

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 191

Country: Papua New Guinea

Part 1: Recent climate

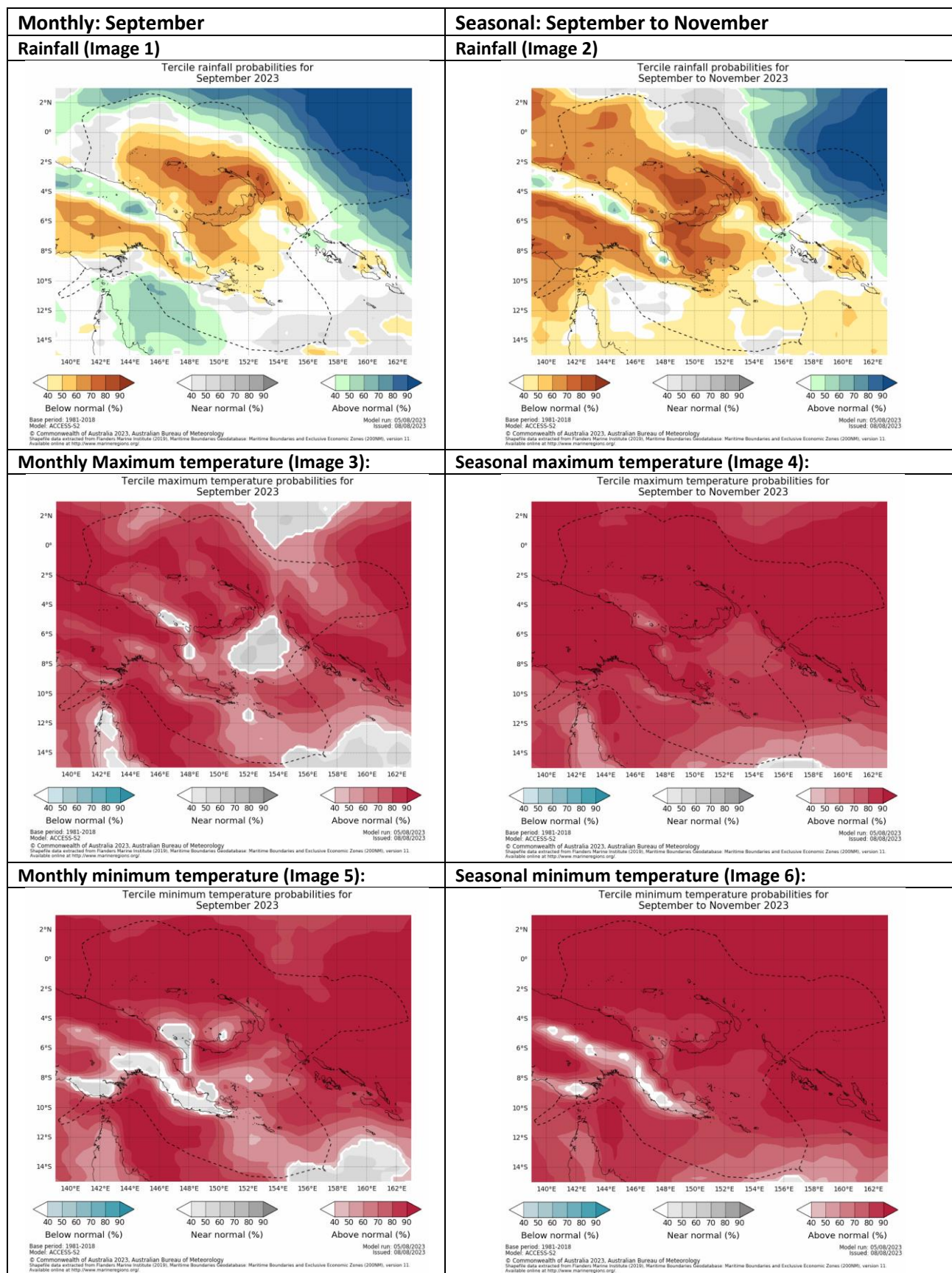
TABLE 1: Monthly Rainfall

Station (include data period)	May-2023	Jun-2023	Jul-2023				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Momase Region							
Madang (1944-2022)				103.8	183.0	142.0	
Nadzab (1973-2023)	129.0	68.8	195.6	75.9	151.0	117.8	39/49
Wewak (1956-2023)	241.6	131.0	109.6	149.0	206.4	176.8	14/68
Vanimo (1918-2023)	167.6	95.2	202.4	145.6	219.8	199.5	37/69
Highlands Region							
Goroka (1948-2023)	187.0	61.2	56.4	41.9	70.6	53.5	34/62
New Guinea Islands Region							
Momote (1949-2023)				292.8	398.8	339.0	
Kavieng (1916-2023)	474.0	293.8	226.6	178.7	273.9	218.6	49/94
Southern Region							
Misima (1917-2022)				87.0	189.9	139.2	
Port Moresby (1875-2023)	354.8	16.2	12.8	6.6	25.4	14.2	58/124

