENSO Update:



Sea Surface Temperature:



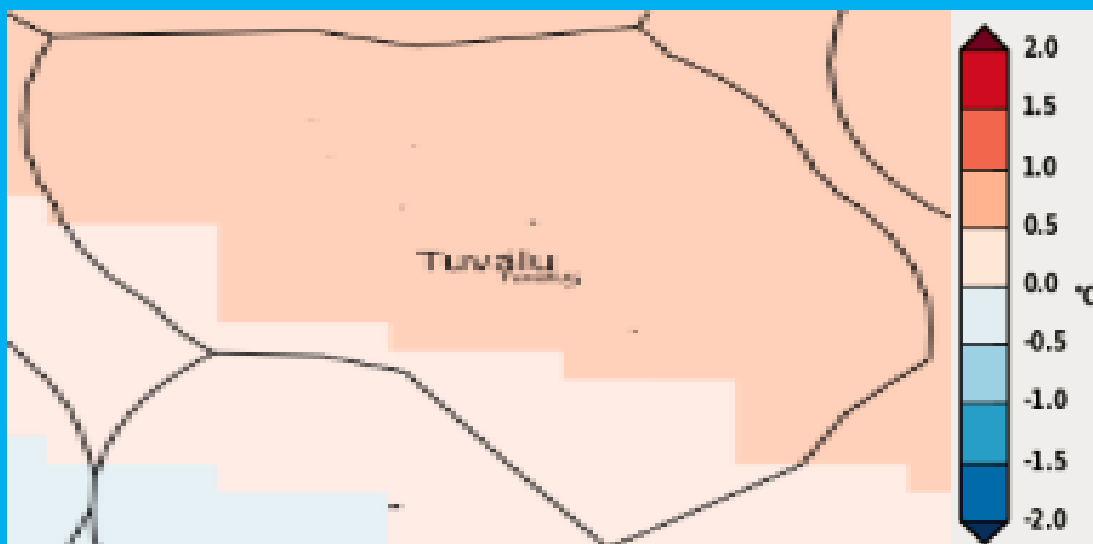
Sea Level Anomaly Forecast:



Major Contributors:

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

Sea Surface Temperature Forecast Anomaly



Sea surface temperature (SST) anomaly forecast for February to April 2019 show a warmer than normal temperature for all Tuvalu waters.

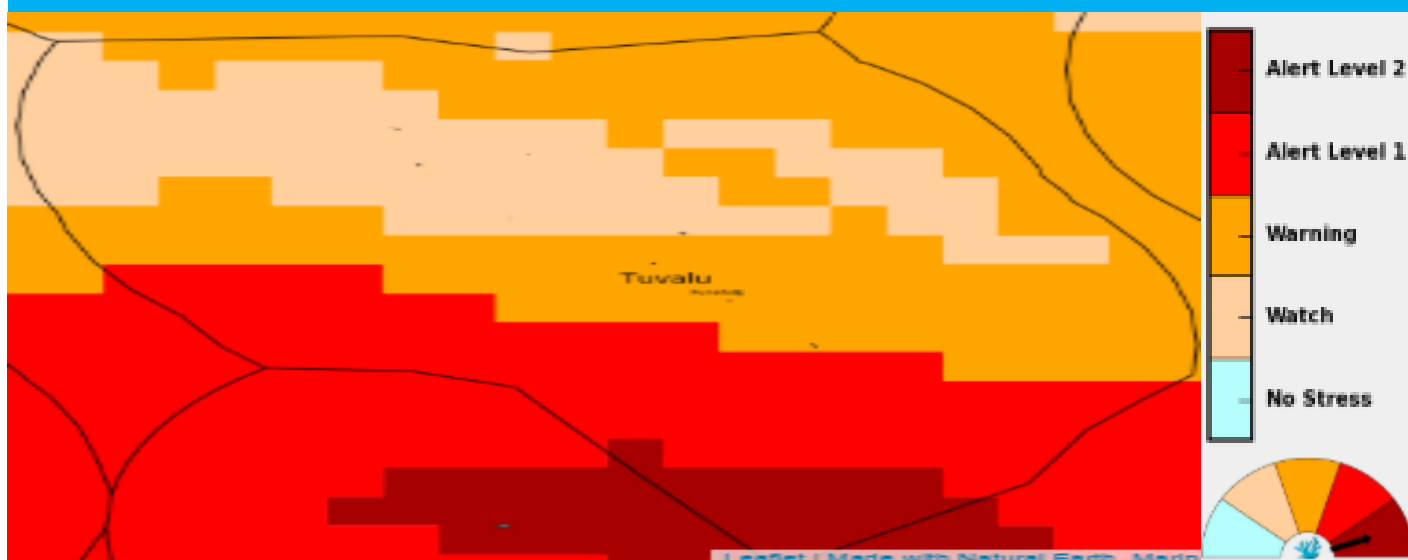
Sea Surface temperature forecast with Fisheries Convergence Zone



The Fisheries Convergence zone is forecasted to lie North and South of its climatological position in February. ¹Fisheries Convergence zone is where cold and warm water meet, and are rich in nutrients, attracting lots of fish.

