

Country: Tonga

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	May-2025	Jun-2025	Jul-2025				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Northern Division							
Niufo'ou (1971-2025)	n/a	n/a	57.0	60.1	146.9	101.0	18/54
Niutoputapu (1947-2025)	350.9	141.6	72.0	60.3	126.8	92.0	32/79
Central Division							
Vava'u (1947-2025)	305.2	284.6	127.1	66.0	121.1	84.0	54/79
Ha'apai (1947-2025)	329.5	126.6	77.4	55.0	99.6	69.5	43/79
Southern Division							
Fua'amotu (1979-2025)	268.6	69.2	83.6	65.0	135.7	96.5	21/46
Nuku'alofa (1944-2025)	187.0	57.0	54.0	63.3	111.7	80.0	20/81

TABLE 2: Three-month Total Rainfall for May to July 2025

Station	Three-month Total	33%tile	67%tile	Median	Rank	
	Rainfall (mm)					
Northern Division						
Niuafo'ou (1971-2025)	n/a					
Niutatoputapu (1947-2025)	564.5	Above normal	320.7	423.0	364.2	63/75
Central Division						
Vava'u (1947-2025)	716.9	Above normal	305.0	409.4	365.0	76/79
Ha'apai (1947-2025)	533.5	Above normal	216.3	320.5	252.7	73/78
Southern Division						
Fua'amotu (1979-2025)	421.4	Normal	263.9	441.7	366.0	27/46
Nuku'alofa (1944-2025)	298.0	Normal	244.0	343.2	298.0	40/81

Part 1i. Monthly and Seasonal Outlooks for September and September to November 2025

Monthly: September	Seasonal: September to November
Rainfall (Image 1)	Rainfall (Image 2)
<p>Tercile rainfall probabilities for September 2025</p> <p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 04/08/2025 Issued: 06/08/2025</p> <p>177°W 176°W 175°W 174°W 173°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>-- EEZ border V11 (Flanders Marine Institute, 2019).</p>	<p>Tercile rainfall probabilities for September to November 2025</p> <p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 04/08/2025 Issued: 06/08/2025</p> <p>177°W 176°W 175°W 174°W 173°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>-- EEZ border V11 (Flanders Marine Institute, 2019).</p>
Monthly Maximum temperature (Image 3):	Seasonal maximum temperature (Image 4):
<p>Tercile maximum temperature probabilities for September 2025</p> <p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 04/08/2025 Issued: 06/08/2025</p> <p>177°W 176°W 175°W 174°W 173°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>-- EEZ border V11 (Flanders Marine Institute, 2019).</p>	<p>Tercile maximum temperature probabilities for September to November 2025</p> <p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 04/08/2025 Issued: 06/08/2025</p> <p>177°W 176°W 175°W 174°W 173°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>-- EEZ border V11 (Flanders Marine Institute, 2019).</p>
Monthly minimum temperature (Image 5):	Seasonal minimum temperature (Image 6):
<p>Tercile minimum temperature probabilities for September 2025</p> <p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 04/08/2025 Issued: 06/08/2025</p> <p>177°W 176°W 175°W 174°W 173°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>-- EEZ border V11 (Flanders Marine Institute, 2019).</p>	<p>Tercile minimum temperature probabilities for September to November 2025</p> <p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 04/08/2025 Issued: 06/08/2025</p> <p>177°W 176°W 175°W 174°W 173°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>-- EEZ border V11 (Flanders Marine Institute, 2019).</p>

