

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 178

Country: Vanuatu

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Apr-2022	May-2022	Jun-2022				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Northern Region							
Sola (1971-2022)	254.6	489.8	622.2	204.2	421.3	261.8	
Pekoa (1971-2022)	217.4	172.7	292.9	90.8	244.0	122.5	40/52
Lamap (1961-2022)	248.5	215.5	218.5	74.8	268.2	104.0	51/61
southern region							
Bauerfield (1972-2022)	204.9	326.7	219.7	99.5	187.5	130.3	40/50
Port Vila (1953-2022)	206.5	231.0	286.5	86.3	159.6	122.3	64/69
Whitegrass (1972-2022)	109.2	372.5	119.0	39.0	91.7	67.2	39/51
Aneityum (1952-2022)	289.5	629.2	126.7	96.0	170.3	137.2	35/71

TABLE 2: Three-month Total Rainfall for April to June 2022

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Northern Region						
Sola (1971-2022)	1366.6	Above normal	1008.2	1269.1	1176.7	36/48
Pekoa (1971-2022)	683.0	Normal	472.3	771.7	633.0	30/52
Lamap (1961-2022)	682.5	Above normal	385.5	580.1	496.0	48/61
Southern Region						
Bauerfield (1972-2022)	751.3	Above normal	447.4	739.0	565.1	35/50
Port Vila (1953-2022)	724.0	Above normal	415.5	634.1	516.0	54/69
Whitegrass (1972-2022)	600.7	Above normal	207.1	333.3	264.2	48/51
Aneityum (1952-2022)	1045.4	Above normal	444.6	659.4	572.6	68/70

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Low: $0 \leq X < 5$

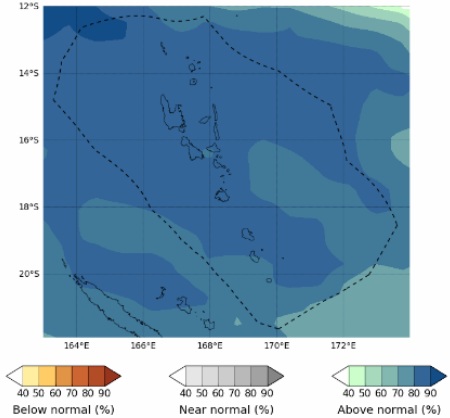
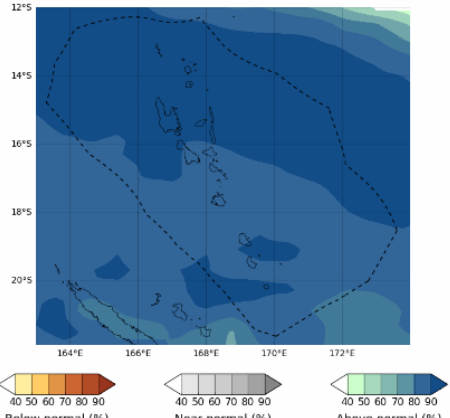
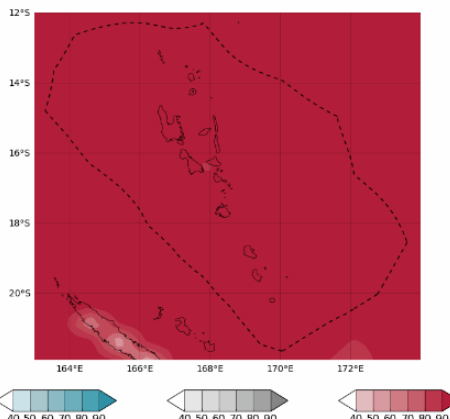
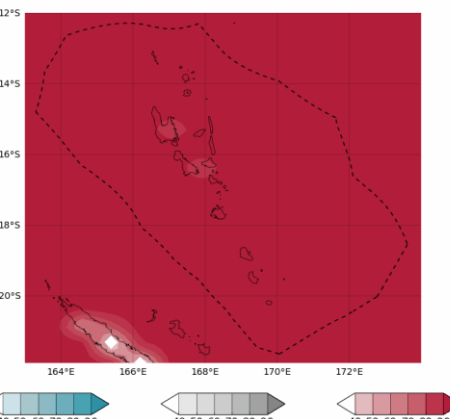
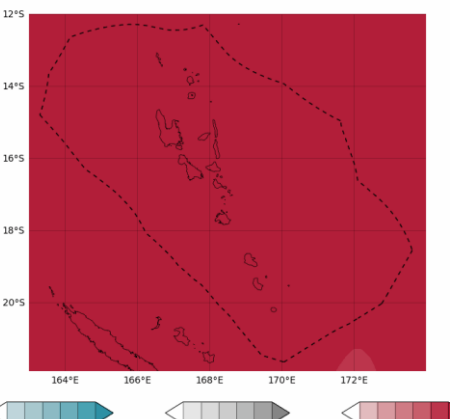
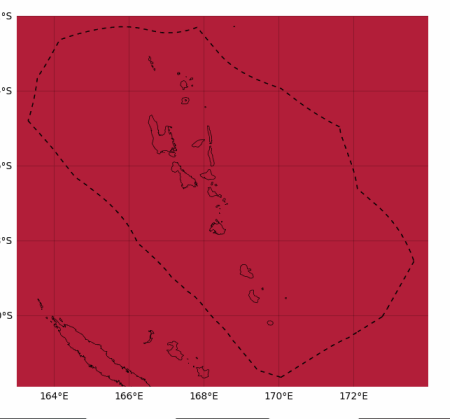
Moderate $5 \leq X < 10$

