

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 181

Country: Tuvalu

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Jul-2022	Aug-2022	Sep-2022				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Nanumea (1941-2022)	28.3	159.7	99.6	86.3	169.4	121.1	30/80
Nui (1946-2022)	56.5	31.8	167.8	125.3	198.5	175.8	37/77
Funafuti (1933-2022)	87.4	76.0	113.2	164.4	247.5	209.4	15/90
Niulakita (1953-2022)	112.0	229.6	99.4	177.7	231.3	192.0	11/70

TABLE 2: Three-month Total Rainfall for July to September 2022

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Nanumea (1941-2022)	287.6	Below normal	401.2	609.7	477.2	15/81
Nui (1946-2022)	256.1	Below normal	528.3	691.9	610.5	6/77
Funafuti (1933-2022)	276.6	Below normal	609.0	795.0	710.6	4/90
Niulakita (1953-2022)	441.0	Below normal	526.4	525.4	622.1	15/70

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

Very Low: $X < 0.0$

Low: $0 \leq X < 5$

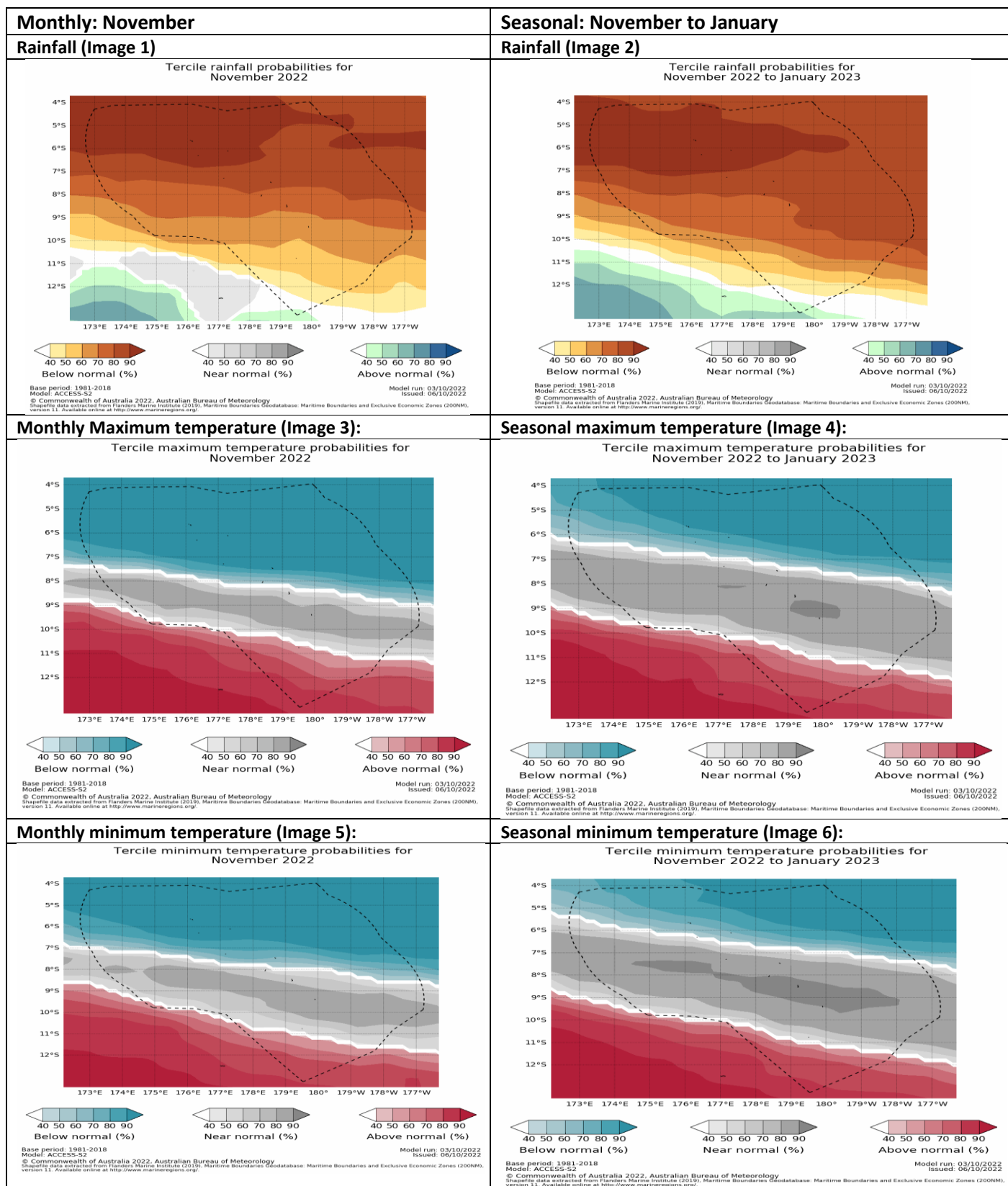
Moderate $5 \leq X < 10$

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 November and November to January 2023



