

Country: TUVALU

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	May-2023	Jun-2023	Jul-2023				
	Total (mm)	Total (mm)	Total (mm)	33%tile	67%tile	Median	Rank
			Rainfall (mm)				
Nanumea (1941-2023)	95.4	104.2	123.5	119.0	214.9	155.4	27/82
Nui (1946-2023)	213.5	109.5	156.1	160.0	231.1	197.9	25/78
Funafuti (1933-2023)	166.7	74.1	289.0	191.3	263.6	219.7	63/91
Niulakita (1953-2023)	121.9	60.5	99.4	162.6	254.7	218.0	8/71

TABLE 2: Three-month Total Rainfall for May to July 2023

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Nanumea (1941-2023)	323.1	Below normal	444.0	711.0	559.9	18/82
Nui (1946-2023)	479.1	Below normal	504.7	706.1	578.3	25/78
Funafuti (1933-2023)	529.8	Below normal	621.2	749.0	696.1	21/91
Niulakita (1953-2023)	281.8	Below normal	546.0	775.9	631.2	3/71

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

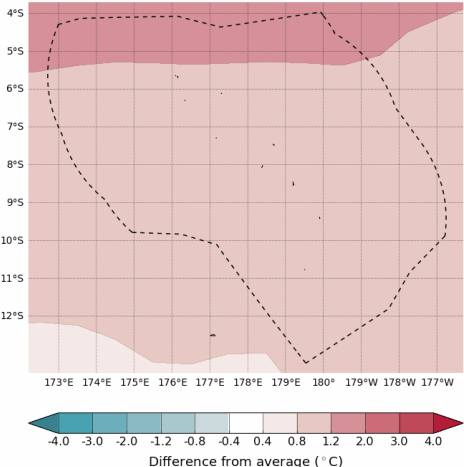
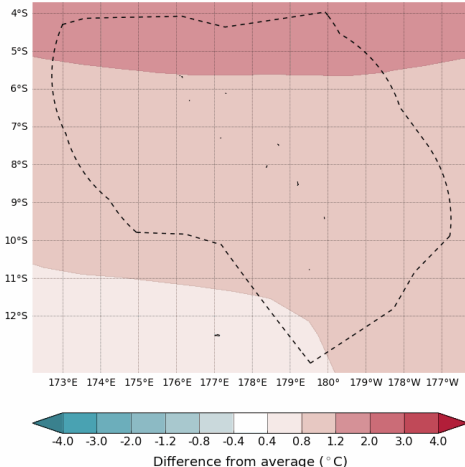
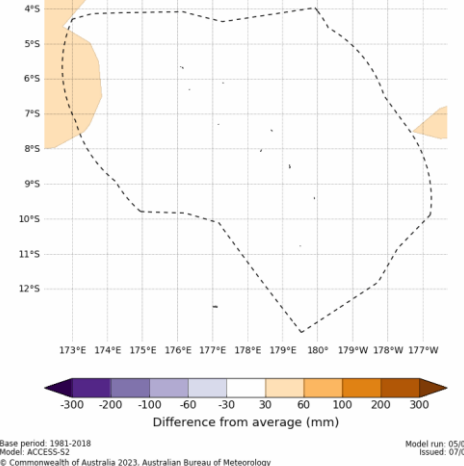
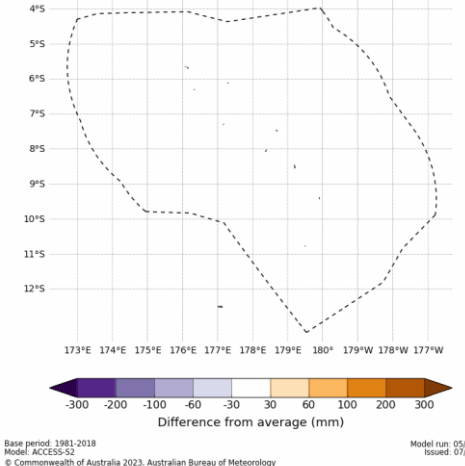
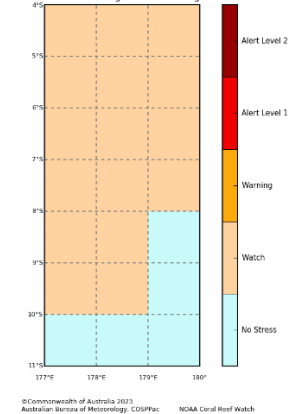
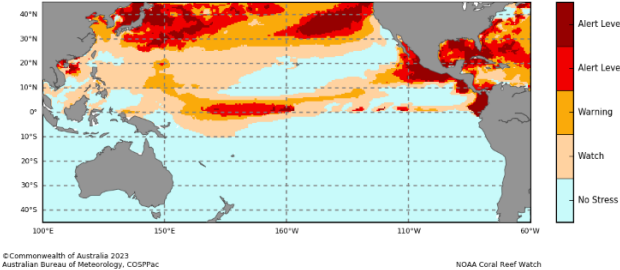
Monthly: September	Seasonal: September to November
Rainfall (Image 1)	Rainfall (Image 2)
<p>Tercile rainfall probabilities for September 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.maritimerregions.org/ Model run: 05/08/2023 Issued: 08/08/2023</p>	<p>Tercile rainfall probabilities for September to November 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile 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/ Model run: 05/08/2023 Issued: 08/08/2023</p>
Monthly Maximum temperature (Image 3):	Seasonal maximum temperature (Image 4):
<p>Tercile maximum temperature probabilities for September 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile 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/ Model run: 05/08/2023 Issued: 08/08/2023</p>	<p>Tercile maximum temperature probabilities for September to November 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile 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/ Model run: 05/08/2023 Issued: 08/08/2023</p>
Monthly minimum temperature (Image 5):	Seasonal minimum temperature (Image 6):
<p>Tercile minimum temperature probabilities for September 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile 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/ Model run: 05/08/2023 Issued: 08/08/2023</p>	<p>Tercile minimum temperature probabilities for September to November 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile 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/ Model run: 05/08/2023 Issued: 08/08/2023</p>

