

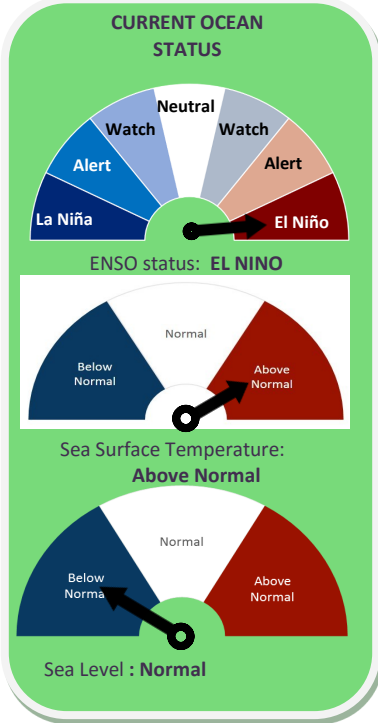
Vanuatu Ocean Outlook

Vanuatu Meteorology & Geo-Hazards Department



March 2024

Issue 53



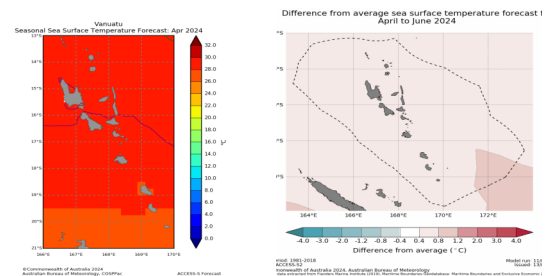
Ocean Summary:

- ENSO status continues to be in El Niño. El Niño events typically increase the chance of below average rainfall in Vanuatu, resulting in drier conditions and warmer daytime temperatures.
- The 30-, 60- and 90-day Southern Oscillation Index (SOI) values for the period ending 3 March 2024 were -11.0, -4.1 and -3.8, respectively. SOI below -7 typically indicate El Niño while sustained positive values above +7 typically indicate La Niña. Values between +7 and -7 generally indicate neutral conditions.
- Trade winds for the 5 days ending 3 March 2024 were generally close to average over most of the Pacific. During El Niño there is a sustained weakening, or even reversal, of trade winds across much of the tropical Pacific.
- Sea Surface temperatures were warmer than average across the equatorial region of the tropical Pacific ocean.
- **Loganville Harbor:** Lowest Tide: 0.18m on 7 April at 22:06pm. Highest tide: 1.78m on 9 April 04:52am.
- **Port Vila Harbor:** Lowest Tide: 0.23m on 11 April at 13:45pm Highest tide: 1.56m on 9 April at 05:48am.

Vanuatu Sea Surface Temperatures (SST) Outlook: March (monthly) and March to May 2024 (seasonally) 2024

- Monthly Sea surface temperature for March in Vanuatu 29°C–30°C over northern region, 28°C– 29°C for Central region and 27°C– 28°C over the southern region.
- Seasonal sea temperatures around Vanuatu from April to June is expected to be above average for the whole country with average difference of 0.8°C.
- **Application: Different species of fish are sometimes known to be found a certain ocean temperatures.**

Common name	Species	All occurrences (°C)	Abundant occurrences (°C)
Skipjack	Katsuwonus pelamis	17-30	20-29
Yellow fin	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

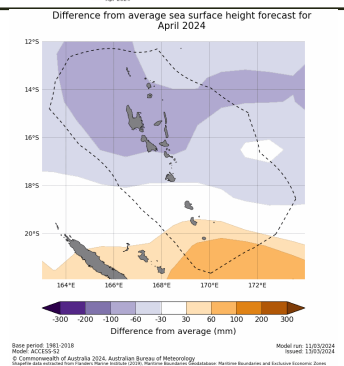


Vanuatu Sea Level (SL) Outlook: April 2024

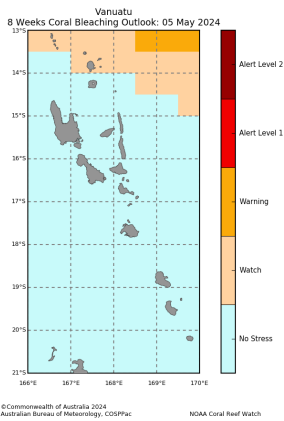
The average sea level height for the month of April will be Below normal with 60-100mm difference for central and Northern regions and near Normal to above normal(60mm difference) for the southern region.

