



Tuvalu Ocean Outlook

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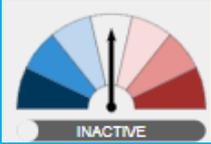
Summary

October 2019

- Tuvalu oceans are likely to be warmer than normal.
- The Fisheries Convergence Zone is expected to shift southwards of its climatological position in November.
- Coral bleaching warning is likely in the upcoming three months. .
- Sea level is predicted to be higher than normal in the next three months.

- Issue Outline:**
- Ocean Summary
 - Ocean Temperature
 - Fisheries Convergence Zone
 - Coral Bleaching
 - Sea Level Forecast

Climate Status:
ENSO Update:



Sea Surface Temperature:

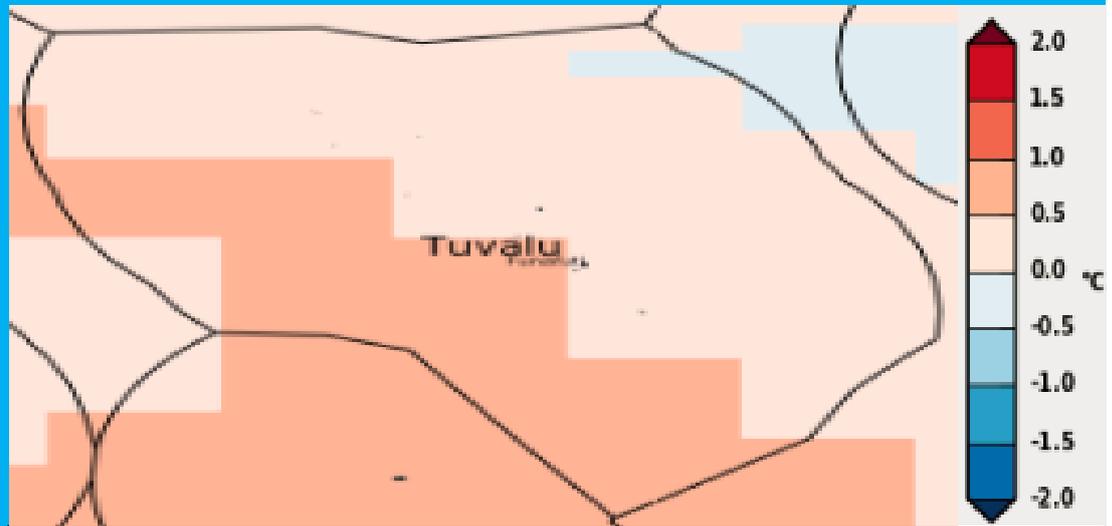


Sea Level Anomaly Forecast:



- 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 forecast for Tuvalu is above normal. Western waters is expected to be warmer by 0.5 to 1.0 degree Celsius.

