

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 180

Country: Tuvalu

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Jun-2022	Jul-2022	Aug-2022				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
Nanumea (1941-2022)	57.9	28.3	159.7	143.6	214.0	185.0	27/81
Nui (1946-2022)	55.3	56.5	31.8	143.7	263.4	190.8	1/77
Funafuti (1933-2022)	93.5	87.4	76.0	190.3	304.2	222.6	3/90
Niulakita (1953-2022)	141.8	112.0	229.6	146.4	259.6	217.0	39/70

TABLE 2: Three-month Total Rainfall for June to August 2022

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Nanumea (1941-2022)	245.9	Below normal	435.9	709.9	541.7	7/81
Nui (1946-2022)	143.6	Below normal	499.6	728.3	650.1	1/77
Funafuti (1933-2022)	256.9	Below normal	589.0	809.7	713.8	2/90
Niulakita (1953-2022)	483.4	Below normal	545.2	765.5	632.5	18/70

NB: The X LEPS % score has been categorised as follows:

Very Low: $X < 0.0$

Low: $0 \leq X < 5$

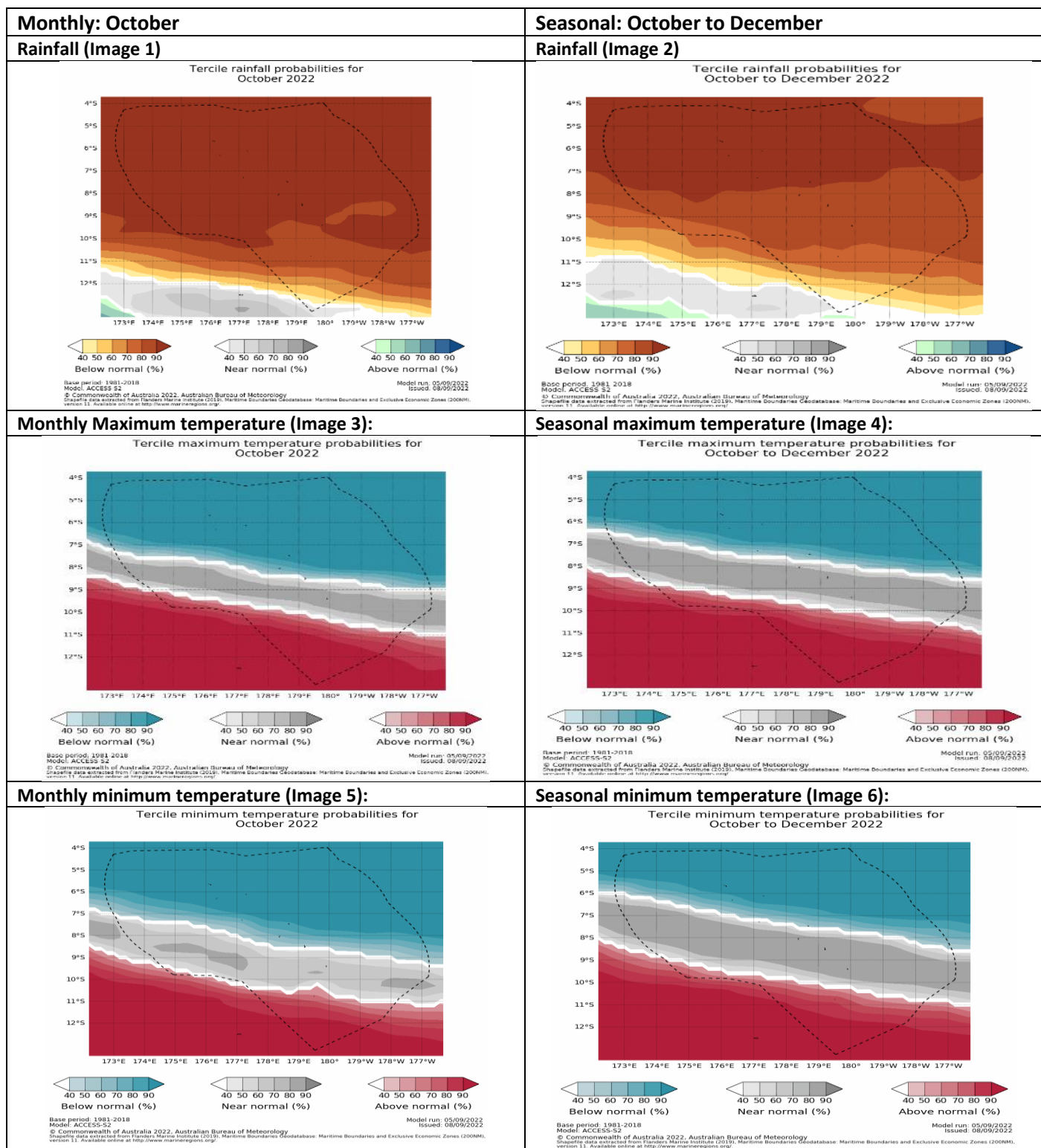
Moderate $5 \leq X < 10$

Good: $10 \leq X < 15$

High: $15 \leq X < 25$

Very High: $25 \leq X < 35$ Exceptional: $X \geq 35$

Part 1i. Monthly and Seasonal Outlooks for October and October to December 2022



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Part 2: Recent Ocean Observation