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 August and August to October 2022

Monthly: August	Seasonal: August to October
Rainfall (Image 1)	Rainfall (Image 2)
<p>Tercile rainfall probabilities for August 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2000M), version 11. Available online at http://www.maritimergions.org/</p> <p>Model run: 11/07/2022 Issued: 14/07/2022</p>	<p>Tercile rainfall probabilities for August to October 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2000M), version 11. Available online at http://www.maritimergions.org/</p> <p>Model run: 11/07/2022 Issued: 14/07/2022</p>
Monthly Maximum temperature (Image 3):	Seasonal maximum temperature (Image 4):
<p>Tercile maximum temperature probabilities for August 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2000M), version 11. Available online at http://www.maritimergions.org/</p> <p>Model run: 11/07/2022 Issued: 14/07/2022</p>	<p>Tercile maximum temperature probabilities for August to October 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2000M), version 11. Available online at http://www.maritimergions.org/</p> <p>Model run: 11/07/2022 Issued: 14/07/2022</p>
Monthly minimum temperature (Image 5):	Seasonal minimum temperature (Image 6):
<p>Tercile minimum temperature probabilities for August 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2000M), version 11. Available online at http://www.maritimergions.org/</p> <p>Model run: 11/07/2022 Issued: 14/07/2022</p>	<p>Tercile minimum temperature probabilities for August to October 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2000M), version 11. Available online at http://www.maritimergions.org/</p> <p>Model run: 11/07/2022 Issued: 14/07/2022</p>

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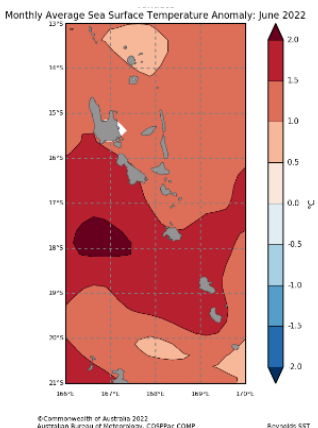
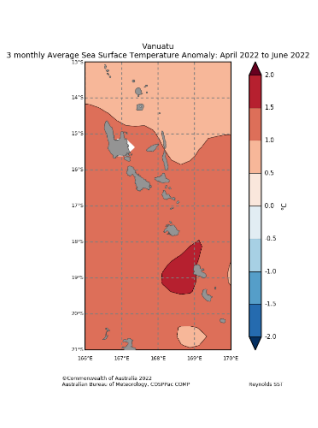
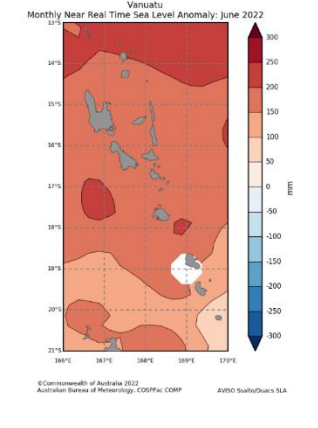
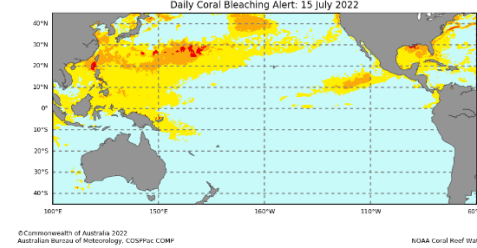
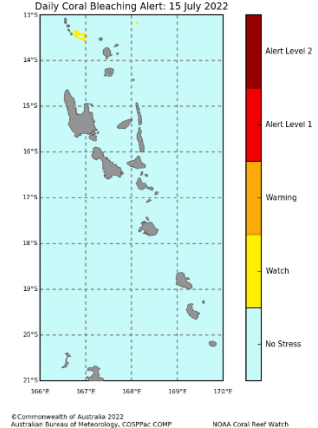
Good: $10 \leq X < 15$

