

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

Country: Papua New Guinea

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Jun-2021	Jul-2021	Aug-2021				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
Momase Region							
Madang (1944-2021)				64.0	142.8	100.5	
Nadzab (1973-2021)	130.4	162.8		81.9	155.6	111.6	
Wewak (1956-2021)	318.0	319.8	133.0	116.5	210.5	146.2	28/66
Vanimo (1918-2021)	247.8	206.8	203.6	138.7	193.3	166.0	49/66
Highlands Region							
Goroka (1948-2021)		28.0		49.5	84.0	64.6	
New Guinea Islands Region							
Momote (1949-2021)	173.8	202.8	355.2	222.5	332.4	276.4	53/72
Kavieng (1916-2021)	170.8	140.6	239.8	158.7	255.4	205.9	55/90
Southern Region							
Misima (1917-2021)	439.0	396.8	326.6	80.4	162.6	109.0	82/96
Port Moresby (1875-2021)	30.4	15.2	10.8	8.4	31.8	15.6	53/122

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

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Momase Region						
Madang (1944-2021)			403.2	546.9	473.0	
Nadzab (1973-2021)			295.0	424.0	329.0	
Wewak (1894-2021)	770.8	Above normal	481.8	616.5	557.0	59/66
Vanimo (1918-2021)	658.2	Above normal	516.4	632.0	560.2	47/64
Highlands Region						
Goroka (1948-2021)			169.8	244.4	191.0	
New Guinea Islands Region						
Momote (1949-2021)	731.8	Below normal	812.0	1063.5	960.9	22/71
Kavieng (1917-2021)	551.2	Below normal	587.8	787.2	709.8	26/90
Southern Region						
Misima (1917-2021)	1162.4	Above normal	336.6	546.4	458.9	86/93
Port Moresby (1875-2021)	56.4	Below normal	56.9	112.4	87.5	38/108

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 for October 2021</p> <p>Tercile rainfall probabilities for October 2021</p> <p>Model: ACCESS-S1 Base period: 1990-2012 Issued: 06/09/2021</p>	<p>Rainfall for October – December 2021</p> <p>Tercile rainfall probabilities for October to December 2021</p> <p>Model: ACCESS-S1 Base period: 1990-2012 Issued: 06/09/2021</p>
<p>Monthly Maximum temperature</p> <p>Tercile maximum temperature probabilities for October 2021</p> <p>Model: ACCESS-S1 Base period: 1990-2012 Issued: 06/09/2021</p>	<p>Seasonal maximum temperature (Image 4):</p> <p>Tercile maximum temperature probabilities for October to December 2021</p> <p>Model: ACCESS-S1 Base period: 1990-2012 Issued: 06/09/2021</p>
<p>Monthly minimum temperature</p> <p>Tercile minimum temperature probabilities for October 2021</p> <p>Model: ACCESS-S1 Base period: 1990-2012 Issued: 06/09/2021</p>	<p>Seasonal minimum temperature (Image 6):</p> <p>Tercile minimum temperature probabilities for October to December 2021</p> <p>Model: ACCESS-S1 Base period: 1990-2012 Issued: 06/09/2021</p>

