

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 192

Country: Papua New Guinea

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Jun-2023	Jul-2023	Aug-2023				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Momase Region							
Madang (1944-2023)				64.0	142.8	100.5	
Nadzab (1973-2023)	68.8	195.6	212.6	80.8	148.0	111.6	42/50
Wewak (1956-2023)	131.0	109.6	65.2	117.6	211.4	146.2	10/68
Vanimo (1918-2023)	95.2	202.4	337.8	138.3	193.5	166.0	67/68
Highlands Region							
Goroka (1948-2023)	61.2	56.4	98.6	49.2	84.0	64.6	42/61
New Guinea Islands Region							
Momote (1949-2023)				221.0	334.8	276.4	
Kavieng (1916-2023)	293.8	226.6	174.4	156.9	253.0	205.9	35/92
Southern Region							
Misima (1917-2023)				80.3	165.0	109.0	
Port Moresby (1875-2023)	16.2	12.8	2.6	9.5	32.0	15.6	18/124

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

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Momase Region						
Madang (1944-2023)			403.2	546.9	473.0	
Nadzab (1973-2023)	477.0	Above normal	295.0	424.3	329.0	37/48
Wewak (1894-2023)	305.8	Below normal	492.3	621.8	563.2	4/68
Vanimo (1918-2023)	635.4	Above normal	514.7	632.3	560.2	46/66
Highlands Region						
Goroka (1948-2023)	216.2	Normal	162.6	240.0	185.2	37/58
New Guinea Islands Region						
Momote (1949-2023)			742.2	1057.7	936.2	
Kavieng (1917-2023)	694.8	Normal	462.0	778.0	700.0	45/92
Southern Region						
Misima (1917-2023)			341.3	548.0	481.8	
Port Moresby (1875-	31.6	Below	56.4	110.8	87.5	19/110

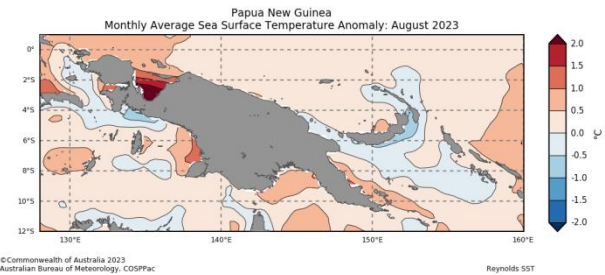
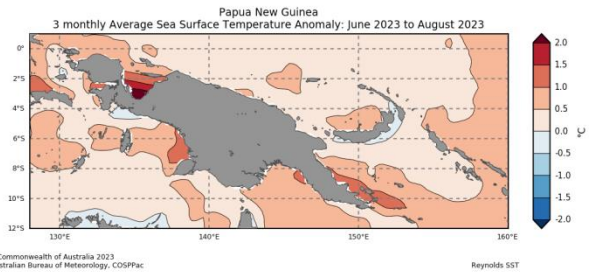
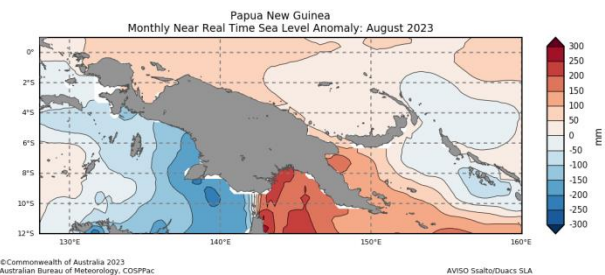
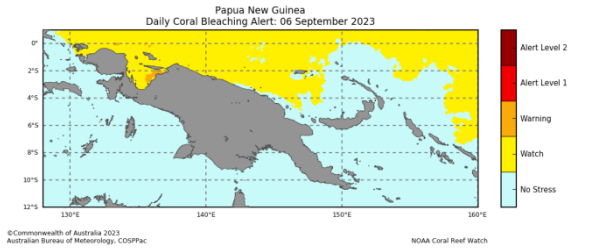
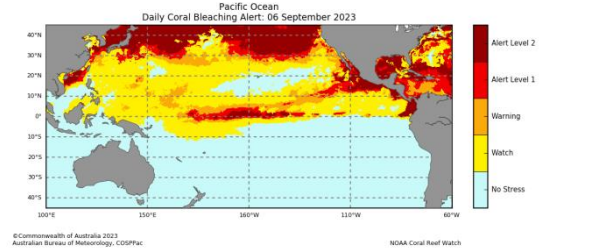
2023)		normal				
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Part 1i. Monthly and Seasonal Outlooks for October and October to December 2023

