

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 174

Country: Tuvalu

Part 1: Recent climate

TABLE 1: Monthly Rainfall.

Station (include data period)	Dec-2021	Jan-2022	Feb-2022				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Nanumea (1941-2022)	69.8	457.3	93.9	166.3	336.4	264.2	12/82
Nui (1946-2022)	209.7	245.3	151.7	225.1	356.4	286.8	11/77
Funafuti (1933-2022)	588.2	616.4	220.8	259.0	427.3	332.6	21/90
Niulakita (1953-2022)	237.6	503.7	185.6	268.8	395.8	330.9	12/70

TABLE 2: Three-month Total Rainfall for December 2021 to February 2022

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Nanumea (1941-2022)	621.0	Below normal	709.5	1131.6	978.1	21/80
Nui (1946-2022)	606.7	Below normal	832.6	1196.9	1065.5	10/76
Funafuti (1933-2022)	1425.4	Above normal	993.4	1248.5	1111.4	76/89
Niulakita (1953-2022)	926.9	Normal	893.5	1181.9	1030.0	31/69

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

Very Low: $X < 0.0$

Low: $0 \leq X < 5$

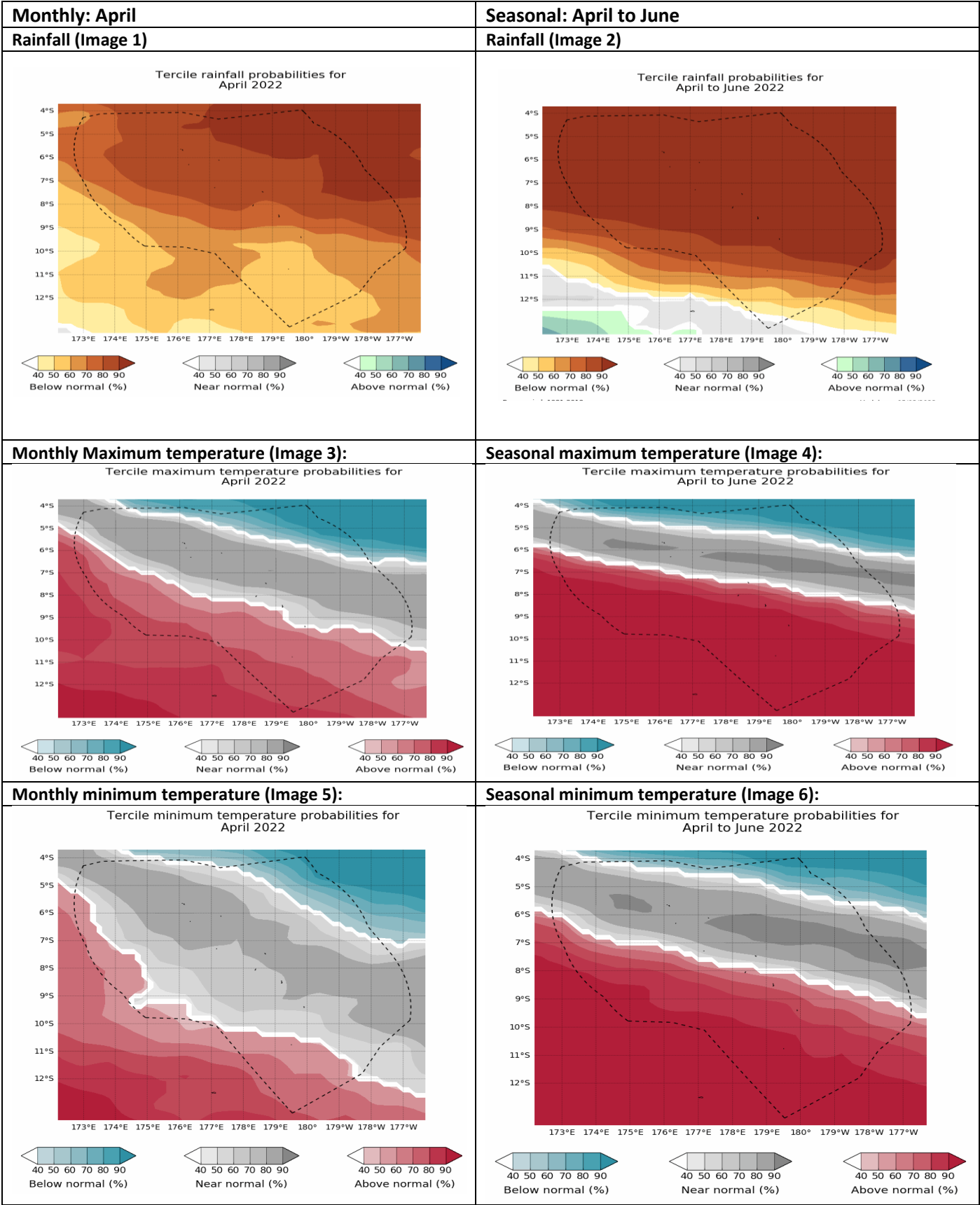
Moderate $5 \leq X < 10$

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 April and April to June 2022



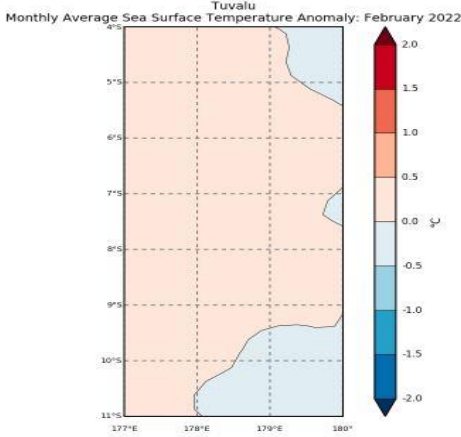
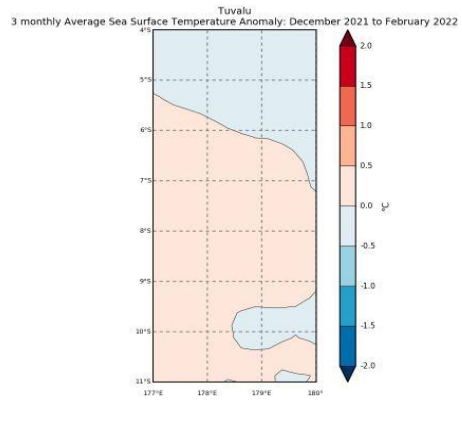
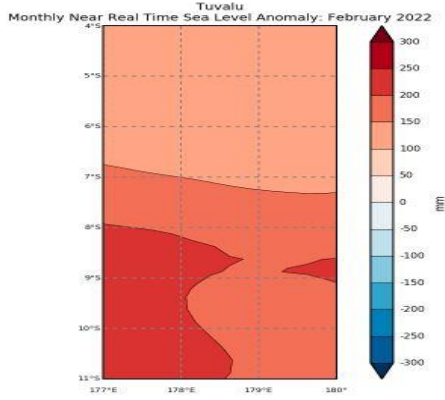
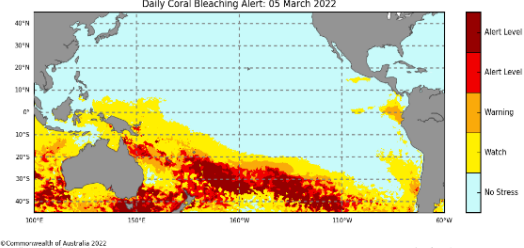
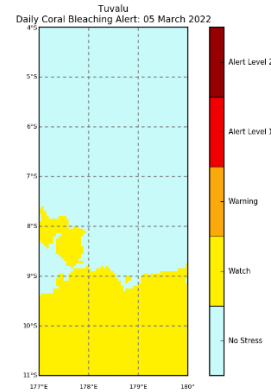
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Part 2: Recent Ocean summary statement

