



Tonga Ocean Outlook

September - November 2025

Issued 18 August 2025

TONGA METEOROLOGICAL

SERVICE

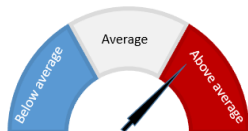
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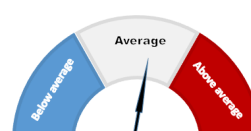
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- Sea surface temperature outlook is predicted to be warmer than normal.
- Sea level is forecast to be average to below average across Tonga waters during the forecast period.
- The fisheries convergence zone is predicted to be far north of the Niua waters in the next few months.
- Next highest on the 10th September at 9.30pm with highest tide at 1.76m and lowest tides on the 12th September 10.30pm at 0.35m.

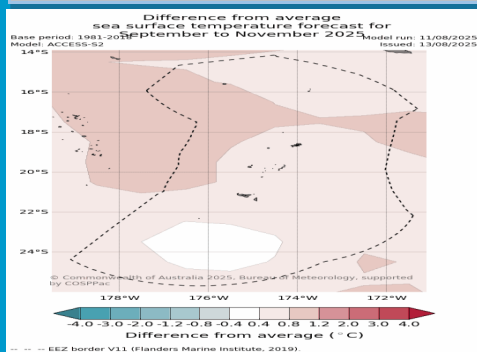


Sea surface temperature



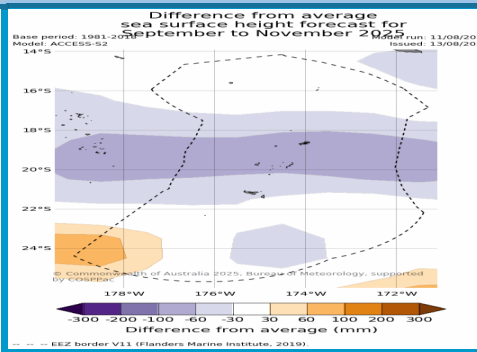
Sea Level Height Forecast

Sea Surface Temperature Forecast



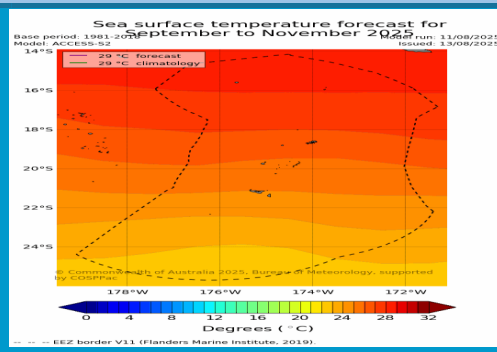
Sea surface temperature forecast for August to October 2025 shows 0.4 to 0.8°C above average for most of Tonga. Presence of warmer or cooler waters than usual is useful because it indicates whether El Nino or La Nina like pattern is likely during the forecast period.

Sea-level Forecast



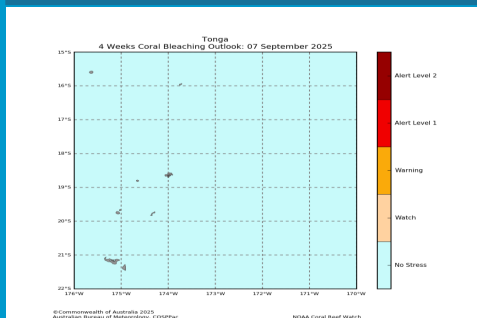
Sea level forecast shows below average (30-60mm) sea level height over Tongatapu to Vava'u waters. Average height over south of Tonga waters and the northern Tonga waters. Stakeholders can use this forecast to make decisions about the protection of communities and infrastructure against coastal inundation, especially when there is extreme high tide.

Nutrient Zone Forecast



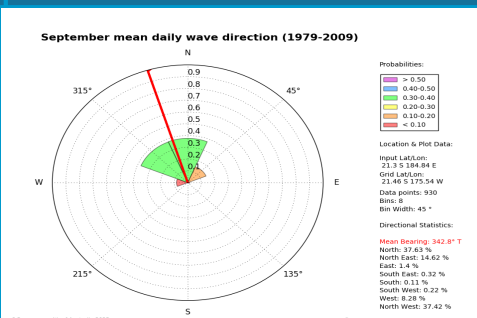
The boundary between warm and cold ocean water is rich in nutrients and attracts Tuna. This convergence zone is normally located too far northwest of Tonga waters but in August to November 2025, it is forecast to be far north of the Niua waters. This information can be used by stakeholders to know where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

Monthly wave direction



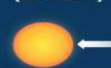
Tonga combined sea and swell wave height for September shows majority of the waves will come from the southeast to the northwest. The average wave height in September will be 2.5m and reaching a maximum height of 5.4m

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 tide is 10th September 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 making waist

Spring tide (full moon)



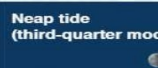
Spring tide (new moon)



Neap tide (first-quarter moon)



Neap tide (third-quarter moon)



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 August to October 2025

22 Aug (New moon)	7 Sep (Full moon)
30 Aug (1 st quarter moon)	22 Sep (new moon)
14 Sep (3 rd quarter moon)	30 Sep (1 st quarter moon)
7th Oct (Full moon)	14 Oct (3rd quarter moon)
22 Oct (New moon)	30 Oct (1st quarter moon)