Sea Surface temperature forecast with Fisheries Convergence Zone

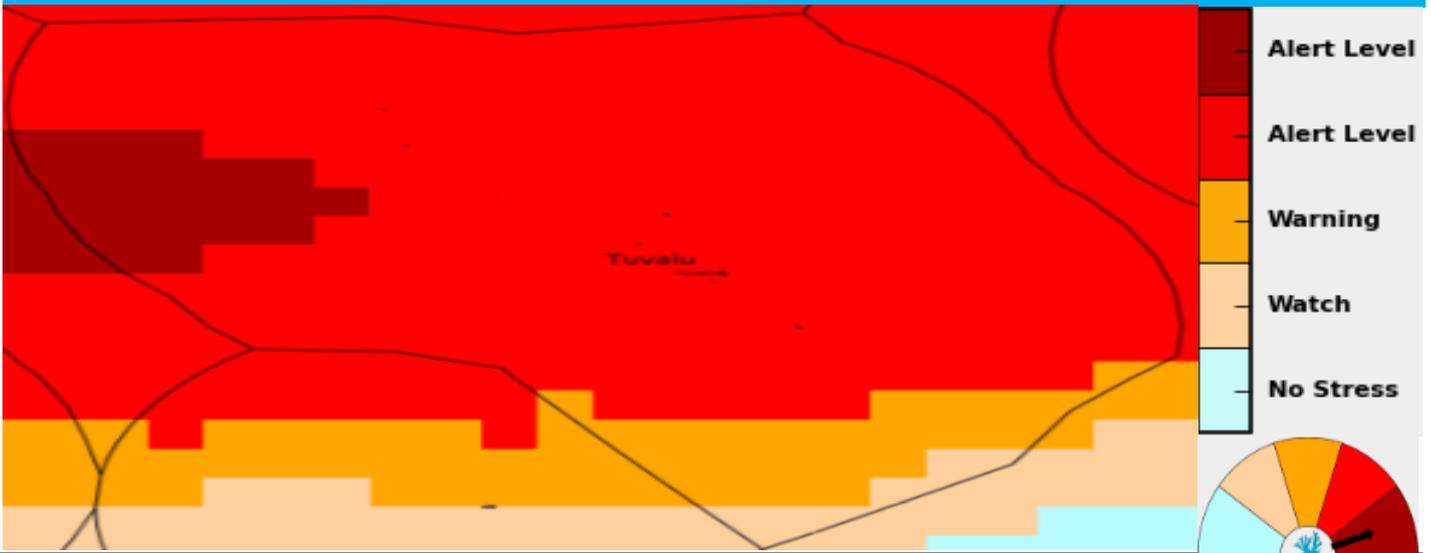


The Fisheries Convergence zone is expected to lie south of its climatological position in November on both Northern and Southern extent of EEZ. ¹Fisheries Convergence zone is where cold and warm water meet, and are rich in nutrients, attracting lots

¹ Exclusive Economic Zone - area beyond and adjacent to the territorial sea: it can extend to a maximum 200 nautical miles from the baselines <https://www.iucn.org>

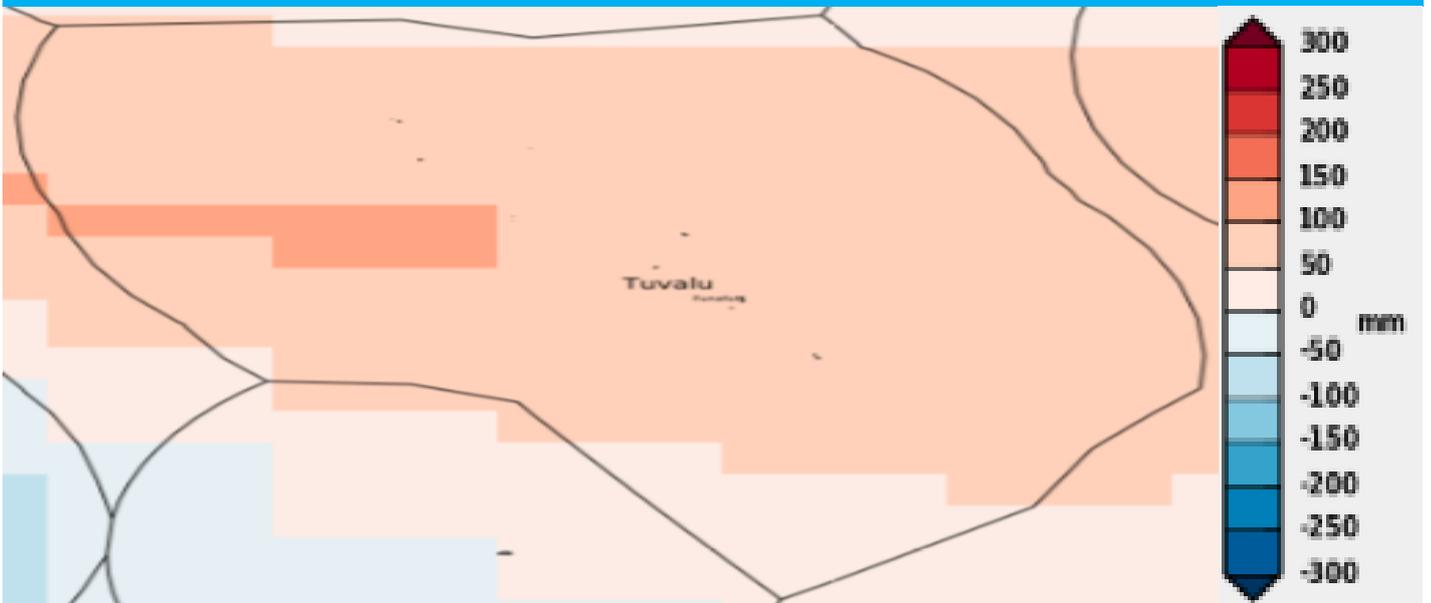
² Fisheries Convergence Zone is different from South Pacific Convergence Zone.

Coral Bleaching Outlook



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

Seasonal Sea Level Forecast



The sea level is forecasted to be higher than normal in the next three months. 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 September—November

Date	Time	Tide Level(m)
28-10-19	1658	3.14
28-10-19	2314	1.01
26-11-19	1639	3.09
26-11-19	2300	1.10
25-12-19	1629	3.01
25-12-19	2254	1.18

The highest and lowest tides for October to December are listed in the table on the left. The predicted tide levels may be different from the observed tide due to weather phenomenon such as low/high pressure systems; South Pacific Convergence Zone; ENSO—El Nino/La Nina.

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 the upcoming Cyclone season, 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.

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