

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 197

Country: Tuvalu

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Nov-2023	Dec-2023	Jan-2024				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
Nanumea (1941-2024)	210.1	252.4	376.1	251.6	388.0	328.8	53/83
Nui (1946-2024)	257.5	246.1	210.2	242.0	443.1	321.3	17/79
Funafuti (1933-2024)	279.2	339.4	440.3	288.6	445.8	383.2	55/92
Niulakita (1953-2024)	449.2	177.7	286.3	299.0	442.0	373.6	24/71

TABLE 2: Three-month Total Rainfall for November 2023 to January 2024

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Nanumea (1941-2024)	838.6	Normal	581.9	996.3	868.0	37/82
Nui (1946-2024)	713.8	Below normal	813.7	1092.0	941.7	20/76
Funafuti (1933-2024)	1058.9	Normal	907.4	1134.5	1011.3	49/91
Niulakita (1953-2024)	913.2	Normal	829.5	1135.6	1024.4	27/67

Part 1i. Monthly and Seasonal Outlooks for March and March to May 2024

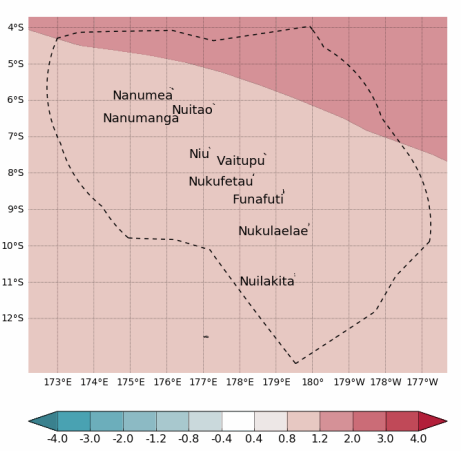
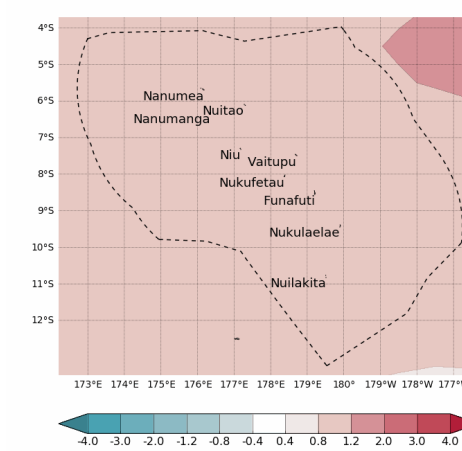
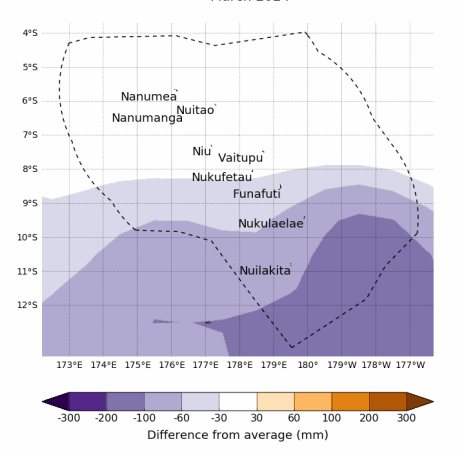
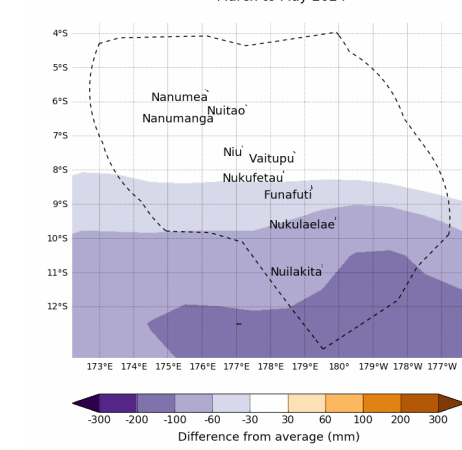
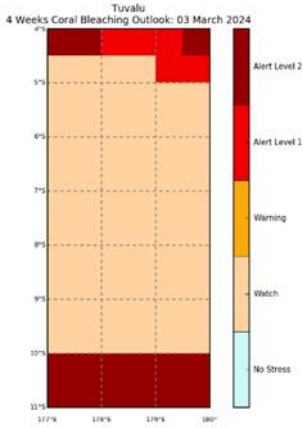
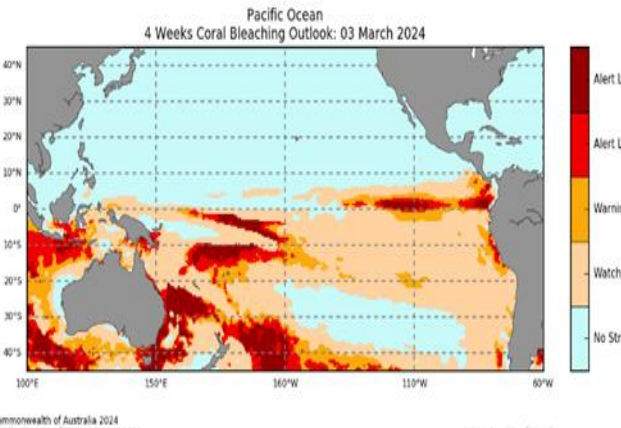
Monthly: March	Seasonal: March to May
<p>Rainfall (Image 1)</p> <p>Tercile rainfall probabilities for March 2024</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marine.gov.au</p> <p>Model run: 03/02/2024 Issued: 05/02/2024</p>	<p>Rainfall (Image 2)</p> <p>Tercile rainfall probabilities for March to May 2024</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marine.gov.au</p> <p>Model run: 03/02/2024 Issued: 05/02/2024</p>
<p>Monthly Maximum temperature (Image 3):</p> <p>Tercile maximum temperature probabilities for March 2024</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marine.gov.au</p> <p>Model run: 27/01/2024 Issued: 29/01/2024</p>	<p>Seasonal maximum temperature (Image 4):</p> <p>Tercile maximum temperature probabilities for March to May 2024</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marine.gov.au</p> <p>Model run: 27/01/2024 Issued: 29/01/2024</p>
<p>Monthly minimum temperature (Image 5):</p> <p>Tercile minimum temperature probabilities for March 2024</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marine.gov.au</p> <p>Model run: 27/01/2024 Issued: 29/01/2024</p>	<p>Seasonal minimum temperature (Image 6):</p> <p>Tercile minimum temperature probabilities for March to May 2024</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marine.gov.au</p> <p>Model run: 27/01/2024 Issued: 29/01/2024</p>

