

# Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 179

Country: Vanuatu

## Part 1: Recent climate

**TABLE 1: Monthly Rainfall**

Station (include data period)	May-2022	Jun-2022	Jul-2022				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Northern Region							
Sola (1971-2022)	489.8	622.2	196.8	167.7	313.1	243.9	19/48
Pekoa (1971-2022)	172.7	292.9	117.4	60.0	111.8	80.3	36/52
Lamap (1961-2022)	215.5	218.5	172.5	57.9	116.0	74.9	50/61
Southern Region							
Bauerfield (1972-2022)	326.7	219.7	272.7	45.8	86.3	61.4	50/50
Port Vila (1953-2022)	231.0	286.5	266.0	49.5	120.1	70.3	69/70
Whitegrass (1972-2022)	372.5	119.0	84.0	24.0	57.6	37.4	40/50
Aneityum (1952-2022)	629.2	126.7	277.0	77.0	140.0	101.0	67/71

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

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Northern Region						
Sola (1971-2022)	1308.8	Above normal	748.7	1181.2	923.8	39/47
Pekoa (1971-2022)	583.0	Above normal	321.1	553.3	462.6	37/52
Lamap (1961-2022)	606.5	Above normal	308.9	450.8	374.6	51/61
Southern Region						
Bauerfield (1972-2022)	819.1	Above normal	306.3	516.6	403.7	49/50
Port Vila (1953-2022)	783.5	Above normal	292.3	477.4	388.8	66/69
Whitegrass (1972-2022)	575.5	Above normal	163.8	258.1	214.8	50/50
Aneityum (1952-2022)	1032.9	Above normal	358.3	517.9	434.7	69/70

**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 September and September to November 2022

Monthly: September	Seasonal: September to November
Rainfall (Image 1)	Rainfall (Image 2)
<p>Tercile rainfall probabilities for September 2022</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.maritimergions.org/">http://www.maritimergions.org/</a></p>	<p>Tercile rainfall probabilities for September to November 2022</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.maritimergions.org/">http://www.maritimergions.org/</a></p>
Monthly Maximum temperature (Image 3):	Seasonal maximum temperature (Image 4):
<p>Tercile maximum temperature probabilities for September 2022</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.maritimergions.org/">http://www.maritimergions.org/</a></p>	<p>Tercile maximum temperature probabilities for September to November 2022</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.maritimergions.org/">http://www.maritimergions.org/</a></p>
Monthly minimum temperature (Image 5):	Seasonal minimum temperature (Image 6):
<p>Tercile minimum temperature probabilities for September 2022</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.maritimergions.org/">http://www.maritimergions.org/</a></p>	<p>Tercile minimum temperature probabilities for September to November 2022</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.maritimergions.org/">http://www.maritimergions.org/</a></p>

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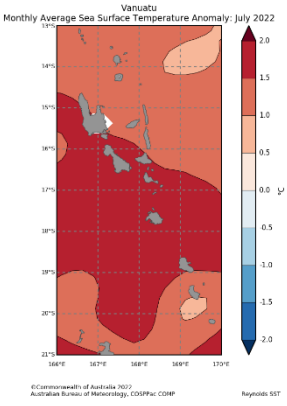
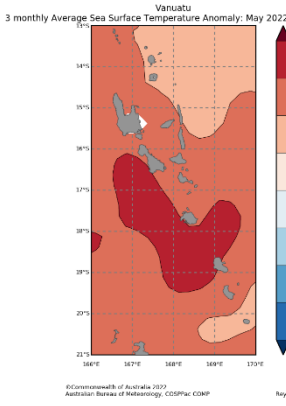
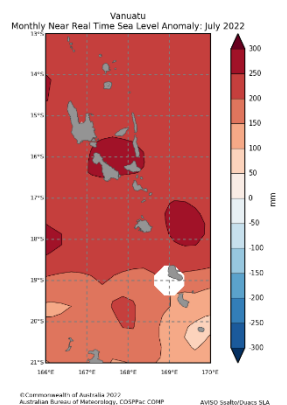
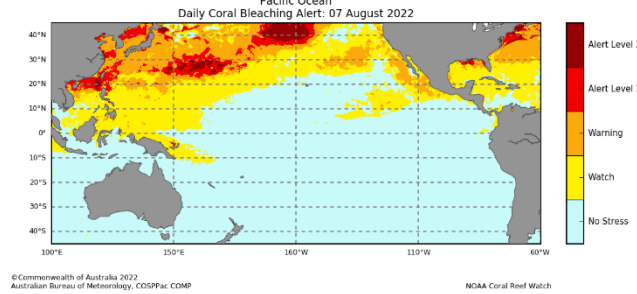
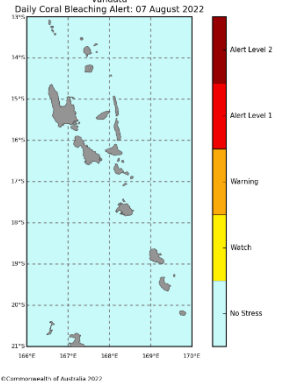
Good:  $10 \leq X < 15$

