

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 185

Country: Vanuatu

Part 1: Recent climate

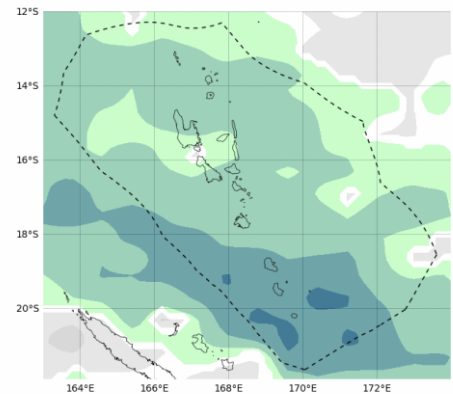
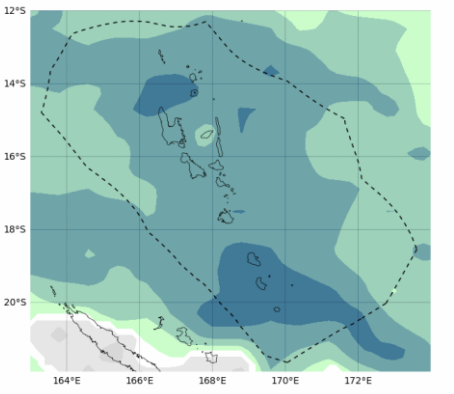
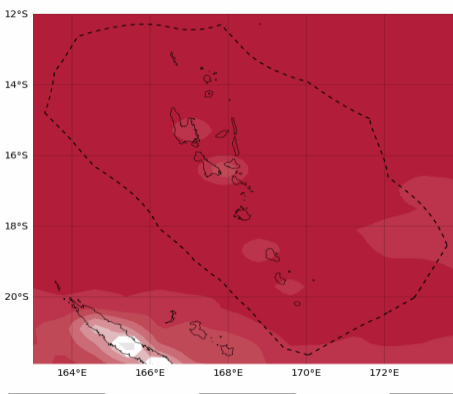
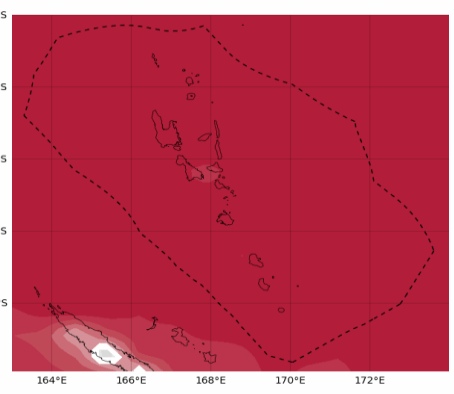
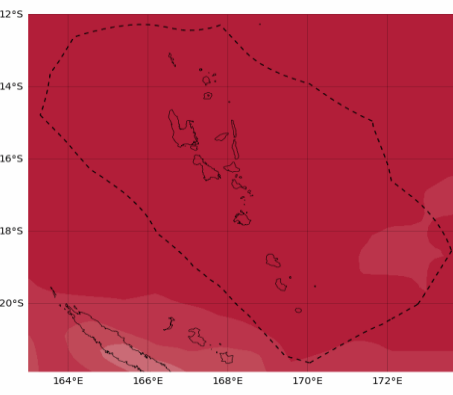
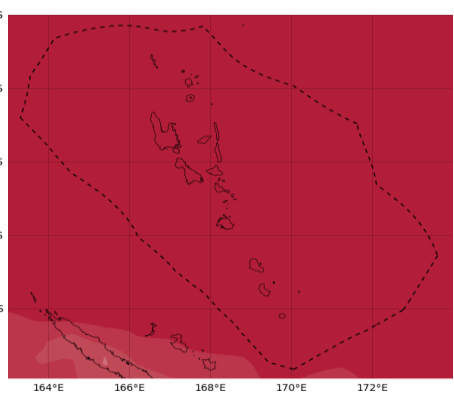
TABLE 1: Monthly Rainfall

Station (include data period)	Nov-2022	Dec-2022	Jan-2023				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Northern Region							
Sola (1971-2023)	241.7	266.3	303.3	321.6	455.8	383.3	16/51
Pekoa (1971-2023)	256.4	210.7	279.2	235.5	341.1	289.1	24/53
Lamap (1961-2023)	229.5	152.5		172.0	275.2	215.6	
Southern Region							
Bauerfield (1972-2023)	331.9	370.8	486.3	205.1	325.6	257.0	44/52
Port Vila (1953-2023)				199.6	325.4	243.1	
Whitegrass (1972-2023)	150.0	109.0	328.9	110.2	221.8	168.2	41/52
Aneityum (1952-2023)	148.0	321.0	316.0	157.6	359.1	246.7	43/72