Part 2: Recent Ocean Observation

Monthly/Three months: May and May to July 2023

Monthly: July	Last three months: May to July 2023:
Sea Surface Temperature (Image 1): <div></div>	Sea Surface Temperature (Image 4): <div></div>
Sea level (Image 2): <div></div>	
Daily coral bleaching alert (Image 3): <div></div>	<div></div>

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

Monthly: September	Seasonal: September to November
<p>Monthly sea surface temperature (Image 5):</p> <p>Difference from average sea surface temperature forecast for September 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapell data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 1.1. Available online at http://www.maritimeregions.org/</p> <p>Model run: 05/08/2023 Issued: 07/08/2023</p>	<p>Seasonal sea surface temperature (Image 6):</p> <p>Difference from average sea surface temperature forecast for September to November 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapell data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 1.1. Available online at http://www.maritimeregions.org/</p> <p>Model run: 05/08/2023 Issued: 07/08/2023</p>
<p>Monthly sea level (Image 7):</p> <p>Difference from average sea surface height forecast for September 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapell data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 1.1. Available online at http://www.maritimeregions.org/</p> <p>Model run: 05/08/2023 Issued: 07/08/2023</p>	<p>Seasonal sea level (Image 8):</p> <p>Difference from average sea surface height forecast for September to November 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapell data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 1.1. Available online at http://www.maritimeregions.org/</p> <p>Model run: 05/08/2023 Issued: 07/08/2023</p>
<p>4-week Coral Bleaching (Image 9):</p> <p>Tuvalu 4 Weeks Coral Bleaching Outlook: 27 August 2023</p>  <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>	<p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 27 August 2023</p>  <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>

Summary Statement

Monthly and last three months Rainfall: July 2023/May to July 2023 statement

July: Below normal at Nui and Niulakita, near-normal rainfall at Funafuti, and above normal at Nanumea.

May to July: Below normal observed across the country. Niulakita recorded its third driest May to July in 71 years of record.

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

Monthly /Seasonal rainfall and temperature Outlook statements

Rainfall for September is likely to be above normal at Nanumaga, Nui, Nukulaelae and Niulakita, while it is likely to be near-normal at Nanumea, Niutao and Nukufetau. The outlook offers little guidance for Vaitupu and Funafuti.

September to November rainfall is likely or very likely to be above normal across the whole country.

Maximum and minimum temperatures for September and averaged over September to November are very likely to be above normal.

Part 2: Recent Ocean summary statement

Monthly and last three months: July 2023/May to July 2023

July ocean temperatures around Tuvalu and the averaged for May to July were 0.5 to 1.0°C above normal, with exception of South-West part of Tuvalu EEZ were 1.0 to 1.5°C above normal.

July sea levels around Northern Tuvalu were 0mm to 50mm near normal, while for the Central part were 50mm to 100mm above normal. Sea levels in the Southern part were 100mm to 150mm above normal and a very little portion of 150mm to 200mm above normal for South-West part of Tuvalu.

Coral Bleaching alert reveals 'Watch' status across the country of Tuvalu.

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

Ocean Variable statement

September ocean temperatures around the Northern group is predicted to be 0.8 to 2.0°C above normal, while for the Central and Southern group are predicted to be 0.8 to 1.2°C above normal.

Averaged over September to November, ocean temperatures around the Northern group are predicted to be 0.8 to 2.0°C above normal. While for the Central and Southern group are predicted to be 0.8 to 1.2°C.

September sea levels around whole group of Tuvalu and averaged for September to November are predicted to be --30mm to 30mm near normal.

Coral Bleaching Outlook for the next four weeks till 27th of August is on 'Watch' for the Northern and Central part with no thermal stress over the Eastern to Southern part of Tuvalu.

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

Product	Date: July 2023	Stakeholder	Total Number of Participants	Number of Male	Number of Female	Comments (If there are comments from you Stakeholders)
Climate Bulletin	31 st July	MET Staff	24	13	11	
		Disaster Dept	2	1	1	
		TRC	2	2		
		TuCAN	1		1	
		Agriculture	1	1		
		All Civil Servants	All Staff			
		All-Kaupule Secretary	13	7	6	
EAR Watch	2 nd August	MET Staff	24	13	11	
		Disaster Dept	2	1	1	
		TRC	2	2		
		TuCAN	1		1	
		Agriculture	1	1		
		All Civil Servants	All Staff			
		All-Kaupule Secretary	13	7	6	
Monthly Climate Briefing		MET Staff	24	13	11	
		Disaster Dept	2	1	1	
		TRC	2	2		
		TuCAN	1		1	
		Agriculture	1	1		
		All Civil Servants	All Staff			
		All-Kaupule Secretary	13	7	6	
Ocean Outlook	2 nd August	MET Staff	24	13	11	
		Disaster Dept	2	1	1	
		TRC	2	2		
		TuCAN	1		1	
		Agriculture	1	1		
		All Civil Servants	All Staff			
		All-Kaupule Secretary	13	7	6	
Climate data request	30th July	MET Staff	24	13	11	
		Disaster Dept	2	1	1	
		TRC	2	2		
		TuCAN	1		1	
		Agriculture	1	1		
		All Civil Servants	All Staff			
			13	7	6	

		All-Kaupule Secretary				
Total			172	96	76	