

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 168

Country: Vanuatu

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Jun-2021 Total (mm)	Jul-2021 Total (mm)	Aug-2021				Rank
			Total (mm)	33%tile	67%tile	Median	
			Rainfall (mm)				
Northern Region							
Sola (1971-2021)	125.6	204.4	257.3	133.6	272.1	190.4	30/48
Pekoa (1971-2021)	26.5	63.2		60.6	104.6	79.6	
Lamap (1961-2021)	26.5	68.5	109.5	49.3	92.3	66.8	48/60
Southern Region							
Bauerfield (1972-2021)	33.0	63.9	102.6	47.1	94.3	65.1	36/49
Port Vila (1953-2021)		61.5	83.0	44.3	93.0	74.4	39/69
Whitegrass (1972-2021)	30.2	11.3	19.7	23.7	56.7	31.9	16/50
Aneityum (1952-2021)	60.6	77.0	4.5	72.5	138.8	102.9	1/70

TABLE 2: Three-month Total Rainfall for June to August 2021

Station	Three-month Total	33%tile	67%tile	Median	Rank	
	Rainfall (mm)					
Northern Region						
Sola (1971-2021)	587.3	Below normal	591.1	1017.9	775.9	16/46
Pekoa (1971-2021)			240.9	460.1	390.5	
Lamap (1961-2021)	204.5	Below normal	232.0	337.7	285.0	17/60
Southern Region						
Bauerfield (1972-2021)	199.5	Below normal	254.6	373.5	327.2	12/49
Port Vila (1953-2021)			236.1	402.9	306.4	
Whitegrass (1972-2021)	61.2	Below normal	136.3	229.6	161.2	4/49
Aneityum (1952-2021)	142.1	Below normal	307.9	438.4	384.5	2/70

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

Very Low: $X < 0.0$

Low: $0 \leq X < 5$

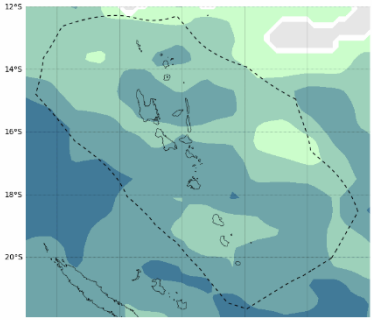
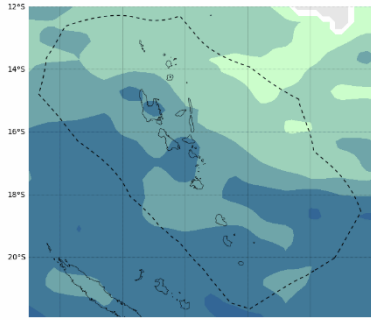
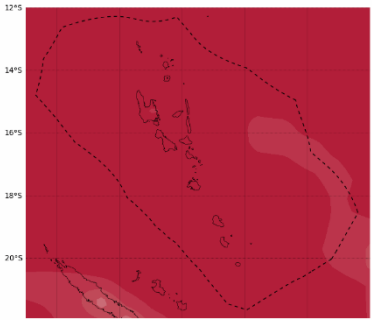
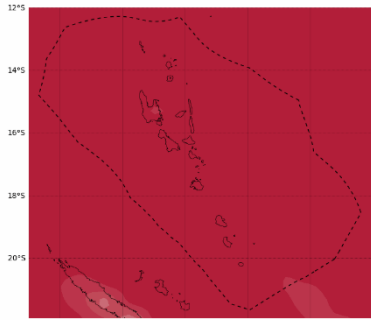


Moderate: $5 \leq X < 10$

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 October and October to December 2021