TABLE 2: Three-month Total Rainfall for November 2022 to January 2023

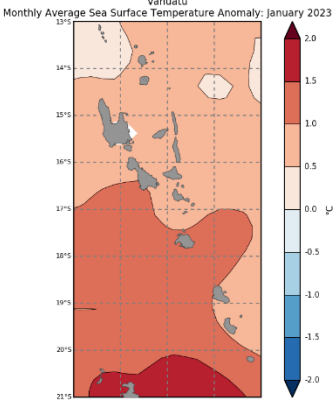
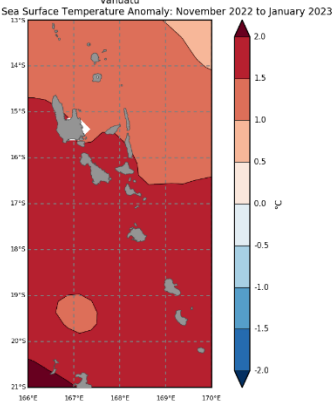
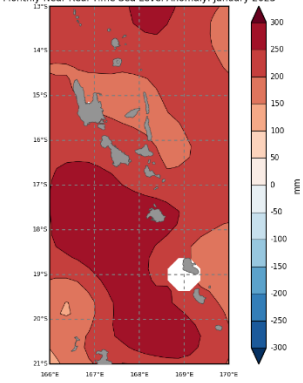
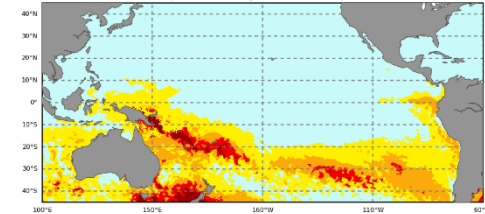
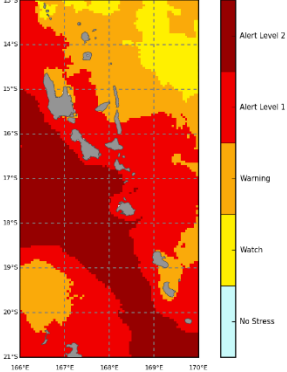
Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Northern Region						
Sola (1971-2023)	811.3	Below normal	1053.8	1358.9	1194.4	7/48
Pekoa (1971-2023)	746.3	Normal	595.0	819.0	624.3	32/51
Lamap (1961-2023)			436.6	551.3	478.6	
Southern Region						
Bauerfield (1972-2023)	1189.0	Above normal	450.6	687.6	577.7	49/50
Port Vila (1953-2023)			429.8	672.9	570.9	
Whitegrass (1972-2023)	587.9	Above normal	265.3	410.5	331.6	45/51
Aneityum (1952-2023)	785.0	Above normal	436.9	680.4	601.5	55/71