High: $15 \leq X < 25$

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

Part 2: Recent Ocean observations

Monthly: June 2022

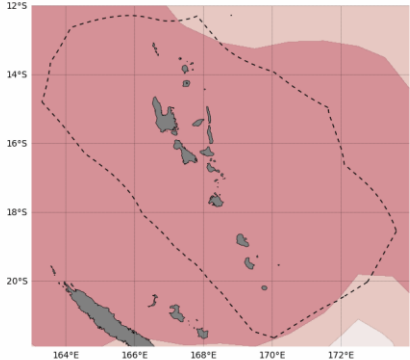
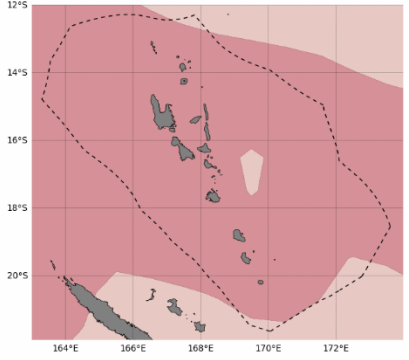
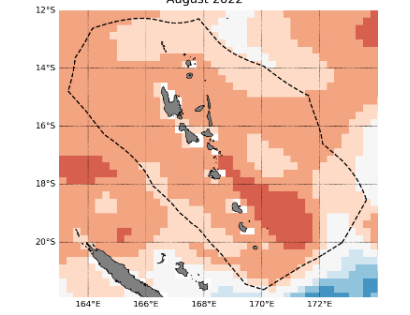
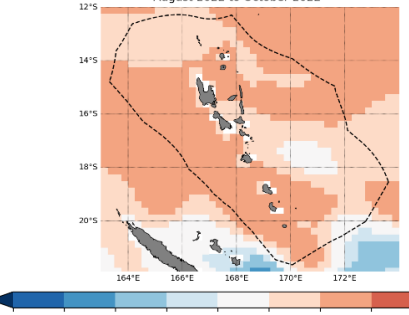
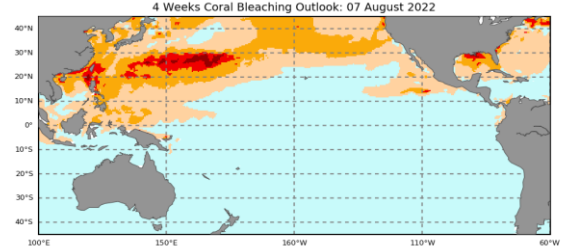
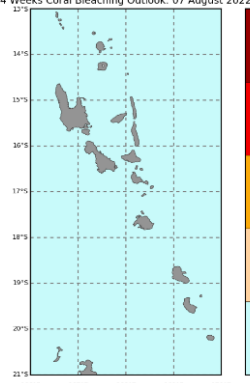
Monthly: June	Last three months: April to June 2022:
Sea Surface Temperature (Image 1):	Sea Surface Temperature (Image 4):
<div><p>Monthly Average Sea Surface Temperature Anomaly: June 2022</p><p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac COMP Reynolds SST</p></div>	<div><p>Vanuatu 3 monthly Average Sea Surface Temperature Anomaly: April 2022 to June 2022</p><p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac COMP Reynolds SST</p></div>
Sea level (Image 2):	
<div><p>Vanuatu Monthly Near Real Time Sea Level Anomaly: June 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 Daily Coral Bleaching Alert: 15 July 2022</p><p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac COMP NOAA Coral Reef Watch</p></div>	<div><p>Vanuatu Daily Coral Bleaching Alert: 15 July 2022</p><p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac COMP NOAA Coral Reef Watch</p></div>

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Part 2i. Monthly and Seasonal Outlooks for August and August to October 2022