High:  $15 \leq X < 25$

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Part 2: Recent Ocean Observation

Monthly: July 2022

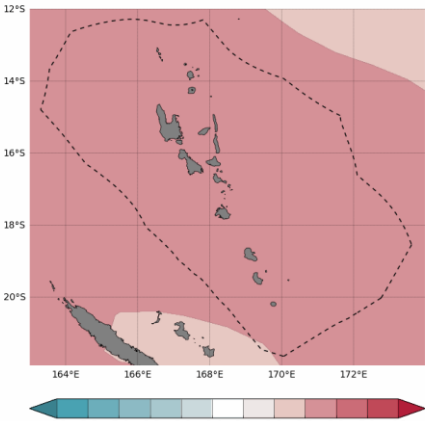
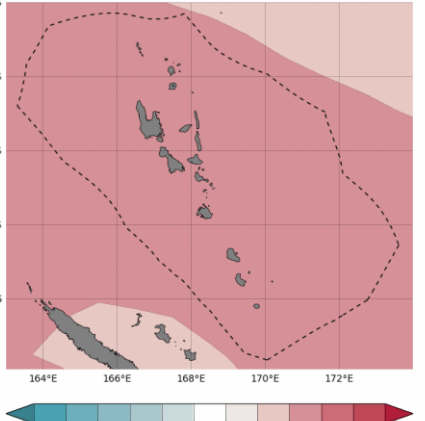
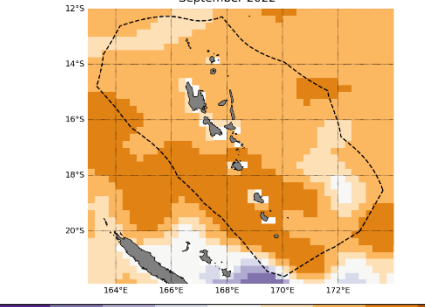
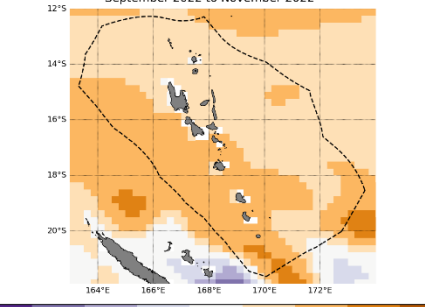
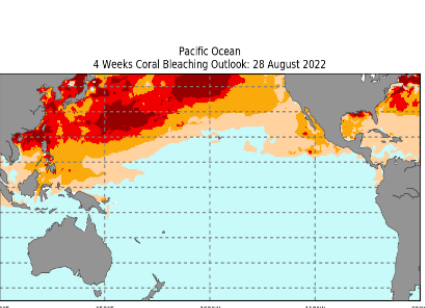
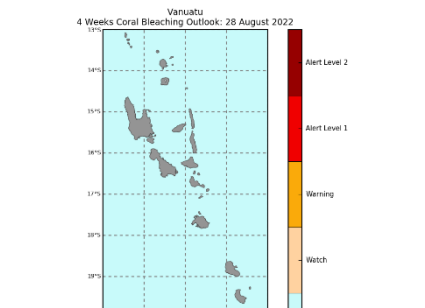
Monthly: July	Last three months: May to July 2022:
Sea Surface Temperature (Image 1):	Sea Surface Temperature (Image 4):
<div><p>Vanuatu</p><p>Monthly Average Sea Surface Temperature Anomaly: July 2022</p><p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac COMP Reynolds SST</p></div>	<div><p>Vanuatu</p><p>3 monthly Average Sea Surface Temperature Anomaly: May 2022 to July 2022</p><p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac COMP Reynolds SST</p></div>
Sea level (Image 2):	
<div><p>Vanuatu</p><p>Monthly Near Real Time Sea Level Anomaly: July 2022</p><p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac COMP AVISO SeaWiFS SLA</p></div>	
Daily coral bleaching alert (Image 3):	
<div><p>Pacific Ocean</p><p>Daily Coral Bleaching Alert: 07 August 2022</p><p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac COMP NOAA Coral Reef Watch</p></div>	<div><p>Vanuatu</p><p>Daily Coral Bleaching Alert: 07 August 2022</p><p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac COMP NOAA Coral Reef Watch</p></div>

