

Vanuatu Ocean Outlook

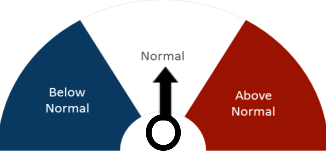
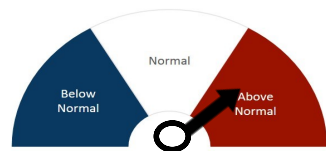
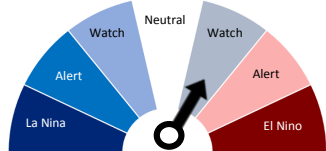
Vanuatu Meteorology & Geo-Hazards Department



June 2019

Issue 01

CURRENT OCEAN STATUS



June Ocean Summary:

- Equatorial Tropical Pacific remain near El Niño thresholds. However, climate models suggest a gradual shift away from El Niño levels over the coming months (July to September).
- Waters are warmer than average across much of the southwest Pacific including Vanuatu, but the past fortnight has seen some cooling across the region.
- Trade winds and SOI are closer to average across the tropical Pacific. SOI values remain neutral.
- Luganville Harbour : Lowest Tide: 13th at 1719hrs - 0.59m, Highest tide : 5th at 0355hrs - 1.78m
- Port Vila Harbour : Lowest Tide: 07th at 1840Hrs -0.56m, Highest tide: 5th at 0438hrs - 1.52m

Ocean Outlook (July – September)

- Cooling Sea Surface temperatures (SST) is expected over Vanuatu in the upcoming months.
- Trade winds over Equatorial Pacific will continue to weaken, while over Vanuatu trades remain moderate.
- Sea level will be normal to below normal over Vanuatu.
- Next extreme high tide will be on 31st August 2019, 04:53hrs at a height of 1.87m. (Luganville Harbour)

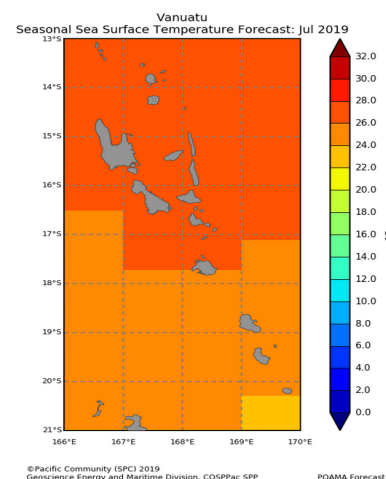
Sea Surface Temperatures (SST)

Average sea surface temperatures for June is normal to above over Vanuatu.

Forecast for July 2019 shows average sea surface temperatures anomaly over Vanuatu. (22.0°C to 28.0°C)

Application: Different species of fish are sometimes know to be found at Certain temperatures.

Common name	Species	All occurrences (C)	Abundant occurrences (C)
Skipjack	Katsuwonus pelamis	17-30	20-29
Yellowfin	Thunnus albacares	18-31	20-30
Bigeye	T.obesus	11-29	13-27
Albacore	T. alalunga	13-25	15-21
Southern	Bluefin T.maccoyii	10.5-21	17-20

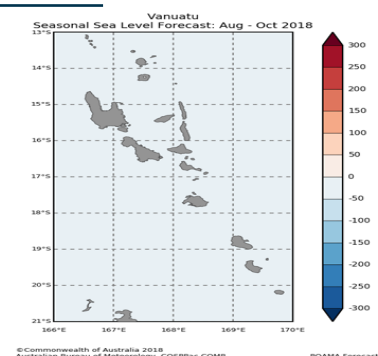


Sea Level

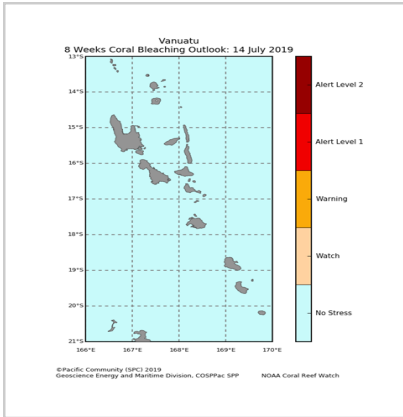
Average Sea level for Vanuatu during the next 3 months (July—September). Trade winds are closer to average across tropical Pacific and moderate over Vanuatu.