Monthly: August	Seasonal: August to October
Monthly sea surface temperature (Image 5):	Seasonal sea surface temperature (Image 6):
<p>Difference from average sea surface temperature forecast for August 2022</p>  <p>Difference from average (°C)</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Geospatial data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2004), version 1.1. Available online at http://www.maritimesg.org/</p> <p>Model run: 16/07/2022 Issued: 18/07/2022</p>	<p>Difference from average sea surface temperature forecast for August to October 2022</p>  <p>Difference from average (°C)</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Geospatial data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2004), version 1.1. Available online at http://www.maritimesg.org/</p> <p>Model run: 16/07/2022 Issued: 18/07/2022</p>
Monthly sea level (Image 7):	Seasonal sea level (Image 8):
<p>Difference from average sea surface height forecast for August 2022</p>  <p>Difference from average (mm)</p> <p>© Commonwealth of Australia 2022 Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base Period: 1981-2018</p> <p>Model Run: 28/06/2022 Issued: 12/07/2022</p>	<p>Difference from average sea surface height forecast for August 2022 to October 2022</p>  <p>Difference from average (mm)</p> <p>© Commonwealth of Australia 2022 Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base Period: 1981-2018</p> <p>Model Run: 28/06/2022 Issued: 12/07/2022</p>
4-week Coral Bleaching (Image 9):	
<p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 07 August 2022</p>  <p>Alert Level 2 Alert Level 1 Warning Watch No Stress</p> <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>NOAA Coral Reef Watch</p>	<p>Vanuatu 4 Weeks Coral Bleaching Outlook: 07 August 2022</p>  <p>Alert Level 2 Alert Level 1 Warning Watch No Stress</p> <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>NOAA Coral Reef Watch</p>

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Summary Statement

Monthly and last three months: June 2022/April to June 2022 statement (Highly significant changes)

In June above normal rainfall was recorded at Sola, Pekoa, Bauerfield, Port Vila and Whitegrass station, while Lamap and Aneityum stations recorded normal rainfall. Sola recorded its fifth and Port Vila its sixth wettest June on record.

From April to June, Vanuatu recorded above normal rainfall at all stations except Pekoa which recorded normal rainfall. Aneityum recorded its third and Whitegrass its fourth wettest April-June on record.

Part 1i. Monthly and Seasonal Outlooks for August and August to October 2022

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

The rainfall and temperature outlooks for Vanuatu show above normal rainfall and temperatures are very likely to continue during August and August to October.

Part 2: Recent Ocean summary statement

Monthly and last three months: June/April to June 2022 (Highly significant changes)

In June 2022, Vanuatu experienced above average SSTs, with differences from normal of 1.0°C to 2.0°C, reaching over 2.0°C above average in the southwest. For April to June, SSTs were above average by 0.5°C to 1.5 °C, with a region of 1.5°C to 2.0°C above average located near Erromango Island. Vanuatu's June sea levels were generally 100 to 200 mm above average. Some areas recorded positive anomalies of 200 to 250 mm, most notably in the northern and central region from Torres Island Group to Erromango Island. Daily coral bleaching alert of 15 July 2022 reveals no thermal stress for most of Vanuatu, except for a Watch status near Torres Island Group.

Part 2i. Monthly and Seasonal Outlooks for August and August to October 2022

Ocean Variable statement (Highly significant changes)

The outlook for Vanuatu shows sea surface temperatures significantly higher than average, with anomalies of +1.2°C to +2.0°C for August and August to October 2022.

The monthly and seasonal sea level outlooks show significantly above average sea levels, with anomalies of +60 to +100 mm over Vanuatu. In August, an area east of the southern island group is predicted to have sea levels of 100 to 200 mm above average.

The 4 weeks coral bleaching outlook for Vanuatu until 7 august shows no thermal stress alert level for the whole country.

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

Product	Date: June 2022	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Sectoral Bulletin	15 th	VMGD-Van-KIRAP Staffs, Department of Tourism, Department of Fisheries, Department of Agriculture and the General Public (VMGD website)			
EAR Watch		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
Monthly Climate Briefing	15 th	Community Climate Centres (Sola, Sanma, Penama), VMGD Staffs, Van-KIRAP Staffs, Malampa Live & Learn Staffs, CSU Staffs, USP Staffs (Fiji) and NDMO Sanma and Sola Office			
Ocean Outlook	16 th	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
Total			412	208	204

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