Ministry of Meteorology, Energy, Information, Disaster, Environment, Climate Change & Communication

TONGA METEOROLOGICAL SERVICE

Tonga Ocean Outlook

August - October 2025

Issued 18 July 2025

TONGA METEOROLOGICAL SERVICE

P. O. Box 1380,

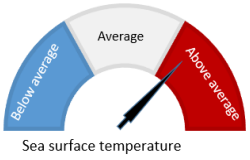
Domestic Terminal, Fua'amotu Airport, Tonga

Phone: (676) 7400062

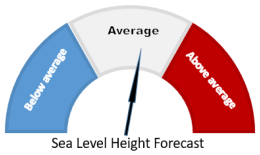
Website: *www.met.gov.to*

Email: metstaff@met.go.to

- Sea surface temperature outlook is predicted to be warmer than normal.
- Sea level is forecast to be above average across Tonga waters during the forecast period.
- The fisheries convergence zone is predicted to be far north of the Niua waters in the next few months.
- Next highest and lowest tides on the 26th June with highest tide at 1.77m at 0741 and 0.25m at 1410.

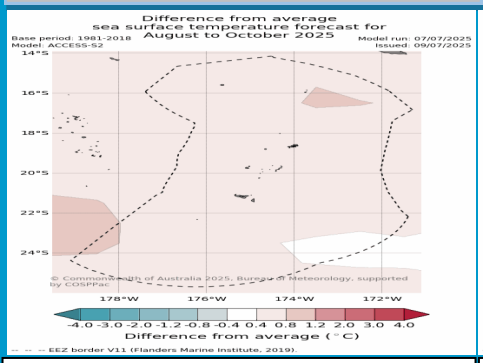


Sea surface temperature



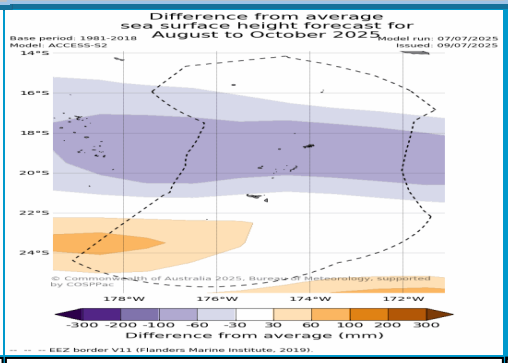
Sea Level Height Forecast

Sea Surface Temperature Forecast



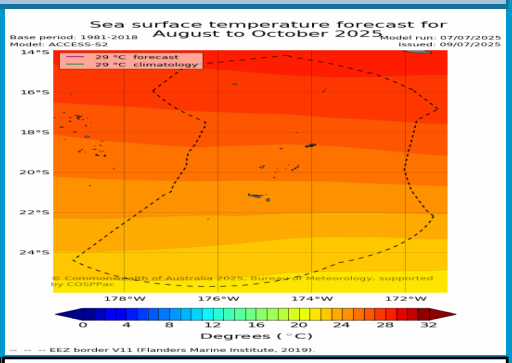
Sea surface temperature forecast for August to October 2025 shows 0.4 to 0.8^{0}C above average for most of Tonga. Presence of warmer or cooler waters than usual is useful because it indicates whether El Nino or La Nina like pattern is likely during the forecast period.

Sea-level Forecast



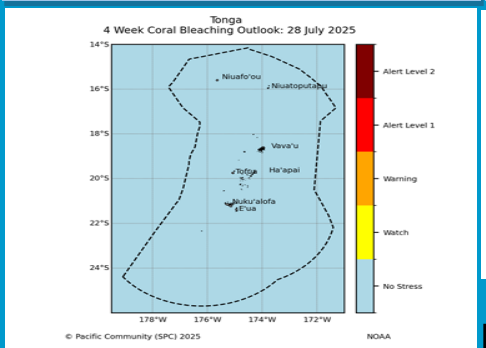
Sea level forecast shows above average (30-60mm) sea level height over southern Tonga waters. Average to below average (30-60mm) height over the rest of Tonga waters. Stakeholders can use this forecast to make decisions about the protection of communities and infrastructure against coastal inundation, especially when there is extreme high tight.