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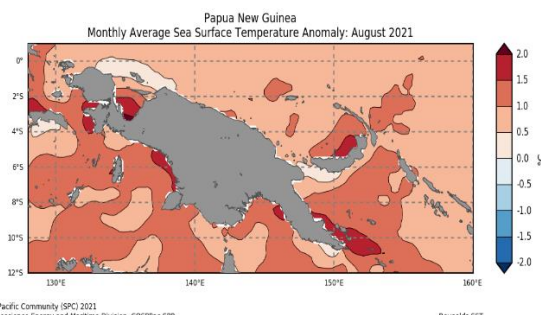
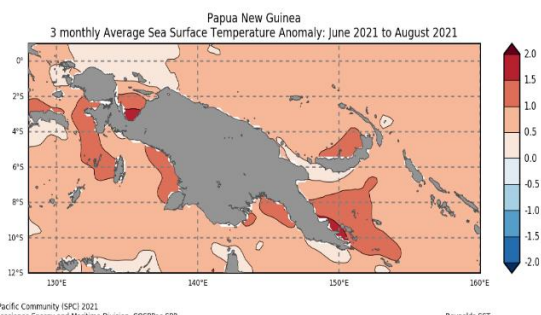
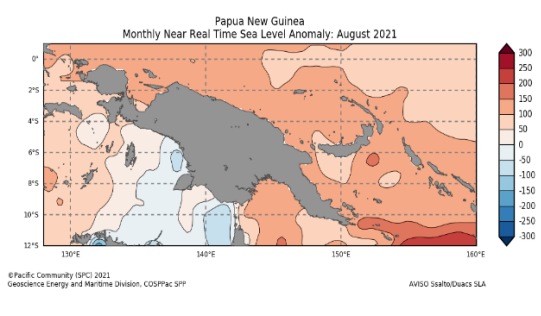
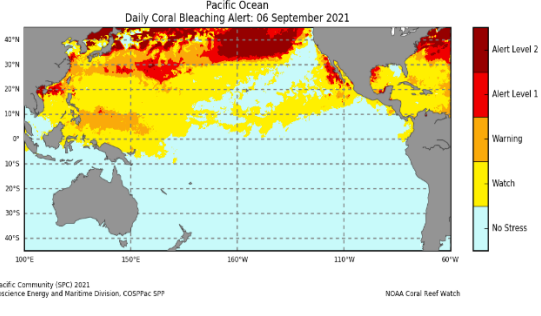
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Part 2: Recent Ocean summary statement

Monthly: August 2021

<p>Monthly: August</p> <p>Sea Surface Temperature (Image 1):</p> 	<p>Last three months: June to August 2021:</p> <p>Sea Surface Temperature (Image 4):</p> 
<p>Sea level (Image 2): Insert map</p> 	
<p>Daily coral bleaching alert (Image 3):</p> 	

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

Monthly: October	Seasonal: October to December
<p>Monthly sea surface temperature (Image 5): Insert map</p> <p>Difference from average sea surface temperature forecast for October 2021</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology Model: ACCESS-S1 Base period: 1990-2012 Model run: 04/09/2021 Issued: 06/09/2021</p>	<p>Seasonal sea surface temperature (Image 6): Insert map</p> <p>Difference from average sea surface temperature forecast for October to December 2021</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology Model: ACCESS-S1 Base period: 1990-2012 Model run: 04/09/2021 Issued: 06/09/2021</p>
<p>Monthly sea level (Image 7):</p> <p>Difference from average sea surface height forecast for October 2021</p> <p>© Commonwealth of Australia 2021 Bureau of Meteorology Model: ACCESS-S1 Base Period: 1990-2012 Model Run: 27/08/2021 Issued: Map not issued</p>	<p>Seasonal sea level (Image 8):</p> <p>Difference from average sea surface height forecast for October 2021 to December 2021</p> <p>© Commonwealth of Australia 2021 Bureau of Meteorology 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>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 03 October 2021</p> <p>Alert Level 2 Alert Level 1 Warning Watch No Stress</p> <p>© Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, COSPPac SPP NOAA Coral Reef Watch</p>	

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Summary Statement

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

Monthly: August 2021 statement

Normal rainfall was received at Wewak, Kavieng and Port Moresby whilst above normal was recorded at Vanimo, Momote and Misima.

Rainfall data was not available for Madang, Nadzab and Goroka.

Last three months: June to August 2021 statement

Rainfall

Below normal rainfall was recorded at Port Moresby and the New Guinea Islands region whilst above normal was recorded at Misima and two stations in the Momase region. Madang, Nadzab and Goroka could not be analysed due to unavailability of data. It was the 8th wettest June to August on record at Misima.