Part 2: Recent Ocean Observation

Monthly/Three months: July and May to July 2025

<div>Monthly: July 2025</div> <div>Sea Surface Temperature Anomaly (Image 1):</div> <div><div><div><div>Tonga</div><div>Monthly Sea Surface Temperature Anomalies: July 2025</div><div></div><div>© Pacific Community (SPC) 2025 Reynolds</div></div></div></div> <td><div>Last three months: May to July 2025:</div><div>Sea Surface Temperature Anomaly (Image 4):</div><div><div><div><div>Tonga</div><div>Seasonal Sea Surface Temperature Anomalies : May 2025 - Jul 2025</div><div></div><div>© Pacific Community (SPC) 2025 Reynolds</div></div></div></div><tr><td><div>Sea level anomaly (Image 2):</div><div><div><div><div>Tonga</div><div>Monthly Sea Level Anomaly: June 2025</div><div></div><div>© Pacific Community (SPC) 2025 CMEMS</div></div></div></div><td></td></td></tr><tr><td><div>National daily coral bleaching alert (Image 3):</div><div><div><div><div>Tonga</div><div>Coral Bleaching Alert: 3 August 2025</div><div></div><div>© Pacific Community (SPC) 2025 NOAA</div></div></div></div><td><div>Pacific daily coral bleaching alert (Image 3):</div><div><div><div><div>Pacific Islands</div><div>Coral Bleaching Alert: 3 August 2025</div><div></div><div>© Pacific Community (SPC) 2025 NOAA</div></div></div></div></td></td></tr></td>	<div>Last three months: May to July 2025:</div> <div>Sea Surface Temperature Anomaly (Image 4):</div> <div><div><div><div>Tonga</div><div>Seasonal Sea Surface Temperature Anomalies : May 2025 - Jul 2025</div><div></div><div>© Pacific Community (SPC) 2025 Reynolds</div></div></div></div> <tr><td><div>Sea level anomaly (Image 2):</div><div><div><div><div>Tonga</div><div>Monthly Sea Level Anomaly: June 2025</div><div></div><div>© Pacific Community (SPC) 2025 CMEMS</div></div></div></div><td></td></td></tr> <tr><td><div>National daily coral bleaching alert (Image 3):</div><div><div><div><div>Tonga</div><div>Coral Bleaching Alert: 3 August 2025</div><div></div><div>© Pacific Community (SPC) 2025 NOAA</div></div></div></div><td><div>Pacific daily coral bleaching alert (Image 3):</div><div><div><div><div>Pacific Islands</div><div>Coral Bleaching Alert: 3 August 2025</div><div></div><div>© Pacific Community (SPC) 2025 NOAA</div></div></div></div></td></td></tr>	<div>Sea level anomaly (Image 2):</div> <div><div><div><div>Tonga</div><div>Monthly Sea Level Anomaly: June 2025</div><div></div><div>© Pacific Community (SPC) 2025 CMEMS</div></div></div></div> <td></td>		<div>National daily coral bleaching alert (Image 3):</div> <div><div><div><div>Tonga</div><div>Coral Bleaching Alert: 3 August 2025</div><div></div><div>© Pacific Community (SPC) 2025 NOAA</div></div></div></div> <td><div>Pacific daily coral bleaching alert (Image 3):</div><div><div><div><div>Pacific Islands</div><div>Coral Bleaching Alert: 3 August 2025</div><div></div><div>© Pacific Community (SPC) 2025 NOAA</div></div></div></div></td>	<div>Pacific daily coral bleaching alert (Image 3):</div> <div><div><div><div>Pacific Islands</div><div>Coral Bleaching Alert: 3 August 2025</div><div></div><div>© Pacific Community (SPC) 2025 NOAA</div></div></div></div>
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Part 2i. Monthly and Seasonal Outlooks for September and September to November 2025

