

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 190

Country: Vanuatu

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Apr-2023	May-2023	Jun-2023				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Northern Region							
Sola (1971-2023)	73.1	385.1	372.4	206.9	420.1	321.6	30/49
Pekoa (1971-2023)	294.2	269.5	167.4	90.8	244.0	122.5	29/53
Lamap (1961-2023)				74.8	169.4	110.8	
Southern Region							
Bauerfield (1972-2023)	82.9	100.9	65.1	102.7	192.0	128.2	8/51
Port Vila (1953-2023)	103.5	110.0	59.0	89.6	162.0	128.7	10/70
Whitegrass (1972-2023)	147.9	261.5	48.3	39.0	90.7	67.2	19/52
Aneityum (1952-2023)	190.0	266.6	22.7	96.1	172.6	132.5	1/72

TABLE 2: Three-month Total Rainfall for April to June 2023

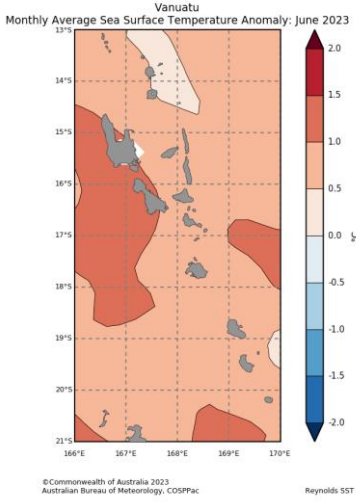
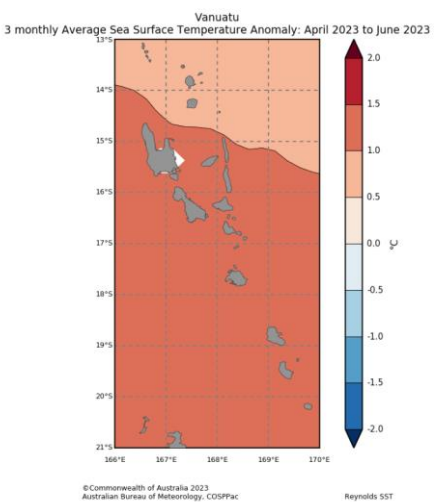
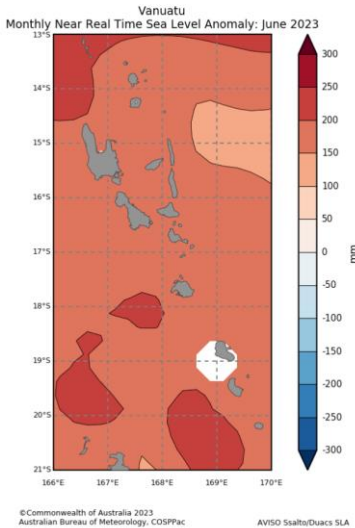
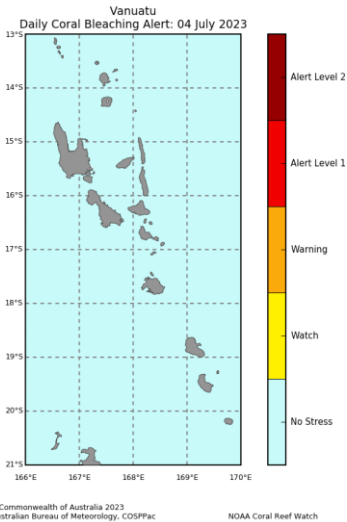
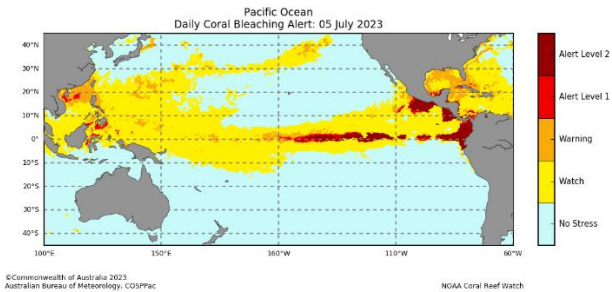
Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Northern Region						
Sola (1971-2023)	830.6	Below normal	1037.4	1355.2	1189.8	2/49
Pekoa (1971-2023)	731.1	Normal	472.1	742.8	656.3	43/53
Lamap (1961-2023)			407.0	607.2	521.3	
Southern Region						
Bauerfield (1972-2023)	248.9	Below normal	468.5	750.1	578.7	4/51
Port Vila (1953-2023)	272.5	Below normal	407.0	656.9	538.9	6/70
Whitegrass (1972-2023)	457.7	Above normal	192.4	325.2	251.3	42/52
Aneityum (1952-2023)	479.3	Normal	475.0	676.1	591.0	27/71

Part 1i. Monthly and Seasonal Outlooks for August and August to October 2023

Monthly: August	Seasonal: August to October
<div><p>Rainfall (Image 1)</p><p>Tercile rainfall probabilities for August 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.maritimerregions.org/</p><p>Model run: 03/07/2023 Issued: 06/07/2023</p></div>	<div><p>Rainfall (Image 2)</p><p>Tercile rainfall probabilities for August to October 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.maritimerregions.org/</p><p>Model run: 03/07/2023 Issued: 06/07/2023</p></div>
<div><p>Monthly Maximum temperature (Image 3):</p><p>Tercile maximum temperature probabilities for August 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.maritimerregions.org/</p><p>Model run: 03/07/2023 Issued: 06/07/2023</p></div>	<div><p>Seasonal maximum temperature (Image 4):</p><p>Tercile maximum temperature probabilities for August to October 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.maritimerregions.org/</p><p>Model run: 03/07/2023 Issued: 06/07/2023</p></div>
<div><p>Monthly minimum temperature (Image 5):</p><p>Tercile minimum temperature probabilities for August 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.maritimerregions.org/</p><p>Model run: 03/07/2023 Issued: 06/07/2023</p></div>	<div><p>Seasonal minimum temperature (Image 6):</p><p>Tercile minimum temperature probabilities for August to October 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.maritimerregions.org/</p><p>Model run: 03/07/2023 Issued: 06/07/2023</p></div>

