

Ocean Summary:

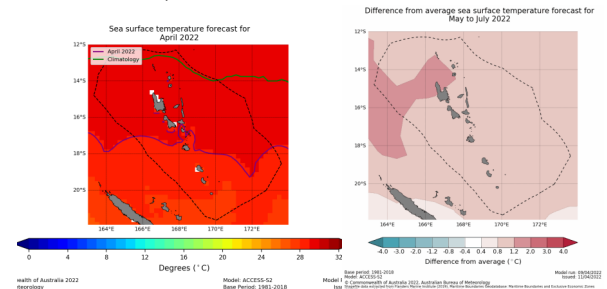
- The ENSO outlook is La Nina . La Niña event has weakened slightly in the tropical Pacific over the past fortnight. Latest outlook indicate a return to neutral late in the southern hemisphere autumn. Even La Nina weaks, it continues to influence the global weather and climate.
- The 30-day Southern Oscillation Index (SOI) for the 30 days ending 27 March 2022 was +14.9. The 90-day SOI value was +8.9. 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 27 March 2022 were close to average over eastern half of tropical Pacific and generally stronger than average in the central to western Pacific.
- Sea surface temperature for tropical Pacific ocean for the week ending 27 March were cooler than average along the equator and most of the central and eastern Pacific Ocean .
- Loganville Harbor:** Lowest Tide: 0.23m on 18 April at 11:58am. Highest tide: 1.72m on 18 April at 05:25pm.
- Port Vila Harbor:** Lowest Tide: 0.23m on 19 April at 13:39pm Highest tide: 1.51m on 18 April at 06:24am.

Sea Surface Temperatures (SST) Outlook: April (monthly) and May to July (seasonally) 2022

- The monthly average sea surface temperature anomaly for Vanuatu in April 2022 is expected to be above average for all region of Vanuatu (Northern , central and southern region).
- The seasonal sea-surface temperature forecast outlook for May to July 2022 is expected to be above average in all ocean water of the country from northern to the southern region.

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
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

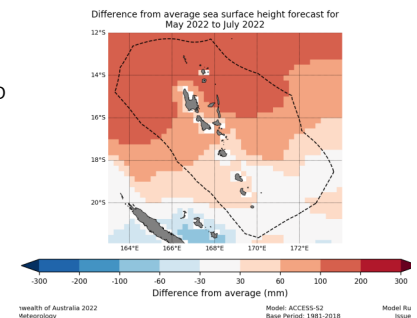


Sea Level (SL) Outlook: May to July 2022

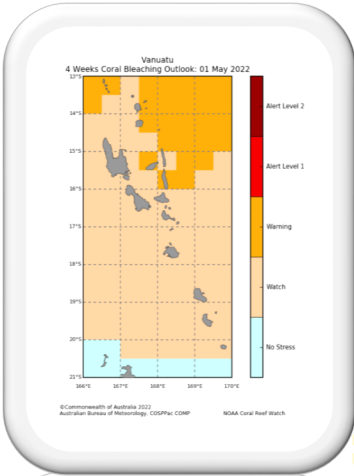
Seasonal sea level outlook forecast by models from May to July 2022, shows above average sea level expected in all regions of Vanuatu.

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.



4 weeks Coral Reef Bleaching Outlook: 1st May 2022

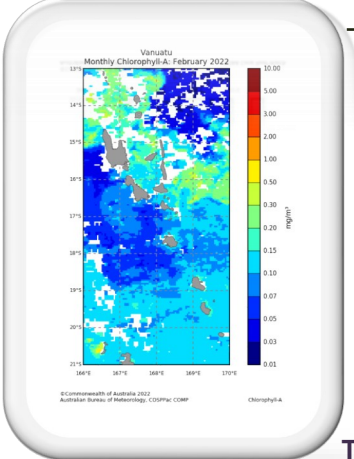


The expected coral bleaching outlook for the next 4 weeks up to 1st indicates Warning alert for Torba and Penama while Watch Alert is record over rest of Vanuatu.

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).

Monthly Chlorophyll for February 2022

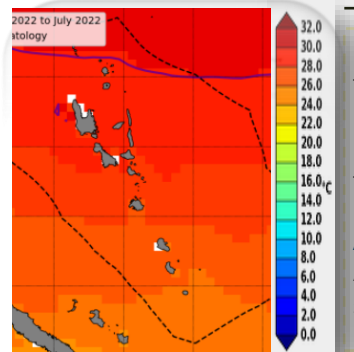


The monthly ocean Chlorophyll concentration forecast for February shows signs of chlorophyll increase in the Torba, penama and part of sanma while there is a decrease in chlorophyll concentrations (below 0.10 mg/m³) elsewhere.

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: May to July 2022



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*.

Forecast shows that the edge of warm pool will move to Torba Province and experience between Tores and banks group from May to July.

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 May to July 2022: Luganville & Port Vila Harbor

Luganville Harbour					
Lowest Tide	Date	Time (VUT)	Highest Tide	Date	Time (VUT)
0.11m	17 May	11:46am	1.77m	17May	04:59am
0.05m	15 Jun	11:39am	1.80m	15 Jun	04:44am
0.03m	14 Jul	11:30am	1.84m	14 Jul	04:36am

Port Vila Harbour					
Lowest Tide	Date	Time (VUT)	Highest Tide	Date	Time (VUT)
1.10m	18 May	13:25pm	1.51m	16 May	05:10am
0.03m	16 Jun	13:15pm	1.51m	14 Jun	04:40am
0.02m	15 Jul	13:02pm	1.51m	14 Jul	05:15am

Moon Phases for April to June 2022

New Moon	First Quarter	Full Moon	Last Quarter
1st April	9 April	17 April	23 April
1st May	9 May	16 May	23 May
29 June	21 June	14 June	8 June