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

Monthly /Seasonal rainfall and temperature Outlook statements

Monthly Rainfall outlook statements

The rainfall outlook for PNG (except for Momote, Vanimo, Wewak, Oro) for October is very likely to be above normal. Above normal rainfall is very likely for East and West New Britain, Nadzab, Southern Highlands, Enga, Western, Gulf, NCD and the Islands of Milne Bay. Normal rainfall is likely for Momote, Vanimo, Wewak and Oro Province.

Seasonal Rainfall statements

Rainfall outlooks for PNG for October to December (except for Kavieng and Momote) is very likely to be above normal. Rainfall is likely to be below normal for October to December in Momote and Kavieng.

Monthly and Seasonal Maximum Temperature statements

The maximum temperature outlook for PNG for October and October to December is very likely to be above normal except for southern parts of Western Province where it is to be near normal

Monthly and Seasonal Minimum Outlook statements

The minimum temperature outlook for PNG for October and October to December is very likely to be above normal.

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Part 2: Recent Ocean summary statement

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

Sea Surface Temperature statement

Most of Papua New Guinea experienced above average SST in the month of August 2021. Significant warm SSTs were experienced on the western side of Milne Bay, moving across the Bismark Sea to the north of New Britain island. Highest SSTs were 1.5 degrees above average and located off the coast of Milne Bay and New Britain Provinces

Sea level statement

The sea level anomaly across Papua New Guinea in August 2021 was higher than normal, with majority of the waters range of 100 to 150 mm above average.

Daily bleaching alert statement

PNG has a coral bleaching 'watch' alert status for much of the region.

Last three months Sea Surface Temperature

Last three months Sea Surface Temperature statement for June to August 2021 period, warmer than average SSTs were experienced in PNG ranging from 0.5 to 1.5 degrees above average.

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

Ocean Variable statement

Monthly sea surface temperature statement

The outlook for PNG shows a significant temperature difference of 0.8-2.0°C for October.

Seasonal Sea Surface Temperature statement

The outlook for PNG shows SSTs are likely to be above average (0.8- 1.2 degrees) for the October to December period.

Monthly sea level statement

The outlook across PNG shows sea surface heights are likely to be above average for October. In the north of PNG is predicted to reach 0.1 to 0.2 metres above normal.

Seasonal sea level statement

The outlook across PNG shows sea surface heights are likely to be above average for October to December and is predicted to reach 0.1 to 0.2 metres above normal.

4-week Coral Bleaching

The outlook for PNG shows a Warning alert for New Britain waters Watch alert in north coast of PNG. A watch is on for waters south of New Britain Island moving on to coast of Milne Bay.

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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
Climate Bulletin	17 th	National Disaster Centre, Climate Change Development Authority, Provincial Disaster Coordinators, Universities, NWS Staff, Mining & Energy Sector, Agriculture, Fisheries, Water PNG, Forestry, Tourism Promotion Authority, Education, Health, Aviation, Shipping, Transport, Banking Institutions, World Vision, UNDP, AHC/DFAT, Customs and Immigration, National Maritime Safety Authority, Coffee & Copra Industry, National Capital District Commission, Mineral Resource Authority, Media	145	103	42
EAR Watch	23rd	Govt: National Disaster Centre, Dept. Of Transport, National Agriculture Research Institute, Dept. Of Agriculture and Livestock, Provincial Disaster Coordinators, Civil Aviation Safety Authority, Climate Change Development Authority, Dept. Of	140	91	49

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		<p>Mineral Policy and Geohazard Management, PNG DFAT, Centre of Environmental Protection Authority, National Capital District Commission, Dept. of Education. UN</p> <p>Agencies : UNDP, FAO, IOM, Oxfam.</p> <p>NGOs : Childfund, WVI, PNGRC.</p> <p>Private:</p> <p>Pacific Hydro Services, PNG Power, Ok</p> <p>Tedi Mining Ltd, Media. Aus DFAT, DAL Provincial Officers</p>			
Monthly Climate Briefing					
Ocean Outlook					
Total			285	194	91

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