Part 2: Recent Ocean Observation

Monthly/Three months: April and April to June 2023

<p>Monthly: June</p>	<p>Last three months: April to June 2023:</p>
<p>Sea Surface Temperature (Image 1):</p>  <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>Reynolds SST</p>	<p>Sea Surface Temperature (Image 4):</p>  <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>Reynolds SST</p>
<p>Sea level (Image 2):</p>  <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>AVISO Ssalto/Duacs SLA</p>	
<p>Daily coral bleaching alert (Image 3):</p>  <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>	 <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>

Part 2i. Monthly and Seasonal Outlooks for August and August to October 2023

Monthly: August	Seasonal: August to October
<div>Monthly sea surface temperature (Image 5):</div> <div><p>Difference from average sea surface temperature forecast for August 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.maritimerregions.org/.</p><p>Model run: 03/07/2023 Issued: 05/07/2023</p></div>	<div>Seasonal sea surface temperature (Image 6):</div> <div><p>Difference from average sea surface temperature forecast for August to October 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.maritimerregions.org/.</p><p>Model run: 03/07/2023 Issued: 05/07/2023</p></div>
<div>Monthly sea level (Image 7):</div> <div><p>Difference from average sea surface height forecast for August 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.maritimerregions.org/.</p><p>Model run: 03/07/2023 Issued: 05/07/2023</p></div>	<div>Seasonal sea level (Image 8):</div> <div><p>Difference from average sea surface height forecast for August to October 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.maritimerregions.org/.</p><p>Model run: 03/07/2023 Issued: 05/07/2023</p></div>
<div>4-week Coral Bleaching (Image 9):</div> <div><p>Vanuatu 4 Weeks Coral Bleaching Outlook: 30 July 2023</p><p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p><p>NOAA Coral Reef Watch</p></div>	<div><p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 30 July 2023</p><p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p><p>NOAA Coral Reef Watch</p></div>

Summary Statement

Monthly and last three months: June 2023/April to June 2023 statement

The rainfall for June was normal for Sola and Pekoa stations, and White-grass stations. Below normal rainfall was recorded at Bauerfield, Port Vila and Aneityum. Aneityum recorded its driest June in 72 years.

The three months rainfall from April to June was below normal for Sola, Bauerfield and Port Vila. Normal for Aneityum and above normal at Aneityum. Sola recorded its second, Bauerfield recorded its fourth, and Port villa recorded its sixth driest April to June respectively.

Data for Lamap station was not available.

Part 1i. Monthly and Seasonal Outlooks for August and August to October 2023

Monthly /Seasonal rainfall and temperature Outlook statements

The rainfall for August is likely to be below normal over southern region. In the central region and most of northern islands, the outlook offers little guidance except part of Penama province with likely above normal rainfall.

The Rainfall for August to October is likely to be below normal over Aneityum Island. For the rest of Vanuatu regions, the outlook offers little guidance.

Maximum temperatures during August are likely to be above normal in Torba, Penama and part of Shefa province, near normal over Sanma, Malampa, Shefa and Tafea Province. Minimum Temperature are likely to be above normal in Torba, Sanma, Penama, Malampa, Shefa and Tafea. Near normal minimum temperatures likely for Tanna and eastern Efate islands.

Maximum temperatures average over August to October are likely to be above normal over Torba, Penama, Shefa and most of Tafea Province. Near normal is likely for Sanma, Malampa and part of Tafea province in the southern region.

Minimum temperatures average over August to October are very likely for all regions of Vanuatu.

Part 2: Recent Ocean summary statement

Monthly and last three months: June 2023/April to June 2023

June ocean temperatures around Vanuatu were 1.0 to 1.5°C above normal.

Averaged over April to June, ocean temperatures around Vanuatu were 1.0 to 1.5°C above normal/below normal.

June sea levels around all Vanuatu regions were 150mm to 250mm above normal.

Daily coral bleaching alert as of 4th of July, there will be no stress for the whole country.

Part 2i. Monthly and Seasonal Outlooks for August and August to October 2023

Ocean Variable statement

August ocean temperatures around Vanuatu are predicted to be 0.4 to 0.8°C above normal.

Averaged over August to October, ocean temperatures around Vanuatu are predicted to be 0.4 to 0.8°C (above normal).

August sea levels around Vanuatu are predicted to be 30mm to 60mm above normal.

Averaged over August to October, sea levels around Vanuatu are predicted to be 30mm to 60mm above normal.

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

Product	Date: June 2023	Stakeholder	Total Number of Participants	Number of Male	Number of Female	Comments (If there are comments from you Stakeholders)
Climate Bulletin						
EAR Watch						
Monthly Climate Briefing	28th					
Ocean Outlook						
Climate data request						
Operations Climate Maps Training	26th	-fisheries -Infstructures -Tourism -Water -Climate change dept -Environment dept -VBTC	26	15	11	
El-Nino awareness (Epi island)	6/07/23	Lamen bay mini youth convention	112	42	88	
TK validation workshop	10/07/23	Nikaura village	42	27	15	
Facebook summary post	26th	Puplic	840	310	530	
Emails	26th		241	50	191	
Total			1261	444	835	