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Very High:  $25 \leq X < 35$       Exceptional:  $X \geq 35$

## Part 2i. Monthly and Seasonal Outlooks for September and September to November 2022

Monthly: September	Seasonal: September to November
Monthly sea surface temperature (Image 5):	Seasonal sea surface temperature (Image 6):
<p>Difference from average sea surface temperature forecast for September 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Seafile data extracted from Flinders Marine Institute (2013). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2004), version 11. Available online at <a href="http://www.marinegovernance.org/">http://www.marinegovernance.org/</a></p> <p>Model run: 13/08/2022 Issued: 15/08/2022</p>	<p>Difference from average sea surface temperature forecast for September to November 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Seafile data extracted from Flinders Marine Institute (2013). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2004), version 11. Available online at <a href="http://www.marinegovernance.org/">http://www.marinegovernance.org/</a></p> <p>Model run: 13/08/2022 Issued: 15/08/2022</p>
Monthly sea level (Image 7):	Seasonal sea level (Image 8):
<p>Difference from average sea surface height forecast for September 2022</p>  <p>© Commonwealth of Australia 2022 Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base Period: 1981-2018</p> <p>Model Run: 28/07/2022 Issued: 03/08/2022</p>	<p>Difference from average sea surface height forecast for September 2022 to November 2022</p>  <p>© Commonwealth of Australia 2022 Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base Period: 1981-2018</p> <p>Model Run: 28/07/2022 Issued: 03/08/2022</p>
4-week Coral Bleaching (Image 9):	
<p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 28 August 2022</p>  <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, CSIRO/PhC/COMP</p> <p>NOAA Coral Reef Watch</p>	<p>Vanuatu 4 Weeks Coral Bleaching Outlook: 28 August 2022</p>  <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, CSIRO/PhC/COMP</p> <p>NOAA Coral Reef Watch</p>

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## Summary Statement

### **Monthly and last three months: July 2022/May to July 2022 statement** *(Highly significant changes)*

Above normal rainfall was recorded at all stations (Pekoa, Lamap, Bauerfield, Port Vila, Whitegrass and Aneityum), except for Sola where normal rainfall was recorded. Bauerfield recorded its wettest July in 50 years, while Port Vila recorded its second wettest, and Aneityum recorded its 5<sup>th</sup> wettest.

For the May to July period, all stations recorded above normal rainfall, especially in the Southern Region where Whitegrass had its highest rain for the period, Bauerfield and Aneityum their second highest, and Port Vila its fourth highest.