Nutrient Zone Forecast



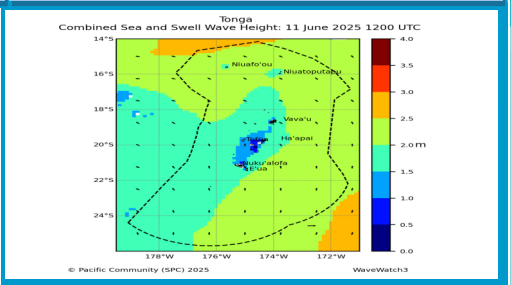
The boundary between warm and cold ocean water is rich in nutrients and attracts Tuna. This convergence zone is normally located too far northwest of Tonga waters but in August to October 2025, it is forecast to be far north of the the Niua waters. This information can be used by stakeholders to know where tuna can be found during this time period.

Coral Bleaching



Coral bleaching is at the no stress level for Tonga. Coral bleaching is a common stress response of corals, caused by warmer sea temperatures. During periods of unusually high sea temperatures, corals can bleach and may eventually die if the heat stress is intense and sustained over several weeks. This information is very useful for tourists and related stakeholders.

Sea and swell wave height



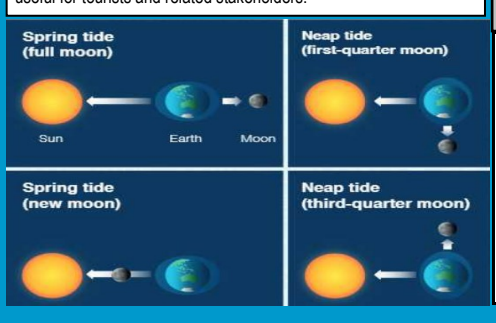
Tonga combined sea and swell wave height for June shows majority of the waves come from the south over southern and central Tonga and over the northern Tonga it was from the southeast. The wave height in June was 0.5m from central Tonga and spreading out reaching a height of 2.5m

The highest & Lowest tides predicted for 2025

10 highest tides for 2025			10 lowest tides for 2025		
Date	Time	Height (m)	Date	Time	Height (m)
06-Dec	20:23	1.88	28-May	14:25	0.23
31-Mar	8:42	1.88	08-Nov	3:09	0.24
05-Dec	19:28	1.88	29-May	15:19	0.24
01-Apr	9:32	1.88	26-Jun	14:10	0.25
29-Apr	8:17	1.87	07-Dec	2:53	0.25
07-Nov	20:41	1.86	09-Nov	4:03	0.25
06-Nov	19:48	1.86	27-Jun	15:01	0.26
30-Apr	9:10	1.86	07-Nov	2:15	0.26
28-Apr	7:26	1.86	27-May	13:31	0.26
07-Dec	21:19	1.85	30-Apr	15:36	0.26

Tidal predictions show the highest tides of the year for Nuku'alofa. The next highest and lowest tide coming up on the 25th July with the highest tide of 1.72m at 7.28am and the next lowest tide on the same day with the lowest tide at 0.29m at 1:55pm. This information is very useful to everyone who wants to know these events especially to those stakeholders and people who are interested in tide predictions for guidance. Process of watering and soaking of the beach hibiscus fibre (fau) for

Spring and Neap Tides



Spring and neap tides occur every month and correspond with the phase of the moon.
They usually occur twice per month.
Spring tides are very high tides that occur during full and new moon phases, when the gravitational forces of the sun and moon combine to exert a stronger pull on the oceans.
Neap tides are lower high tides and higher low tides that occur during the moon's quarter phases, when the gravitational forces between the sun and moon are not aligned.

Moon Phases for July to September 2025

18 Jul (3rd quarter)	25 Jul (New moon)
2 Aug (1st quarter)	9 Aug (full moon)
16 Aug (3rd quarter moon)	23 Aug (New moon)
31 Aug (1st quarter moon)	8 Sep (Full moon)
14 Sep (3rd quarter moon)	22 Sep (new moon)
30 Sep (1st quarter moon)	