Monthly: February 2022

Monthly: February	Last three months: December 2021 to February 2022:
Sea Surface Temperature (Image 1):	Sea Surface Temperature (Image 4):
 <p>Tuvalu Monthly Average Sea Surface Temperature Anomaly: February 2022</p>	 <p>Tuvalu 3 monthly Average Sea Surface Temperature Anomaly: December 2021 to February 2022</p>
Sea level (Image 2):	
 <p>Tuvalu Monthly Near Real Time Sea Level Anomaly: February 2022</p>	
Daily coral bleaching alert (Image 3):	
 <p>Pacific Ocean Daily Coral Bleaching Alert: 05 March 2022</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac COMP</p> <p>NOAA Coral Reef Watch</p>	 <p>Tuvalu Daily Coral Bleaching Alert: 05 March 2022</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac: COM/NOAA Coral Reef Watch</p>

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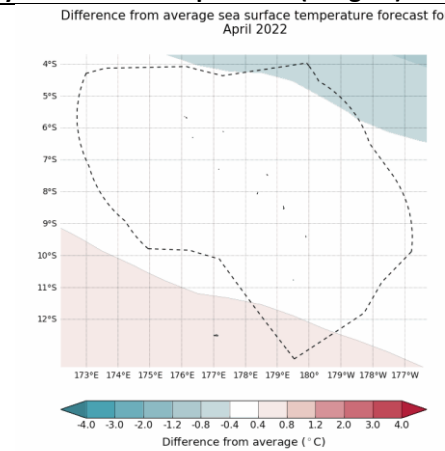
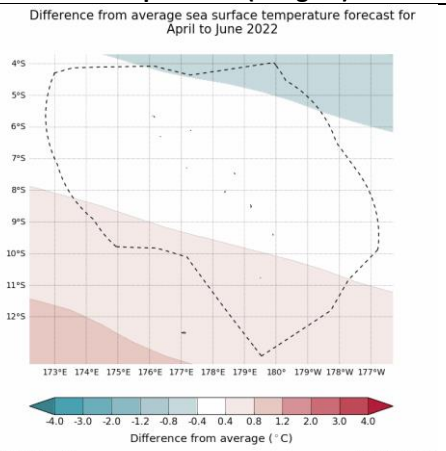
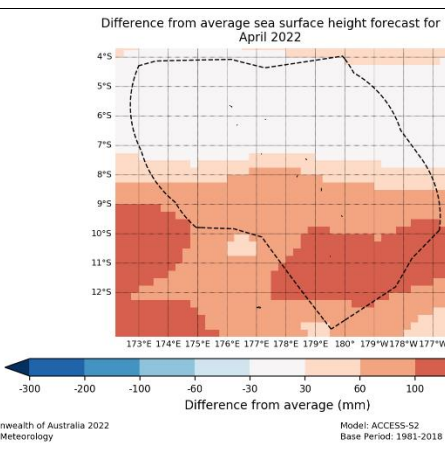
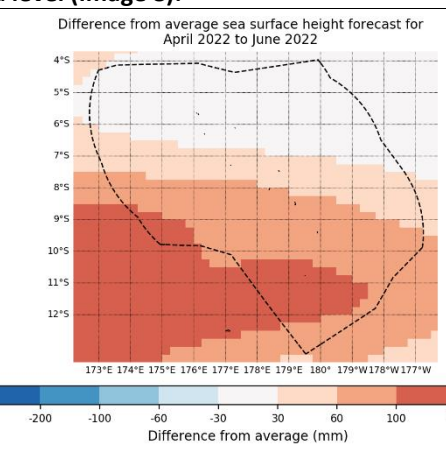

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Part 2i. Monthly and Seasonal Outlooks for April and April to June 2022