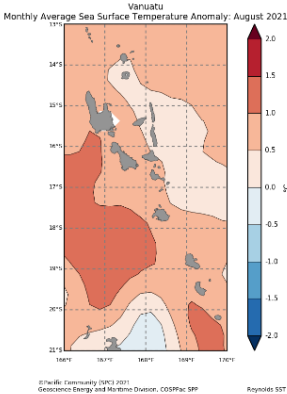
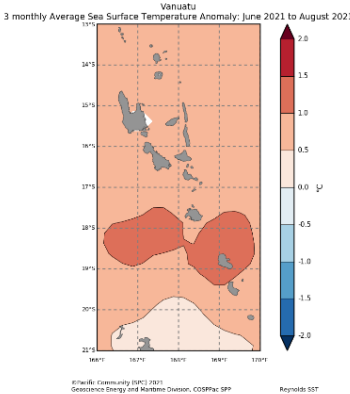
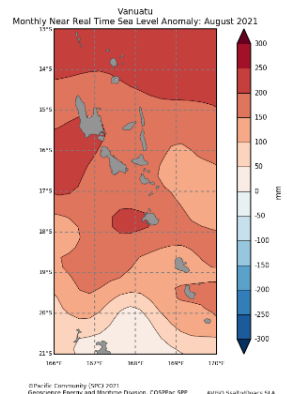
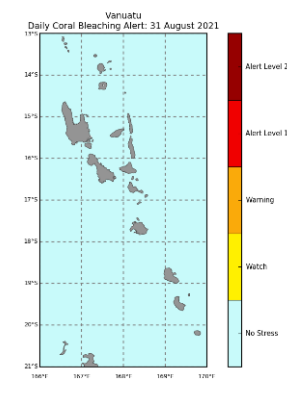
Monthly	Seasonal
<p>Rainfall:</p> <p>Tercile rainfall probabilities for October 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology <small>Shapefile data extracted from: Tonder, P. and Institute (2018), Maritime Boundaries, Coastlines, Marine Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://data.maritime.gov.au/</small></p> <p>Model: ACCESS-S1 Model run: 30/08/2021 Base period: 1990-2012 Issued: 02/09/2021</p>	<p>Rainfall:</p> <p>Tercile rainfall probabilities for October to December 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology <small>Shapefile data extracted from: Tonder, P. and Institute (2018), Maritime Boundaries, Coastlines, Marine Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://data.maritime.gov.au/</small></p> <p>Model: ACCESS-S1 Model run: 30/08/2021 Base period: 1990-2012 Issued: 02/09/2021</p>
<p>Monthly Maximum temperature:</p> <p>Tercile maximum temperature probabilities for October 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology <small>Shapefile data extracted from: Tonder, P. and Institute (2018), Maritime Boundaries, Coastlines, Marine Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://data.maritime.gov.au/</small></p> <p>Model: ACCESS-S1 Model run: 30/08/2021 Base period: 1990-2012 Issued: 02/09/2021</p>	<p>Seasonal maximum temperature:</p> <p>Tercile maximum temperature probabilities for October to December 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology <small>Shapefile data extracted from: Tonder, P. and Institute (2018), Maritime Boundaries, Coastlines, Marine Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://data.maritime.gov.au/</small></p> <p>Model: ACCESS-S1 Model run: 30/08/2021 Base period: 1990-2012 Issued: 02/09/2021</p>
<p>Monthly minimum temperature:</p> <p>Tercile minimum temperature probabilities for October 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology <small>Shapefile data extracted from: Tonder, P. and Institute (2018), Maritime Boundaries, Coastlines, Marine Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://data.maritime.gov.au/</small></p> <p>Model: ACCESS-S1 Model run: 30/08/2021 Base period: 1990-2012 Issued: 02/09/2021</p>	<p>Seasonal minimum temperature:</p> <p>Tercile minimum temperature probabilities for October to December 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology <small>Shapefile data extracted from: Tonder, P. and Institute (2018), Maritime Boundaries, Coastlines, Marine Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://data.maritime.gov.au/</small></p> <p>Model: ACCESS-S1 Model run: 30/08/2021 Base period: 1990-2012 Issued: 02/09/2021</p>

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 2: Recent Ocean summary statement

Monthly: August 2021

<p align="center">Monthly: August</p>	<p align="center">Last three months: June to August 2021:</p>
<p align="center">Sea Surface Temperature (Image 1):</p>  <p align="center"> <small>© The Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, COSPPac SPP Reynolds SST</small> </p>	<p align="center">Sea Surface Temperature (Image 4):</p>  <p align="center"> <small>© The Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, COSPPac SPP Reynolds SST</small> </p>
<p align="center">Sea level (Image 2):</p>  <p align="center"> <small>© The Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, COSPPac SPP AVISO SeaLevelClimatology SLLA</small> </p>	
<p align="center">Daily coral bleaching alert (Image 3):</p>  <p align="center"> <small>© The Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, COSPPac SPP NOAA Coral Reef Watch</small> </p>	