Application

- High tides at higher sea level could cause inundation of wave overland (seas-flooding), also contributing to coastal erosion. During bad weather / windy conditions causing rough seas.
- Low tides at lower sea level could reduce sea level over wharfs and docks, and could also expose coral reefs further during low tides.



Base period: 1981-2018
 Model: ACC-SIS-2
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 Metadata also available from <https://www.bom.gov.au/metadata/>
 (2024M, version 1). Available online at <https://www.bom.gov.au>



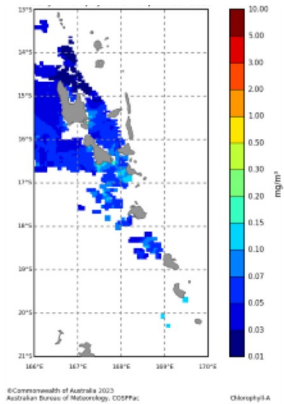
Vanuatu 8 weeks Coral Bleaching Outlook until 05 May 2024

The 8 weeks coral bleaching outlook For Vanuatu until 05 May, indicates No stress over all Provinces of Vanuatu Part of Torba with WATCH alert level.

Application.

- Coral reef protect coastal areas by reducing waves, and also provide food for fishes and shells. When coral bleaching occur corals die, thus affecting the whole food chain and underwater ecosystem.
- 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).

Vanuatu Daily Chlorophyll A 04 September 2023

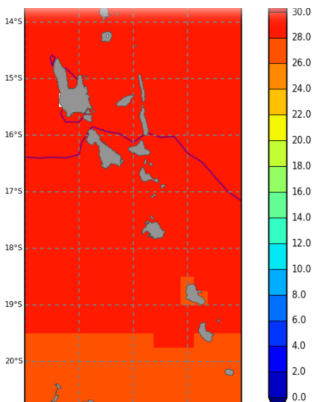


The Daily ocean Chlorophyll concentration issue on 4th September 2023 shows very little to no chlorophyll near coastal water Vanuatu islands.

Application.

- Fishermen targeting smaller pelagic (open sea) fish, may be interested in the chlorophyll concentration.
- Filter feeders (i.e. oysters, mussels, clams, scallops) thrive in high chlorophyll concentrations.
- Crown of thorns spawning is likely to be more successful under high chlorophyll concentrations.

The Convergence Zone Outlook for April 2024



The **green line** is the average position of the *Warm pool –cold tongue Convergence zone*. The **purple line** is the edge of the *Warm pool –cold tongue Convergence zone*.

Outlook for April 2024 show that the average position of the warm pool-cold tongue convergence zone will be position between the northern part of Torba and edge of warm pool will be located between malampa, Sanma & Penama Provinces.

Application:

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

Top Lowest and Highest Tides for May to July 2024: Luganville & Port Vila Harbor

Luganville Harbour					
Lowest Tide	Date	Time (VUT)	Highest Tide	Date	Time (VUT)
0.15m	9 May	11:51am	1.78m	8 May	04:20am
0.15m	7 Jun	11:43am	1.74m	6 Jun	03:59am
0.14m	22 Jul	11:45am	1.79m	23 Jul	05:38am

Port Vila Harbour					
Lowest Tide	Date	Time (VUT)	Highest Tide	Date	Time (VUT)
0.13m	9 May	12:11pm	1.53m	8 May	05:10am
0.10m	7 Jun	12:28pm	1.48m	5 Jun	03:59am
0.11m	22 Jul	12:31pm	1.4m	23 Jul	06:25am

Moon Phases from March to May 2024

New Moon	First Quarter	Full Moon	Last Quarter
10 March	17 March	25 March	2 April
9 April	16 April	24 April	1 May
8 May	15 May	24 May	31 May

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