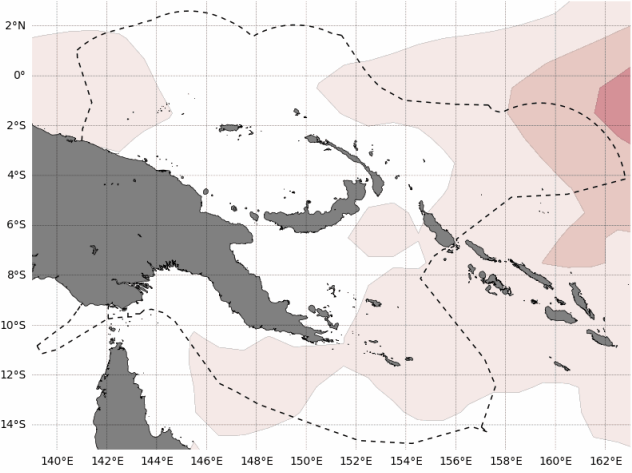
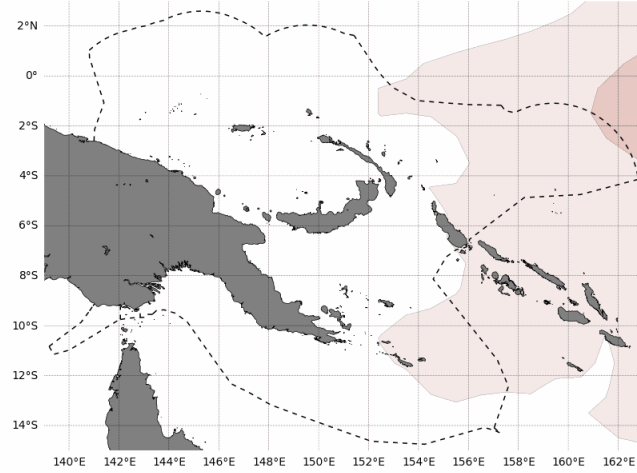
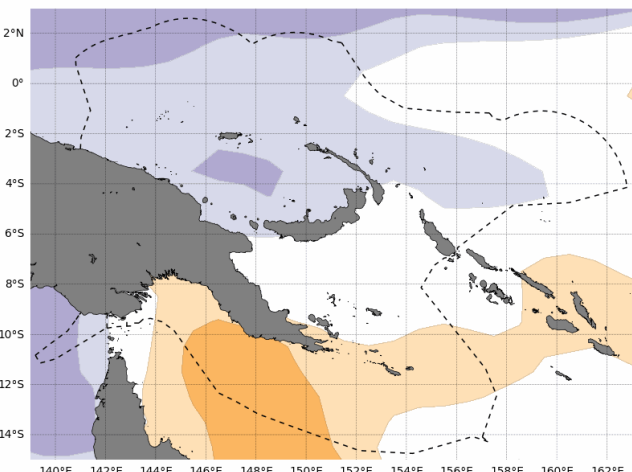
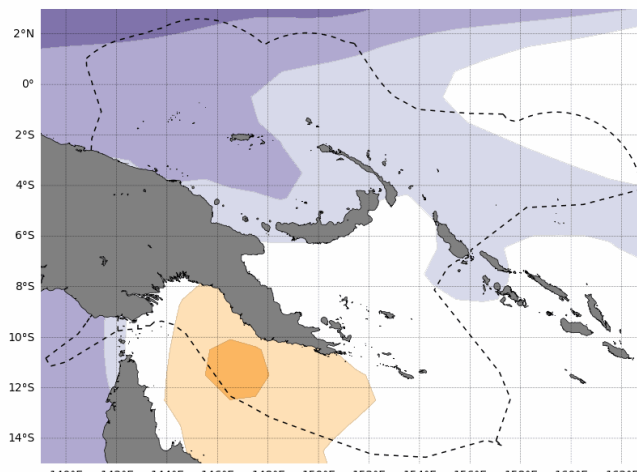
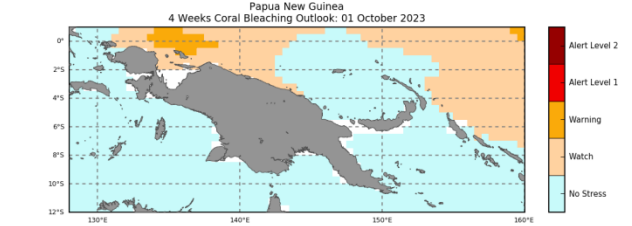
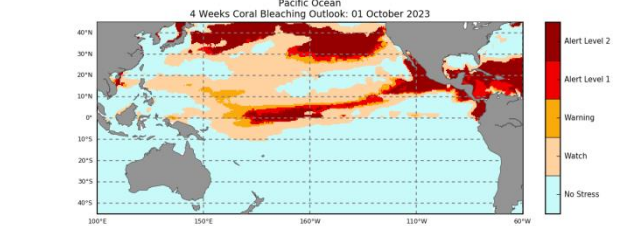
Monthly: October	Seasonal: October to December
Rainfall (Image 1)	Rainfall (Image 2)
<p>Tercile rainfall probabilities for October 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023. Australian Bureau of Meteorology Map data extracted from Tanager Marine Institute (2019). Maritime Boundaries Database: Maritime Boundaries and Exclusive Economic Zones (2008M), version 11. Available online at http://www.marinegifs.org/</p>	<p>Tercile rainfall probabilities for October to December 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023. Australian Bureau of Meteorology Map data extracted from Tanager Marine Institute (2019). Maritime Boundaries Database: Maritime Boundaries and Exclusive Economic Zones (2008M), version 11. Available online at http://www.marinegifs.org/</p>
Monthly Maximum temperature (Image 3):	Seasonal maximum temperature (Image 4):
<p>Tercile maximum temperature probabilities for October 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023. Australian Bureau of Meteorology Map data extracted from Tanager Marine Institute (2019). Maritime Boundaries Database: Maritime Boundaries and Exclusive Economic Zones (2008M), version 11. Available online at http://www.marinegifs.org/</p>	<p>Tercile maximum temperature probabilities for October to December 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023. Australian Bureau of Meteorology Map data extracted from Tanager Marine Institute (2019). Maritime Boundaries Database: Maritime Boundaries and Exclusive Economic Zones (2008M), version 11. Available online at http://www.marinegifs.org/</p>
Monthly minimum temperature (Image 5):	Seasonal minimum temperature (Image 6):
<p>Tercile minimum temperature probabilities for October 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023. Australian Bureau of Meteorology Map data extracted from Tanager Marine Institute (2019). Maritime Boundaries Database: Maritime Boundaries and Exclusive Economic Zones (2008M), version 11. Available online at http://www.marinegifs.org/</p>	<p>Tercile minimum temperature probabilities for October to December 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023. Australian Bureau of Meteorology Map data extracted from Tanager Marine Institute (2019). Maritime Boundaries Database: Maritime Boundaries and Exclusive Economic Zones (2008M), version 11. Available online at http://www.marinegifs.org/</p>