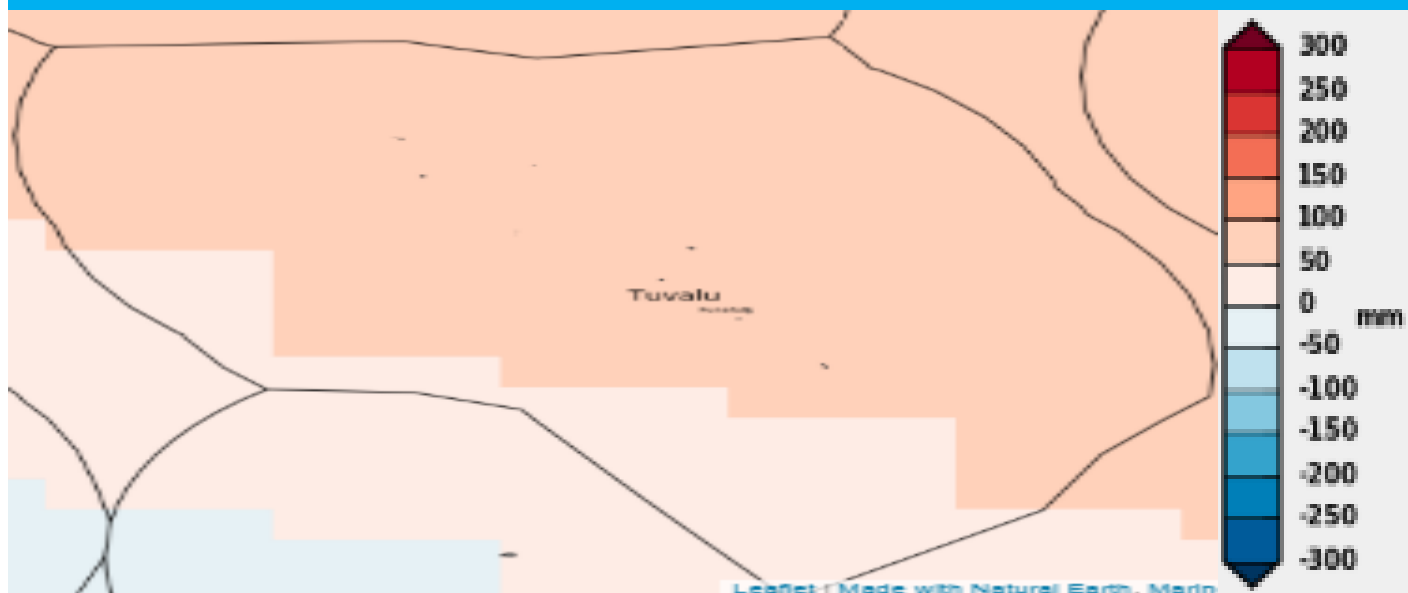
¹ Fisheries Convergence Zone is different from South Pacific Convergence Zone.

Coral Bleaching Outlook



A widespread of bleaching and significant coral mortality is predicted for Tuvalu coral reefs in the upcoming 3 months especially the Southern extent of the EEZ.

Seasonal Sea Level Forecast



The sea level forecast for February to April show a higher than normal for all Tuvalu waters. The sea level is forecasted to remain higher for these regions. . 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.

Highest and Lowest Tide from January - March 2019

Date	Time	Tide Level(m)
21-01-19	23:38	1.00
22-01-19	17:59	3.23
19-02-19	23:23	0.97
20-02-19	17:45	3.29
20-03-19	16:43	3.25
20-03-19	23:00	1.00

The highest and lowest tides for January to March 2019 are listed in the table on the left. Highlighted is the highest predicted tide for the year . The higher tide levels coupled with higher than normal sea levels for Tuvalu could cause inundation in low lying areas. For preparedness, coastal communities should be cautious during this Cyclone season, especially in the upcoming month, as higher tide level could result in serious inundation IF coincides with a meteorological system, which may have impacts on agriculture, infrastructures, and daily activities.

¹ Fisheries Convergence Zone is different from South Pacific Convergence Zone.