Part 2: Recent Ocean Observation

Monthly/Three months: January 2024 and November 2023 to January 2024

Monthly: January 2024	Last three months: November 2023 to January 2024:
<p>Sea Surface Temperature (Image 1):</p> <p>Tuvalu Monthly Average Sea Surface Temperature Anomaly: January 2024</p> <p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSIPac Reynolds SST</p>	<p>Sea Surface Temperature (Image 4):</p> <p>Tuvalu 3 monthly Average Sea Surface Temperature Anomaly: November 2023 to January 2024</p> <p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSIPac Reynolds SST</p>
<p>Sea level (Image 2):</p> <p>Tuvalu Monthly Near Real Time Sea Level Anomaly: January 2024</p> <p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSIPac JERSD SeaSurface S.L.A.</p>	
<p>Daily coral bleaching alert (Image 3):</p> <p>Tuvalu Daily Coral Bleaching Alert: 07 February 2024</p> <p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSIPac NOAA Coral Reef Watch</p>	<p>Pacific Ocean</p> <p>Daily Coral Bleaching Alert: 07 February 2024</p> <p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSIPac NOAA Coral Reef Watch</p>

Part 2i. Monthly and Seasonal Outlooks for March and March to May 2024

Monthly: March	Seasonal: March to May
<p>Monthly sea surface temperature (Image 5):</p> <p>Difference from average sea surface temperature forecast for March 2024</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapefile data extracted from Fisheries Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/</p> <p>Model run: 29/01/2024 Issued: 31/01/2024</p>	<p>Seasonal sea surface temperature (Image 6):</p> <p>Difference from average sea surface temperature forecast for March to May 2024</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapefile data extracted from Fisheries Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/</p> <p>Model run: 29/01/2024 Issued: 31/01/2024</p>
<p>Monthly sea level (Image 7):</p> <p>Difference from average sea surface height forecast for March 2024</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapefile data extracted from Fisheries Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/</p> <p>Model run: 29/01/2024 Issued: 31/01/2024</p>	<p>Seasonal sea level (Image 8):</p> <p>Difference from average sea surface height forecast for March to May 2024</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapefile data extracted from Fisheries Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/</p> <p>Model run: 29/01/2024 Issued: 31/01/2024</p>
<p>4-week Coral Bleaching (Image 9):</p> <p>Tuvalu 4 Weeks Coral Bleaching Outlook: 03 March 2024</p>  <p>© Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSPPAC</p> <p>NOAA Coral Reef Watch</p>	<p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 03 March 2024</p>  <p>© Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSPPAC</p> <p>NOAA Coral Reef Watch</p>

Summary Statement

Monthly and last three months: January 2024/November 2023 to January 2024 statement

The rainfall for January was normal over Nanumea, and Funafuti, while below normal at Nui and Niulakita.