Monthly: September	Seasonal: September to November
Monthly sea surface temperature anomaly (Image 5):	Seasonal sea surface temperature anomaly (Image 6):
<div><p>Difference from average sea surface temperature forecast for September 2025</p><p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 02/08/2025 Issued: 04/08/2025</p><p>© Commonwealth of Australia 2025, Bureau of Meteorology, supported by COSPPac</p><p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p></div>	<div><p>Difference from average sea surface temperature forecast for September to November 2025</p><p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 02/08/2025 Issued: 04/08/2025</p><p>© Commonwealth of Australia 2025, Bureau of Meteorology, supported by COSPPac</p><p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p></div>
Monthly sea level anomaly (Image 7):	Seasonal sea level anomaly (Image 8):
<div><p>Difference from average sea surface height forecast for September 2025</p><p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 02/08/2025 Issued: 04/08/2025</p><p>© Commonwealth of Australia 2025, Bureau of Meteorology, supported by COSPPac</p><p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p></div>	<div><p>Difference from average sea surface height forecast for September to November 2025</p><p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 02/08/2025 Issued: 04/08/2025</p><p>© Commonwealth of Australia 2025, Bureau of Meteorology, supported by COSPPac</p><p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p></div>
National 4-week Coral Bleaching Outlook (Image 9):	Pacific 4-week Coral Bleaching Outlook (Image 9):
<div><p>Tonga 4 Weeks Coral Bleaching Outlook: 31 August 2025</p><p>©Commonwealth of Australia 2025 Australian Bureau of Meteorology, COSPPac</p><p>NOAA Coral Reef Watch</p></div>	<div><p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 31 August 2025</p><p>©Commonwealth of Australia 2025 Australian Bureau of Meteorology, COSPPac</p><p>NOAA Coral Reef Watch</p></div>

Summary Statement

Monthly and last three months: July 2025/May to July 2025 statement

The rainfall for July was above normal at Vava'u, near normal rainfall at Niuatoputapu, Ha'apai and Fua'amotu. Below normal rainfall was recorded at Niuafu'ou and Nuku'alofa.

May to July rainfall was above normal at Niuatoputapu, Vava'u and Ha'apai, near normal for Fua'amotu and Nuku'alofa. Vava'u recorded its fourth and Ha'apai its sixth highest May to July rainfall on record.

Part 1i. Monthly and Seasonal Outlooks for September and September to November 2025

Monthly /Seasonal rainfall and temperature Outlook statements

The rainfall for September 2025 is for above normal for Niuatoputapu and Niuafu'ou and likely to be near normal to normal for Nuku'alofa, Fua'amotu, Ha'apai and Vava'u.

The rainfall for September to November is likely to be above normal over Tonga.

Maximum and minimum temperatures for September and September to November are likely to be above normal for all of Tonga.

Part 2: Recent Ocean summary statement

Monthly and last three months: July 2025/May to July 2025

July and averaged over May to July sea surface temperatures (SSTs) around Tonga were near normal to 0.5 to 1.0°C above normal.

July sea levels around Tonga were 50 to 200mm above normal.

The coral bleaching alert as at 3rd August shows "No Stress".

Part 2i. Monthly and Seasonal Outlooks for September and September to November 2025

Ocean Variable statement

September and averaged over September to November sea surface temperatures around Tonga are predicted to be 0.4 to 1.2°C above normal.

September and averaged over September to November sea levels around Tonga are predicted to be near normal to 30 to 100mm below normal.

Coral Bleaching outlook indicates "No Stress" status for the next 4 weeks.

In brief for Teleconference

- Rainfall was generally below normal to normal in July while mostly above normal for July.
- The rainfall outlook is generally very likely to be above normal in September and over September to November.
- SSTs were near-normal to above normal for July and May to July. The outlook shows above normal SSTs for the next one and three months.

- Sea levels were above normal for July. Below normal to near normal sea levels are predicted for September and September to November.

TABLE 3: Stakeholder Engagement- Evaluations of how effective NMS engage with stakeholders

Product	Date: July 2025	Stakeholder	Total Number of Participants	Number of Male	Number of Female	Disability	Age group	Comments (If there are comments from you Stakeholders)
Climate Bulletin	18 th July	Government Ministries, NGO's, Media Private Sector	226	188	37			
Health Products	4 th , 11 th , 18 th , 25 th	Ministry of Health						Weekly Weather & Climate Outlook Briefing # 16,17,18,19, 20, 21 in support to the Ministry of Health on the Declaration of the Dengue Fever Outbreak in Tonga
Monthly Climate Briefing								
Ocean Outlook	18 th July	Government Ministries, NGO's, Media Private Sector	226	188	37			
Climate data request								Requests, made from various governments departments and media for various elements of the climate data especially extreme rain e vents etc
Total			452	376	74			