Application

- Extreme high tides can cause inundation of waves overland (seas-flooding) during bad weather / windy conditions causing rough seas.



Coral Reef Watch

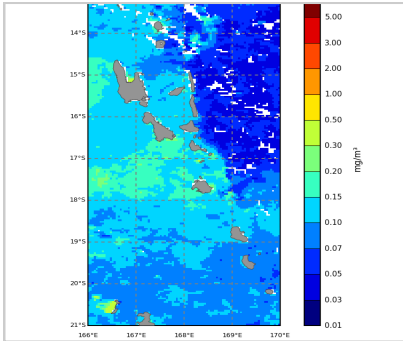


Coral Reef around Vanuatu in the next four weeks is on *No Stress*. This means that there is no chance of having any damage to coral.

Application

- Coral reef provide food for fishes and shells. When there is coral bleaching, the corals can die and the whole food chain is affected.
- Limiting fishing in the region can increase fish populations, which in turn maximizes the consumption of plant growth and limits their impact on the corals. (Marshall and Schuttenberg, 2006).

Monthly Chlorophyll

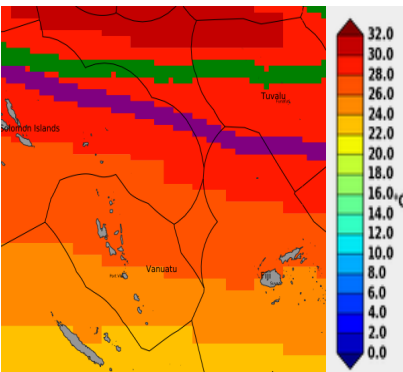


There is a moderate concentration of Chlorophyll on the Western waters of Vanuatu in the past month and has remained like so in recent months. Light to moderate concentration of Chlorophyll around Shefa waters and the Toress island (Torba)

Application

- Fishermen targeting smaller pelagic (open sea) fish may be interested in the chlorophyll concentration.

Sea Surface Temperature With Convergence Zone



The **green** line is July average position of the Warn pool –cold tongue Convergence zone. For July 2019, models predict it (edge of warm pool-cold tongues convergence zone) (**purple**) will shift slightly southwards near Solomon Islands. Sea Surface Temperatures are forecasted to be within 22°C to 28°C for July over Vanuatu Waters.

Application: Along the eastern edge of Warm pool-cold tongue Convergence zone is rich with nutrient which support high abundance of tuna.

Top Highest and Lowest Tides for July to September 2019 for Luganville & Port Vila Harbour

Luganville Harbour						Port Vila Harbour					
Date	Time (VUT)	Lowest Tide	Date	Time (VUT)	Highest Tide	Date	Time (VUT)	Lowest Tide	Date	Time (VUT)	Highest Tide
04 Jul	12:12pm	0.12m	04 Jul	05:17am	1.77m	04 Jul	13:01pm	0.08m	31 Jul	04:12am	1.46m
02 Aug	11:55pm	0.08m	31 Aug	04:53am	1.87m	02 Aug	12:44pm	0.07m	31 Aug	05:42am	1.54m
28 Sep	10:22am	0.15m	01 Sep	05:40am	1.83m	01 Sep	13:04pm	0.17m	30 Sep	18:50pm	1.59m

Moon Phases for the next 3 Months (July to September 2019)

New Moon	First Quarter	Full Moon	Last Quarter
3rd of July	9th of July	17th of July	25th of July
1st of August	8th of August	15th of August	24 August
30th August	6th September	14th September	22nd September
29th September			