For the past three months, rainfall was near-normal over Nanumea, Funafuti and Niulakita, but below normal at Nui.

Part 1i. Monthly and Seasonal Outlooks for March and March to May 2024

Monthly /Seasonal rainfall and temperature Outlook statements

The rainfall for March is likely to be above normal over Central group, while very likely to be above normal for Northern group. The outlook offers little guidance at the Southern group, but for the Eastern and Western side of Tuvalu EEZ are likely to be near normal including Nui, Vaitupu and Niulakita.

The rainfall for March to May is very likely to be above over the Northern and Central part of the country, while likely for the Southern and parts of the Central.

Maximum and minimum temperatures during March and averaged over March to May are very likely to be above normal over Tuvalu.

Part 2: Recent Ocean summary statement

Monthly and last three months: January 2024/November 2023 to January 2024

January ocean temperatures around Northern group and Central group were 1.0 to 2.0°C above normal. In the Southern group were 1.0 to 1.5°C above normal.

Averaged over November to January, ocean temperatures over Tuvalu were 1.0 to 1.5°C above normal.

January sea levels around the Northern group were 100mm to 150mm above normal. In the Central and Southern group were 50mm to 150mm above normal, excluding some parts for the South of Tuvalu EEZ were near normal.

Coral Bleaching Alert shows “Alert Level 2” for most of Tuvalu.

Part 2i. Monthly and Seasonal Outlooks for March and March to May 2024

Ocean Variable statement

March ocean temperatures and averaged over March to May ocean temperatures around Tuvalu are predicted to be 0.8 to 1.2°C above normal.

Averaged over March to May, ocean temperatures over Tuvalu are predicted to be above normal.

March sea levels and averaged over March to May around the Northern group and Central group are predicted to be near normal and for the Southern group are predicted to be -30mm to -100mm below normal.

Coral Bleaching outlook for the next four weeks, are predicted to be Alert Level 2 over far Northern and Southern group of Tuvalu.

IN BRIEF for Teleconference

- Rainfall for January and November to January was near-normal to below normal.
- The rainfall outlook generally indicates above normal most likely in March and March to May.
- Temperatures during March and averaged over March to May.
- SSTs were above normal for January and November to January over Tuvalu. The outlook predicts above normal SSTs for the next one and three months.
- Sea-surface heights (SSH) were above normal for January around the Northern group and Central group. Below normal sea surface height for Southern group of Tuvalu are predicted for March and March to May.
- Coral Bleaching Alert and outlook predicts Alert Level 2 for Tuvalu.

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

Product	Date: January 2024	Stakeholder	Total Number of Participants	Number of Male	Number of Female	Comments (If there are comments from you Stakeholders)
Climate Bulletin	26/01/24	MET Staff	All			
		Disaster Dept	1		1	
		TRC	3	2	1	
		TuCAN	2	1	1	
		Agriculture	2	1	1	
		All Civil Servants	All			
		All-Kaupule Secretary	13	7	6	
EAR Watch	26/01/24	MET Staff	All			
		Disaster Dept	1		1	
		TRC	3	2	1	
		TuCAN	2	1	1	
		Agriculture	2	1	1	
		All Civil Servants	All			
		All-Kaupule Secretary	13	7	6	
Monthly Climate Briefing		MET Staff	All			
		Disaster Dept	1		1	
		TRC	3	2	1	
		TuCAN	2	1	1	
		Agriculture	2	1	1	
		All Civil Servants	All			
		All-Kaupule Secretary	13	7	6	
Océan Outlook	26/01/24	MET Staff	All			
		Disaster Dept	1		1	
		TRC	3	2	1	
		TuCAN	2	1	1	
		Agriculture	2	1	1	
		All Civil Servants	All			
		All-Kaupule Secretary	13	7	6	
Climate data request						
Total			84	44	40	