

Ocean Summary:

- Both sea surface and sub-surface temperatures across the central tropical Pacific Ocean have cooled over recent months. The ENSO outlook has been shifted to **La Niña WATCH** since the end of June 2020. **La Niña WATCH** means the chance of La Niña forming around September—November 2020 is around 50%.
- Key indicators of ENSO, such as the Southern Oscillation Index (SOI), trade winds, cloudiness near the Date Line, and sea surface temperatures in the tropical Pacific Ocean, remain within ENSO neutral range.
- **Luganville Harbour:** Lowest Tide: 0.14m on 5th July, at 11:15 am. Highest tide: 1.74m on 4th July at 03:41 am.
- **Port Vila Harbour:** Lowest Tide: 0.11m on 5th July, at 11:59 am. Highest tide: 1.47m on 4th July at 04:16 am.

Sea Surface Temperatures (SST) Outlook: August 2020

SSTs in July ranged from 27°C—28°C in the northern region (Torba, Sanma, Penama, Malampa) to 24°C—26°C in the southern region (Shefa, Tafea). SSTs are likely to remain within 27°C—28°C over the northern region in August, and 24°C—26°C over the southern region.

Application: Different species of fish are sometimes known to be found at certain temperatures.

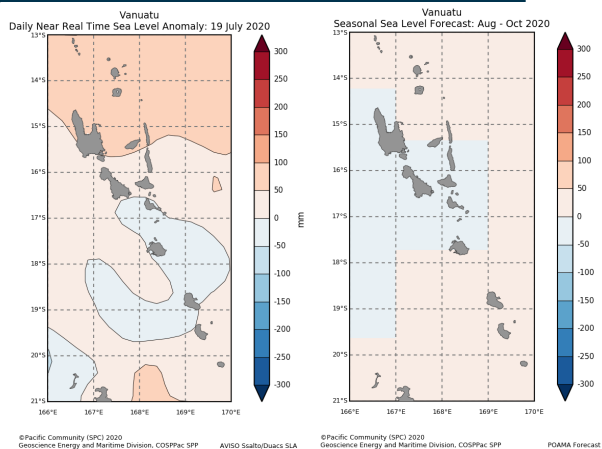
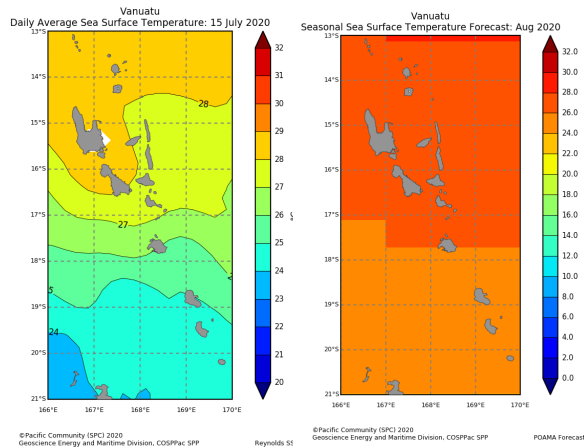
Common name	Species	All occurrences (°C)	Abundant occurrences (°C)
Skipjack	Katsuwonus pelamis	17-30	20-29
Yellowfin	Thunnus albacares	18-31	20-30
Bigeye	T.obesus	11-29	13-27
Albacore	T. alalunga	13-25	15-21
Southern	Bluefin T.maccoyii	10.5-21	17-20

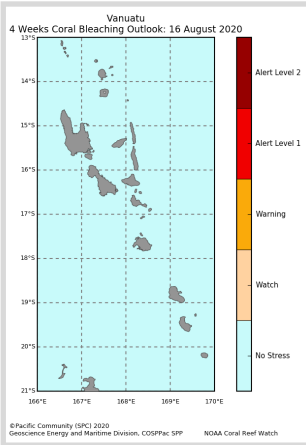
Sea Level (SL) Outlook: August to October 2020

Sea Level has been above normal over most of the northern region in July, while the southern region experiences normal to below normal sea level. Forecast for the next three months shows below normal sea level (-50mm) over Sanma, Penama, Malampa and Shefa. Above normal sea level is forecasted elsewhere.

Application

- High tides at higher sea level could cause inundation of waves overland (seas-flooding) 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.



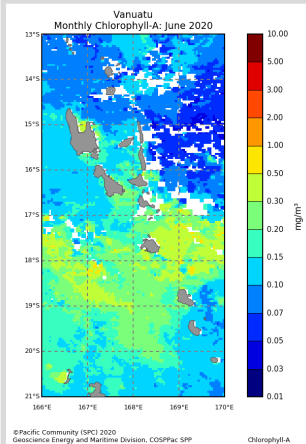


Coral Reef Outlook: August 2020

No stress on Corals is observed over Vanuatu waters in July, and forecast show corals will continue to experience no stress during the next 4 weeks. This means there is no potential threat of coral bleaching until 16th August.

Application

- Coral reef provide food for fishes and shells. When there is coral bleaching, the coral 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).

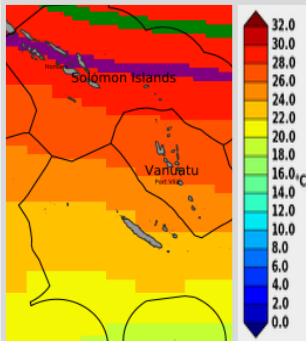


Monthly Chlorophyll

Chlorophyll concentration are steadily increasing over Vanuatu waters. Up to 0.50 mg/m³ of chlorophyll (green colour) are concentrated over Shefa extending to Tafea, with parts of Malampa and Sanma.

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: August 2020

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 the Convergence Zone will remain over Solomon islands in the next three months (August–October 2020).

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 August 2020 to October 2020 Luganville & Port Vila Harbour

Luganville Harbour						Port Vila Harbour					
Lowest Tide	Date	Time (VUT)	Highest Tide	Date	Time (VUT)	Lowest Tide	Date	Time (VUT)	Highest Tide	Date	Time (VUT)
0.15m	19 Aug	11:11 am	1.81m	20 Aug	05:08 am	0.15m	20 Aug	12:41pm	1.49m	20 Aug	05:57 am
0.17m	17 Sep	10:41 am	1.82m	18 Sep	04:15 am	0.21m	17 Sep	11:30am	1.57m	19 Sep	19:10 pm
0.24m	19 Oct	12:09 am	1.89m	17 Oct	04:59 am	0.23m	20 Oct	01:50 am	1.63m	17 Oct	05:55 pm

Moon Phases for August 2020 to October 2020

New Moon ●	First Quarter ◐	Full Moon ○	Last Quarter ◑
		4th August	12th August
19th August	26th August	2nd September	10th September
17th September	24th September	2nd October	10th October
17th October	24th October		