Monthly/Three months: August 2022 and June to August 2022

Monthly: August	Last three months: June to August 2022:
<p>Sea Surface Temperature (Image 1):</p> <p>Tuvalu Monthly Average Sea Surface Temperature Anomaly: August 2022</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPAR/COMP Reynolds SST</p>	<p>Sea Surface Temperature (Image 4):</p> <p>Tuvalu 3 monthly Average Sea Surface Temperature Anomaly: June 2022 to August 2022</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPAR/COMP Reynolds SST</p>
<p>Sea level (Image 2):</p> <p>Tuvalu Monthly Near Real Time Sea Level Anomaly: August 2022</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPAR, COMRUSO, StatsData/SLA</p>	
<p>Daily coral bleaching alert (Image 3):</p> <p>Pacific Ocean Daily Coral Bleaching Alert: 06 September 2022</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPAR/COMP NOAA Coral Reef Watch</p>	<p>Daily coral bleaching alert (Image 3):</p> <p>Tuvalu Daily Coral Bleaching Alert: 06 September 2022</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPAR/COMP/NOAA Coral Reef Watch</p>

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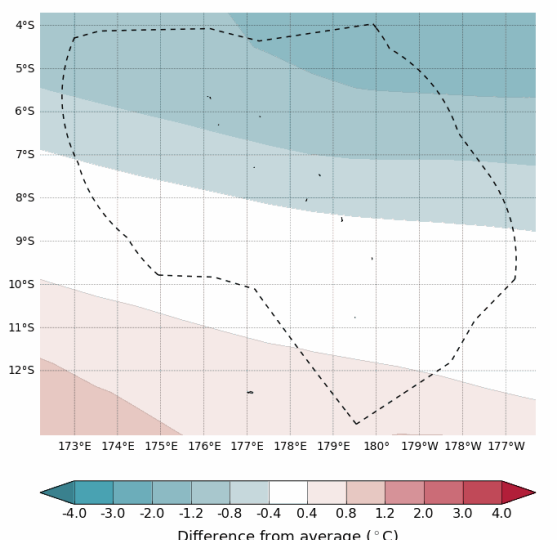
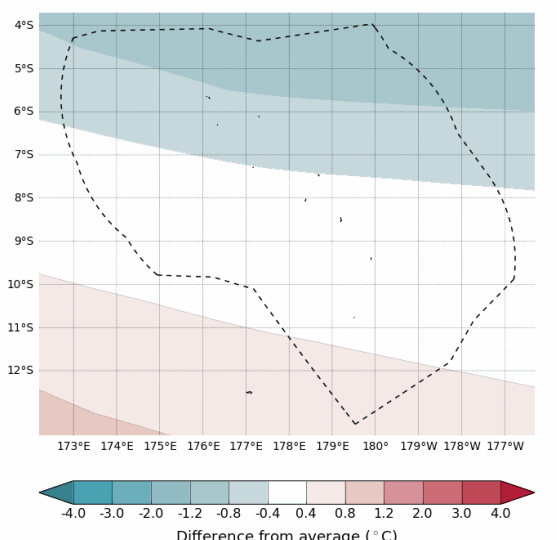
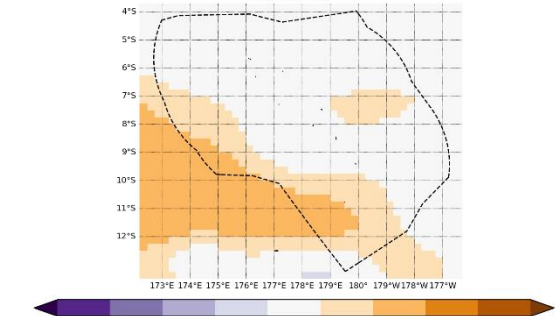
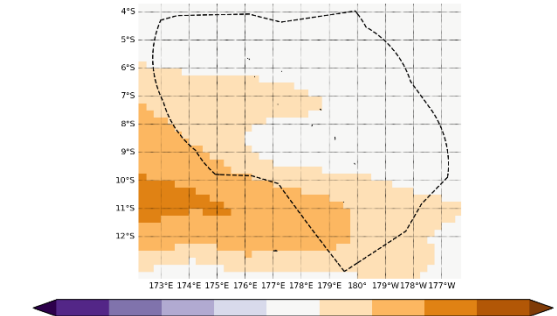
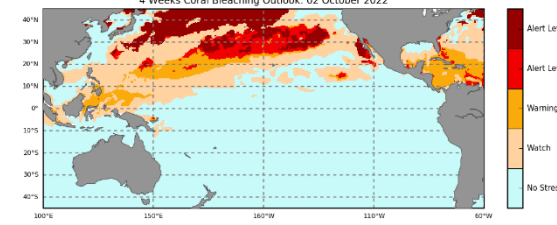
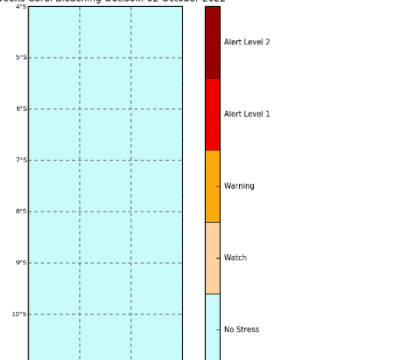
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Part 2i. Monthly and Seasonal Outlooks for October and October to December 2022