## **Part 1i. Monthly and Seasonal Outlooks for September and September to November 2022**

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

*Above normal rainfall and above average maximum and minimum temperatures are very likely for the Vanuatu group in September, and the September to November period.*

## **Part 2: Recent Ocean summary statement**

### **Monthly and last three months: July/May to July 2022** *(Highly significant changes)*

Majority of the Vanuatu group experienced above normal SSTs anomaly for July and the last three month and above normal sea level for July. Significant above average SSTs of 1.5 to 2.0 degrees Celsius were over parts of the Sanma, Malampa, Shefa and Tafea province in July. Significant sea level anomalies of 250 to 300 mm were located over parts of Sanma, Penama and Malampa provinces.

Coral bleaching alert reveals no thermal stress for Vanuatu.

## **Part 2i. Monthly and Seasonal Outlooks for September and September to November 2022**

### **Ocean Variable statement** *(Highly significant changes)*

The monthly and seasonal outlook for the Vanuatu archipelago shows a significant SST difference of 1.2-2.0°C. While sea surface height forecast shows above average difference of 60 to 200 mm.

Coral bleaching outlook reveals no thermal stress for Vanuatu.

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

Product	Date: July 2022	Stakeholder	Total Number of Participants	Number of male	Number of female
<b>Vanuatu Climate Update</b>	20 <sup>th</sup>	VMGD-Van-KIRAP Staffs, Oxfam Vanuatu, Action Aid Vanuatu, University of the South Pacific (USP), Vanuatu Statistics Office, SPREP, Vanuatu National Disaster Management Office (NDMO), Media-Vanuatu, Vanuatu Red Cross Society, Matevulu College, Onesua Presbyterian College, Aore Adventist College, Tafea College, CSU, Vanuatu Care International, Save the Children Vanuatu, UNDP, Shefa Education, Live & Learn, UN-Women, Vanuatu Christian Council (VCC), GCF Private Consultants, Vanuatu Society of People Living with Disability, Unelco Vanuatu, World Health Organization, Vanuatu Meteorology & Geo-Hazards Department (Staffs), General Public (Website and VMGD Call-Center).	206	104	102
<b>Early Action Rainfall (EAR) Watch</b>	20 <sup>th</sup>	VMGD-Van-KIRAP Staffs, Oxfam Vanuatu, Action Aid Vanuatu, University of the South Pacific (USP), Vanuatu Statistics Office, SPREP, Vanuatu National Disaster Management Office (NDMO), Media-Vanuatu, Vanuatu Red Cross Society, Matevulu College, Onesua Presbyterian College, Aore Adventist College, Tafea College, CSU, Vanuatu Care International, Save the Children Vanuatu, UNDP, Shefa Education, Live & Learn, UN-Women, Vanuatu Christian Council (VCC), GCF Private Consultants, Vanuatu Society of People Living with Disability, Unelco Vanuatu, World Health Organization, Vanuatu Meteorology & Geo-Hazards Department (Staffs), General Public (Website and VMGD Call-Center).	206	104	102
<b>Vanuatu Ocean Outlook</b>	20 <sup>th</sup>	Van-KIRAP Staffs, Malampa Live & Learn Staffs, CSU Staffs, USP Staffs (Fiji) and NDMO Sanma and Sola Office VMGD-Van-KIRAP Staffs, Oxfam Vanuatu, Action Aid Vanuatu, University of the South Pacific (USP), Vanuatu Statistics Office, SPREP, Vanuatu National Disaster Management Office (NDMO), Media-Vanuatu, Vanuatu Red Cross Society, Matevulu College, Onesua Presbyterian College, Aore Adventist College, Tafea College, CSU, Vanuatu Care International, Save the Children Vanuatu, UNDP, Shefa Education, Live & Learn, UN-Women, Vanuatu Christian Council (VCC), GCF Private Consultants, Vanuatu Society of People Living with Disability, Unelco Vanuatu, World Health Organization, Vanuatu Meteorology & Geo-Hazards Department (Staffs), General Public (Website and VMGD Call-Center).	206	104	102
<b>Total</b>			206	104	102

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