<p>Monthly: April</p> <p>Monthly sea surface temperature (Image 5):</p>  <p>Difference from average sea surface temperature forecast for April 2022</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Diagnostic data extracted from Forecast Marine Institute (2022). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2009M). version 1.1. Available online at http://www.marineinsights.com</p> <p>Model run: 12/03/2022 Issued: 14/03/2022</p>	<p>Seasonal: April to June</p> <p>Seasonal sea surface temperature (Image 6):</p>  <p>Difference from average sea surface temperature forecast for April to June 2022</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Diagnostic data extracted from Forecast Marine Institute (2022). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2009M). version 1.1. Available online at http://www.marineinsights.com</p> <p>Model run: 12/03/2022 Issued: 14/03/2022</p>
<p>Monthly sea level (Image 7):</p>  <p>Difference from average sea surface height forecast for April 2022</p> <p>© Commonwealth of Australia 2022 Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base Period: 1981-2018</p> <p>Model Run: 28/02/22 Issued: 09/03/22</p>	<p>Seasonal sea level (Image 8):</p>  <p>Difference from average sea surface height forecast for April 2022 to June 2022</p> <p>© Commonwealth of Australia 2022 Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base Period: 1981-2018</p> <p>Model Run: 28/02/22 Issued: 09/03/22</p>
<p>4-week Coral Bleaching (Image 9):</p>  <p>Tuvalu</p> <p>4 Weeks Coral Bleaching Outlook: 03 April 2022</p> <p>Alert Level 2 Alert Level 1 Warning Watch No Stress</p> <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, CSIRO/PC: CORINGAA Coral Reef Watch</p>	

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Summary Statement

Monthly and last three months: February 2022/December 2021 to February 2022 statement (Highly significant changes)

Monthly: Below normal rainfall was observed at Nanumea, Nui, Funafuti and Niulakita.

Seasonal: Below Normal rainfall was observed at Nanumea and Nui, near normal rainfall observed in Niulakita while Funafuti observed Above Normal rainfall.

Part 1i. Monthly and Seasonal Outlooks for April and April to June 2022

Monthly /Seasonal rainfall and temperature Outlook statements (Highly significant changes)

Monthly rainfall outlook for Tuvalu for April is very likely to be below normal rainfall for Nanumea, Nui and Funafuti, while it is likely to be below normal for Niulakita. For the coming season April-June, the outlook for Nanumea, Nui, Funafuti and Niulakita is very likely to be below normal rainfall.

Monthly and Seasonal temperature, Nanumea and Nui are very likely to be near normal temperature, Funafuti is offers a little guidance as the chance of below normal, normal and above normal are similar, while Niulakita is very likely to be above normal temperature.

Part 2: Recent Ocean summary statement

Monthly and last three months: February/December 2021 to February 2022 (Highly significant changes)

The February 2022 Sea level anomaly for Tuvalu showed significant sea level differences of 100mm to 250mm.

The coral bleaching alert shows no stress of coral bleaching for northern and central atolls, with some parts of southern waters of Tuvalu on a coral bleaching watch.

Part 2i. Monthly and Seasonal Outlooks for April and April to June 2022

Ocean Variable statement (Highly significant changes)

Monthly:

Sea level for April shows a normal condition which is -30 to 30mm for Northern Tuvalu, with a higher than normal condition for the central and southern group with sea surface height differences of 30 to 200mm.

Season:

Sea level for April to June shows a normal condition for the Northern group, with a higher than normal sea surface height difference of 30 to 100mm for central and 100 to 200mm for the southern group.

Coral Bleaching in the southern atolls are more likely to be on coral bleaching watch, with a no stress for Central and Northern atolls.

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

Product	Date: February 2022	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin		Met staffs Disaster Members All civil servants and kaupule members	22 9	17 6	5 3
EAR Watch		Met staffs Disaster Members All civil servants and kaupule members	22 9	17 6	5 3
Monthly Climate Briefing		Met staffs	22	17	5
Ocean Outlook		Met staffs Disaster Members All civil servants and kaupule members	22 9	17 6	5 3
Climate data request					
Total			115	86	29

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