Part 2: Recent Ocean Observation

Monthly/Three months: August and June to August 2023

Monthly: August	Last three months: June and June to August 2023:
<p>Sea Surface Temperature (Image 1):</p> 	<p>Sea Surface Temperature (Image 4):</p> 
<p>Sea level (Image 2):</p> 	
<p>Daily coral bleaching alert (Image 3):</p> 	

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

Monthly: October	Seasonal: October to December
Monthly sea surface temperature (Image 5): Difference from average sea surface temperature forecast for October 2023  Difference from average (°C) <small>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/</small>	Seasonal sea surface temperature (Image 6): Difference from average sea surface temperature forecast for October to December 2023  Difference from average (°C) <small>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/</small>
Monthly sea level (Image 7): Difference from average sea surface height forecast for October 2023  Difference from average (mm) <small>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/</small>	Seasonal sea level (Image 8): Difference from average sea surface height forecast for October to December 2023  Difference from average (mm) <small>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/</small>
4-week Coral Bleaching (Image 9): Papua New Guinea 4 Weeks Coral Bleaching Outlook: 01 October 2023  <small>© Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac NOAA Coral Reef Watch</small>	Pacific Ocean 4 Weeks Coral Bleaching Outlook: 01 October 2023  <small>© Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac NOAA Coral Reef Watch</small>

Summary Statement

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

Rainfall for August was below normal at Wewak and Port Moresby, above normal at Nadzab, Vanimo and Goroka, and normal at Kavieng. Vanimo received its second wettest August on record.

July rainfall was not available for Madang, Momote, and Misima.

Rainfall for June to August was below normal at Wewak and Port Moresby, above normal at Nadzab and Vanimo, and near-normal at Goroka and Kavieng. Wewak received its fourth driest June to August on record.

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

Monthly /Seasonal rainfall and temperature Outlook statements

The rainfall for October is likely or very likely to be below normal over most of the regions of PNG. The main exception is the Momase Region where the outlook offers little guidance.

The rainfall for October to December is likely very likely to be below normal for most of PNG. The exceptions are northeast New Britain and much of New Ireland where near-normal is likely, and the Momase region where there are some small areas of above normal being likely surrounded by a region of little guidance.

Maximum temperatures during October and October to December are very likely to be above normal over PNG.

Minimum temperatures averaged over October and October to December are likely to be near-normal over most parts of Southern region and in parts of the Highlands region. For the rest of PNG, above normal is likely or very likely.

Part 2: Recent Ocean summary statement

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

August ocean temperatures around PNG were 0.5 to 1.0 °C above normal and 0.5 to 1.0 below normal.

Averaged over June to August, ocean temperatures around PNG were 0.5 to 1.0 °C above normal.

August sea levels around PNG were 50mm to 250mm above normal and 50mm to 100mm below normal.

PNG has a 'Watch' coral bleaching status over the waters of PNG.

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

Ocean Variable statement

Averaged over October and October to December ocean temperatures around PNG are predicted to be 0.4 to 0.8 °C above normal.

Averaged over October and October to December, sea levels around PNG are predicted to be 30mm to 60mm below normal north of New Britain and 30mm to 60mm above normal south of PNG.

The four-week coral bleaching outlook to 01 October shows PNG has a 'Watch' status over PNG waters.

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

Product	Date: August 2023	Stakeholder	Total Number of Participants	Number of Male	Number of Female	Comments (If there are comments from you Stakeholders)
Seasonal Climate Outlook	15 th	Govt: National Disaster Centre, Dept. of Agriculture and Livestock, Climate Change Development Authority, National Agriculture Research Institute, Dept. of Transport, Dept. Of Mineral Policy and Geohazard Management, Dept. of Works, PNG Fire, National Maritime Safety Authority, Civil Aviation Safety Authority, PNG Forest Authority, National Capital District Commission, PNG Customs Authority, National Dept. Of Health, Dept. of Education, Centre for Environmental Protection Authority, Water PNG. UN agencies: UNDP, IOM, UNOCH. Private: PNG Air Services Limited, ExxonMobil, Ok Tedi Mining Ltd, PNG Power Ltd, Global Construction Ltd, Datec, Interoil, Air Niugini, Bank South Pacific, Kina Bank, SMEC, PNG Ports, Media and Universities.	222	172	50	
Monthly OTML Climate Briefing	11th	Ok Tedi Mine Limited, PNGNWS, BOM	14	11	3	
Total			236	183	53	