Part 1i. Monthly and Seasonal Outlooks for March and March to May 2023

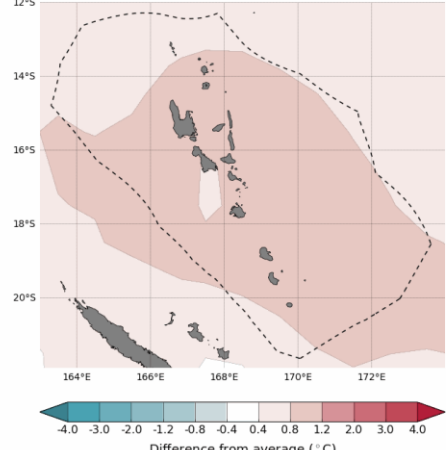
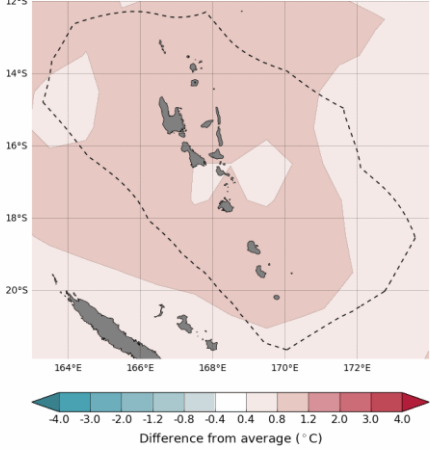
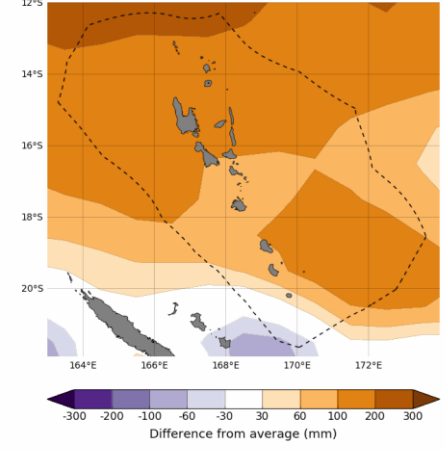
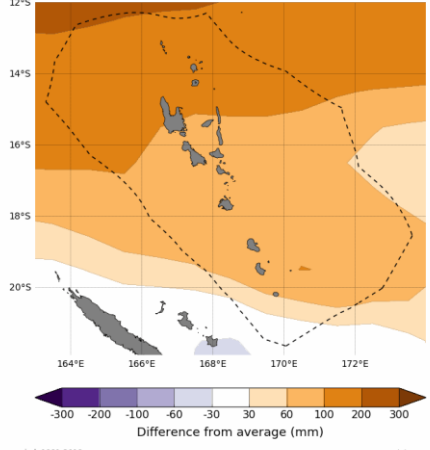
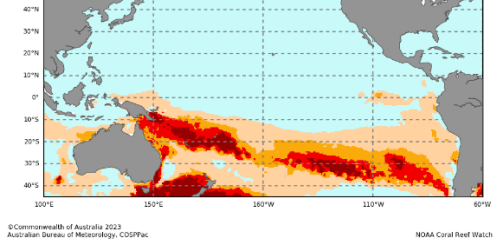
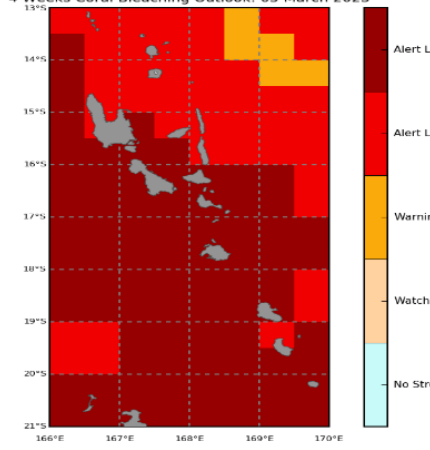
Monthly: March	Seasonal: March to May
Rainfall (Image 1)	Rainfall (Image 2)
<p>Tercile rainfall probabilities for March 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.maritimergions.org/</p> <p>Model run: 06/02/2023 Issued: 09/02/2023</p>	<p>Tercile rainfall probabilities for March to May 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.maritimergions.org/</p> <p>Model run: 06/02/2023 Issued: 09/02/2023</p>
Monthly Maximum temperature (Image 3):	Seasonal maximum temperature (Image 4):
<p>Tercile maximum temperature probabilities for March 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.maritimergions.org/</p> <p>Model run: 06/02/2023 Issued: 09/02/2023</p>	<p>Tercile maximum temperature probabilities for March to May 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.maritimergions.org/</p> <p>Model run: 06/02/2023 Issued: 09/02/2023</p>
Monthly minimum temperature (Image 5):	Seasonal minimum temperature (Image 6):
<p>Tercile minimum temperature probabilities for March 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.maritimergions.org/</p> <p>Model run: 06/02/2023 Issued: 09/02/2023</p>	<p>Tercile minimum temperature probabilities for March to May 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.maritimergions.org/</p> <p>Model run: 06/02/2023 Issued: 09/02/2023</p>

Part 2: Recent Ocean Observation

Monthly/Three months: January 2023 and November 2022 to January 2023

Monthly: January	Last three months: November 2022 to January 2023:
Sea Surface Temperature (Image 1):	Sea Surface Temperature (Image 4):
<div><p>Vanuatu</p><p>Monthly Average Sea Surface Temperature Anomaly: January 2023</p><p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p><p>Reynolds SST</p></div>	<div><p>Vanuatu</p><p>3 monthly Average Sea Surface Temperature Anomaly: November 2022 to January 2023</p><p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p><p>Reynolds SST</p></div>
Sea level (Image 2):	
<div><p>Vanuatu</p><p>Monthly Near Real Time Sea Level Anomaly: January 2023</p><p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p><p>AVISO SeaWiFS SLA</p></div>	
Daily coral bleaching alert (Image 3):	
<div><p>Pacific Ocean</p><p>Daily Coral Bleaching Alert: 06 February 2023</p><p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p><p>NOAA Coral Reef Watch</p></div>	<div><p>Vanuatu</p><p>Daily Coral Bleaching Alert: 06 February 2023</p><p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p><p>NOAA Coral Reef Watch</p></div>