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 2i. Monthly and Seasonal Outlooks for October and October to December 2021

<p>Monthly: October</p>	<p>Seasonal: October to December</p>
<p>Monthly sea surface temperature (Image 5):</p>	<p>Seasonal sea surface temperature (Image 6):</p>
<p>Difference from average sea surface temperature forecast for October 2021</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology <small>SeaState data extracted from: Tropical Ocean Forecast (TOF), Pacific Ocean Forecast (POF), Indian Ocean Forecast (IOF) and Southern Ocean Forecast (SOF) (2006), version 11. Available online at http://www.bom.gov.au</small></p> <p>Model: ACCESS-S1 Base period: 1990-2012 Model run: 11/09/2021 Issued: 13/09/2021</p>	<p>Difference from average sea surface temperature forecast for October to December 2021</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology <small>SeaState data extracted from: Tropical Ocean Forecast (TOF), Pacific Ocean Forecast (POF), Indian Ocean Forecast (IOF) and Southern Ocean Forecast (SOF) (2006), version 11. Available online at http://www.bom.gov.au</small></p> <p>Model: ACCESS-S1 Base period: 1990-2012 Model run: 11/09/2021 Issued: 13/09/2021</p>
<p>Monthly sea level (Image 7):</p>	<p>Seasonal sea level (Image 8):</p>
<p>Difference from average sea surface height forecast for October 2021</p> <p>© Commonwealth of Australia 2021 Bureau of Meteorology</p> <p>Model: ACCESS-S1 Base Period: 1990-2012 Model Run: 27/08/2021 Issued: Map not issued</p>	<p>Difference from average sea surface height forecast for October 2021 to December 2021</p> <p>© Commonwealth of Australia 2021 Bureau of Meteorology</p> <p>Model: ACCESS-S1 Base Period: 1990-2012 Model Run: 27/08/2021 Issued: Map not issued</p>
<p>4-week Coral Bleaching (Image 9):</p>	
<p>Vanuatu 4 Weeks Coral Bleaching Outlook: 03 October 2021</p> <p>Alert Level 2 Alert Level 1 Warming Watch No Stress</p> <p>© Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, COSFAC SPP NOAA Coral Reef Watch</p>	

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: $X \geq 35$

Summary Statement

Monthly and last three months: August 2021/June to August statement

Below normal rainfall was recorded at Whitegrass and Aneityum for the month of August. On the other hand, above normal rainfall was recorded at Lamap and Bauerfield. Near normal rainfall was received at Sola and Port Vila. Rainfall data is not available for Pekoa. It was the driest August on record for Aneityum.

Below normal rainfall was recorded in all stations for the June to August period. Rainfall data was not available at Pekoa and Port Vila. It was the second driest June to August on record for Aneityum and the fourth driest for Whitegrass.

Part 1i. Monthly and Seasonal Outlooks for October and October to December 2021

Monthly /Seasonal rainfall and temperature Outlook statements

The rainfall and temperature outlook for October, and the October to December period, is very likely to be above normal for the whole country.

Part 2: Recent Ocean summary statement

Monthly and last three months: August/June to August 2021

Most of the Vanuatu archipelago experienced normal to slightly warmer than average SST in August. For the June to August period, SSTs were warmer than average with the warmest SSTs of 1.5 °C above average located over Erromango Island.

Sea level was higher than normal in August. The highest SL was 250 mm and was located over the Torba group, and the western parts of Santo and Efate Island.

Part 2i. Monthly and Seasonal Outlooks for October and October to December 2021

Ocean Variable statement

The outlook for the Vanuatu archipelago shows a significant temperature difference of 0.8-1.2°C for October, as well as the October to December period, and sea level forecasts of up to 200 mm above average is expected for the next one to three months.

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: $X \geq 35$

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

Product	Date: August 2021	Stakeholder	Total Number of Participants	Number of male	Number of female
Vanuatu Climate Update	7 th	Local Community Noticeboard around Efate Island	25 Noticeboards		
Monthly Tide Calendar	7 th	Local Community Noticeboard around Efate Island	25 Noticeboards		
Training on understanding the different products and services of weather, Climate Variability and Climate Change in Vanuatu and the Climate Smart Agriculture recommendations and practices.	9 th – 13 th	 Women's group	78		78
Total			78		78

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: $X \geq 35$