Monthly: October	Seasonal: October to December
<p>Monthly sea surface temperature (Image 5):</p> <p>Difference from average sea surface temperature forecast for October 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapellee data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.maritimerregions.org/.</p>	<p>Seasonal sea surface temperature (Image 6):</p> <p>Difference from average sea surface temperature forecast for October to December 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapellee data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.maritimerregions.org/.</p>
<p>Monthly sea level (Image 7):</p> <p>Difference from average sea surface height forecast for October 2022</p>  <p>© Commonwealth of Australia 2022 Bureau of Meteorology Model: ACCESS-S2 Base Period: 1981-2018 Model Run: 28/08/2022 Issued: 06/09/2022</p>	<p>Seasonal sea level (Image 8):</p> <p>Difference from average sea surface height forecast for October 2022 to December 2022</p>  <p>© Commonwealth of Australia 2022 Bureau of Meteorology Model: ACCESS-S2 Base Period: 1981-2018 Model Run: 28/08/2022 Issued: 06/09/2022</p>
<p>4-week Coral Bleaching (Image 9):</p> <p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 02 October 2022</p>  <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, CCSP/Spec COM9P NOAA Coral Reef Watch</p>	<p>Tuvalu 4 Weeks Coral Bleaching Outlook: 02 October 2022</p>  <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, CCSP/Spec COM9/NOAA Coral Reef Watch</p>

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Summary Statement

Monthly and last three months: August 2022/June to August 2022 statement

August: Rainfall was below normal at Nui and Funafuti, while Nanumea and Niulakita observed normal rainfall. Niu and Funafuti recorded their driest and third driest August on record respectively.

June to August: Below normal rainfall was observed across the country. Niu, Funafuti and Nanumea recorded their driest, second driest and seventh driest June to August on record respectively.

Part 1i. Monthly and Seasonal Outlooks for October and October to December 2022

Monthly /Seasonal rainfall and temperature Outlook statements

The monthly and seasonal outlook for October and October to December for Tuvalu shows below normal rainfall is very likely for all stations (Nanumea, Nui, Funafuti and Niulakita).

Maximum and minimum temperatures averaged over October and October to December are likely or very likely to be below normal at Nanumea and Niu, near-normal at Funafuti, and above normal at Niulakita.

Part 2: Recent Ocean summary statement

Monthly and last three months: August/June to August 2022

The sea surface temperature for August and the last three months, reveal mostly near normal conditions for central and southern Tuvalu, with negative anomalies approaching -1 °C for northern Tuvalu.

For August 2022, Tuvalu sea level was about 50-150mm above normal.

Coral Bleaching status in the last month was 'No Stress' for the whole group of Tuvalu.

Part 2i. Monthly and Seasonal Outlooks for October and October to December 2022

Ocean Variable statement

Monthly and seasonal sea-surface temperature outlooks indicate below normal is very likely for the northern group, with near-normal conditions for the central and southern groups of Tuvalu.

The sea level anomaly forecasts for October and October to December reveals near normal conditions, with portions of Tuvalu forecasted to experience above normal sea level anomalies of utmost 60mm.

Coral bleaching outlook for Tuvalu reveals no thermal stress for the next four weeks.

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

Product	Date: August 2022	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin		MET Staff	22	17	5
		Disaster Dept	2	2	
		TRC	2	1	1
		TuCAN	1	1	
		Agriculture	2		2
		All Civil Servants			
		All Kaupule Members			
EAR Watch		MET Staff	22	17	5
		Disaster Dept	2	2	
		TRC	2	1	1
		TuCAN	1	1	
		Agriculture	2		2
		All Civil Servants			
		All Kaupule Members			
Monthly Climate Briefing		MET Staff	22	17	5
		Disaster Dept	2	2	
		TRC	2	1	1
		TuCAN	1	1	
		Agriculture	2		2
		All Civil Servants			
		All Kaupule Members			
Ocean Outlook		MET Staff	22	17	5
		Disaster Dept	2	2	
		TRC	2	1	1
		TuCAN	1	1	
		Agriculture	2		2
		All Civil Servants			
		All Kaupule Members			
Climate data request		Tautalo Iese(Student)	1		1
Total			117	84	33

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