Part 2i. Monthly and Seasonal Outlooks for March and March to May 2023

Monthly: March	Seasonal: March to May
<p>Monthly sea surface temperature (Image 5):</p> <p>Difference from average sea surface temperature forecast for March 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Tanager Marine Institute (2018). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 1.1. Available online at http://www.maritimerregions.org/</p> <p>Model run: 11/02/2023 Issued: 13/02/2023</p>	<p>Seasonal sea surface temperature (Image 6):</p> <p>Difference from average sea surface temperature forecast for March to May 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Tanager Marine Institute (2018). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 1.1. Available online at http://www.maritimerregions.org/</p> <p>Model run: 11/02/2023 Issued: 13/02/2023</p>
<p>Monthly sea level (Image 7):</p> <p>Difference from average sea surface height forecast for March 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Tanager Marine Institute (2018). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 1.1. Available online at http://www.maritimerregions.org/</p> <p>Model run: 11/02/2023 Issued: 13/02/2023</p>	<p>Seasonal sea level (Image 8):</p> <p>Difference from average sea surface height forecast for March to May 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Tanager Marine Institute (2018). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 1.1. Available online at http://www.maritimerregions.org/</p> <p>Model run: 11/02/2023 Issued: 13/02/2023</p>
<p>4-week Coral Bleaching (Image 9):</p> <p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 05 March 2023</p>  <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>	<p>Vanuatu 4 Weeks Coral Bleaching Outlook: 05 March 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: January 2023/November 2022 to January 2023 statement

During January, rainfall was above normal in Bauerfield and Whitegrass, near-normal in Pekoa and Aneityum, and below normal at Sola.

For the November 2022 to January 2023 period, rainfall was above normal in the Southern Region, near-normal at Pekoa, and above normal at Sola.

Bauerfield posted its second wettest November to January period in 50 years of record.

Part 1i. Monthly and Seasonal Outlooks for March and March to May 2023

Monthly /Seasonal rainfall and temperature Outlook statements

The rainfall for March 2023 is *very likely* to be above normal for most of the country, except for South Santo, Ambae and Northwest Malekula where rainfall is just *likely* to be above normal.

The rainfall for the period of March to May 2023 is *very likely* to be above normal for the whole country.

Maximum and minimum temperatures during March and averaged over March to May 2023, are *very likely* to be above normal over the whole country.

Part 2: Recent Ocean summary statement

Monthly and last three months: January 2023/November 2022 to January 2023

January ocean temperatures around Vanuatu were 0.5 to 1.5°C above normal.

Averaged over November 2022 to January 2023, ocean temperatures around Vanuatu were 1 to 2°C above normal.

January sea levels around Vanuatu were up to 300mm above normal.

Coral bleaching alert on 'Alert Level 1 and 2' for most of Vanuatu.

Part 2i. Monthly and Seasonal Outlooks for March and March to May 2023

Ocean Variable statement

The monthly (March) and seasonal (March to May) ocean temperatures around Vanuatu are predicted to be 0.8 to 1.2°C above normal.

The monthly and seasonal sea level forecast around Vanuatu are predicted to be 60mm to 200mm above normal.

The 4-week coral bleaching outlook for Vanuatu until 05 March is predicted to be Alert Level 1 for Torba Province, and Alert Level 2 for Sanma, Penama, Malampa, Shefa and Tafea Province.

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

Product	Date: January 2023	Stakeholder	Total Number of Participants	Number of male	Number of female
116 Toll Free Update	13 th	General Public			
Community Climate Centres Climate Briefing	18 th	VMGD, Van-KIRAP, NDMO, Agriculture, Infrastructure, Water, General Public.	27	19	8
Agro-met Bulletin	20 th	General Public			
Fisheries-Climate Outlook	20 th	General Public			
Tourism-Climate Bulletin	20 th	General Public			
Vanuatu Ocean Outlook	20 th	General Public			
Total			27	19	8