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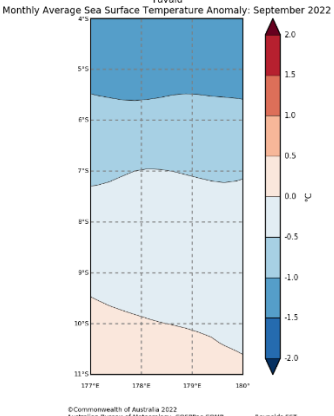
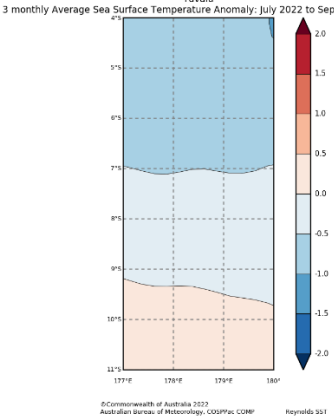
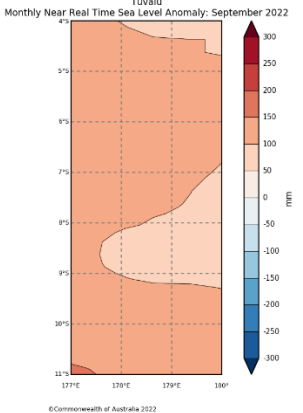
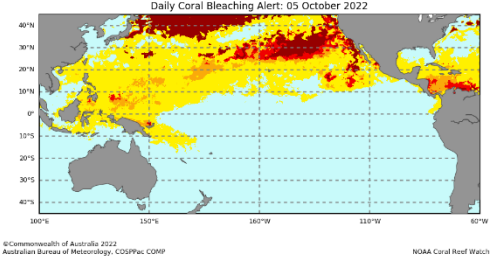
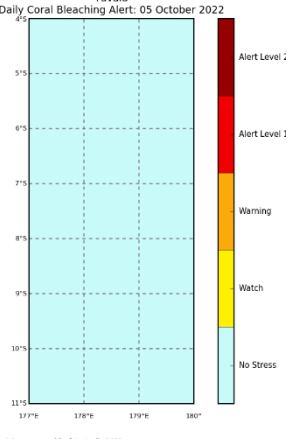
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Part 2: Recent Ocean Observation

Monthly/Three months: September 2022 and July to September 2022

Monthly: September	Last three months: July to September 2022:
Sea Surface Temperature (Image 1):	Sea Surface Temperature (Image 4):
	
Sea level (Image 2):	
	
Daily coral bleaching alert (Image 3):	
	

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Part 2i. Monthly and Seasonal Outlooks for November and November to January 2023

Monthly: November	Seasonal: November to January
Monthly sea surface temperature (Image 5):	Seasonal sea surface temperature (Image 6):
<p>Difference from average sea surface temperature forecast for November 2022</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Tanager Marine Institute (2019). Maritime Boundaries. Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008M), version 1.1. Available online at http://www.marine.gov.au</p> <p>Model run: 10/10/2022 Issued: 12/10/2022</p>	<p>Difference from average sea surface temperature forecast for November 2022 to January 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Tanager Marine Institute (2019). Maritime Boundaries. Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008M), version 1.1. Available online at http://www.marine.gov.au</p> <p>Model run: 10/10/2022 Issued: 12/10/2022</p>
Monthly sea level (Image 7):	Seasonal sea level (Image 8):
<p>Difference from average sea surface height forecast for November 2022</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Tanager Marine Institute (2019). Maritime Boundaries. Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008M), version 1.1. Available online at http://www.marine.gov.au</p> <p>Model run: 10/10/2022 Issued: 12/10/2022</p>	<p>Difference from average sea surface height forecast for November 2022 to January 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Tanager Marine Institute (2019). Maritime Boundaries. Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008M), version 1.1. Available online at http://www.marine.gov.au</p> <p>Model run: 10/10/2022 Issued: 12/10/2022</p>
4-week Coral Bleaching (Image 9):	
<p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 30 October 2022</p> <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac COMP</p> <p>NOAA Coral Reef Watch</p>	<p>Tuvalu 4 Weeks Coral Bleaching Outlook: 30 October 2022</p> <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac COMINOAA Coral Reef Watch</p>

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Summary Statement

Monthly and last three months: September 2022/July to September 2022 statement

September: Normal rainfall observed at Nanumea and Nui, while Funafuti and Niulakita observed below normal rainfall.

July to September: Below normal rainfall was observed across the country.

Part 1i. Monthly and Seasonal Outlooks for November and November to January 2023

Monthly /Seasonal rainfall and temperature Outlook statements

Rainfall across Tuvalu during November and November to January is likely or very likely to be below normal, especially over the northern islands.

Nanumea: Monthly and seasonal maximum and minimum temperatures are very likely to be below normal.

Nui: Monthly maximum and minimum temperatures are very likely to be below normal, but seasonal maximum and minimum temperatures are likely to be near-normal.

Funafuti: Monthly and seasonal maximum and minimum temperatures are very likely to be near-normal.

Niulakita: Monthly maximum temperatures likely to be above normal, but monthly minimum temperatures likely to be near-normal. Seasonal maximum and minimum temperatures likely to be near-normal.

Part 2: Recent Ocean summary statement

Monthly and last three months: September/July to September 2022

The sea surface temperature for September and the last three months, July to September, reveals below normal SSTs for northern Tuvalu with SST differences of utmost -1.5 degrees Celsius below average. The remaining parts of Tuvalu experienced near normal SST anomalies.

The sea level anomaly for September reveals above normal sea level height differences of utmost 150mm.

Coral bleaching alerts reveals no thermal stress.

Part 2i. Monthly and Seasonal Outlooks for September and September to January 2023

Ocean Variable statement

The monthly and seasonal SST outlook for November and November to January predicts below normal is likely for the northern group, with near normal conditions for the central and southern groups of Tuvalu.

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

Coral bleaching outlook for the next four weeks reveals no thermal stress over the whole group of Tuvalu.

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

Product	Date: September 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					
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					
Total			87	63	24

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