TABLE 2: Three-month Total Rainfall for May to July 2023

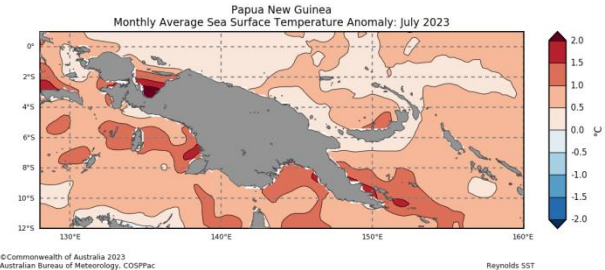
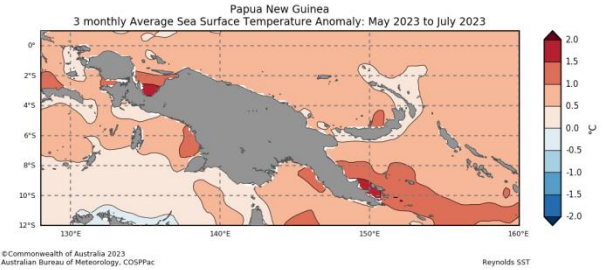
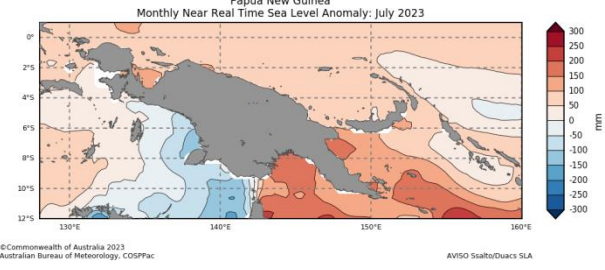
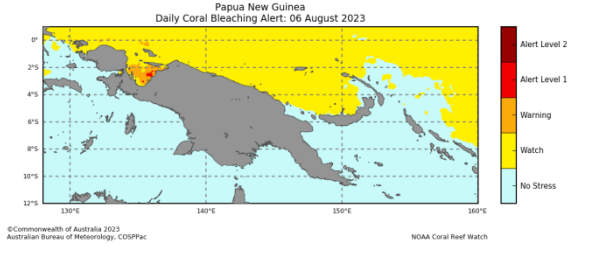
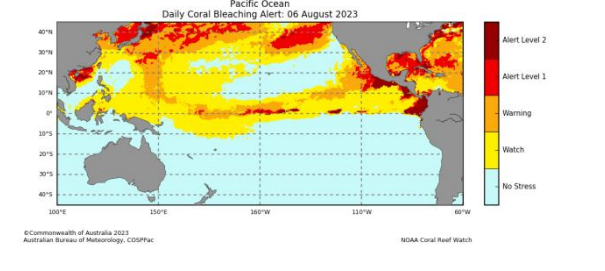
Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Momase Region						
Madang (1944-2022)			636.1	813.3	743.2	
Nadzab (1973-2023)	393.4	Above normal	274.8	372.8	319.1	37/47
Wewak (1894-2023)	482.2	Below normal	540.0	694.6	629.8	20/68
Vanimo (1918-2023)	465.2	Below normal	575.0	685.5	606.6	14/68
Highlands Region						
Goroka (1948-2023)	304.6	Above normal	200.0	257.6	255.0	45/57
New Guinea Islands Region						
Momote (1949-2023)			790.9	1017.0	898.1	
Kavieng (1917-2023)	994.4	Above normal	635.6	782.9	709.8	85/92
Southern Region						
Misima (1917-2022)			473.4	709.0	564.2	
Port Moresby (1875-2023)	383.8	Above normal	86.9	158.3	119.8	109/113

Part 1i. Monthly and Seasonal Outlooks for September and September to November 2023

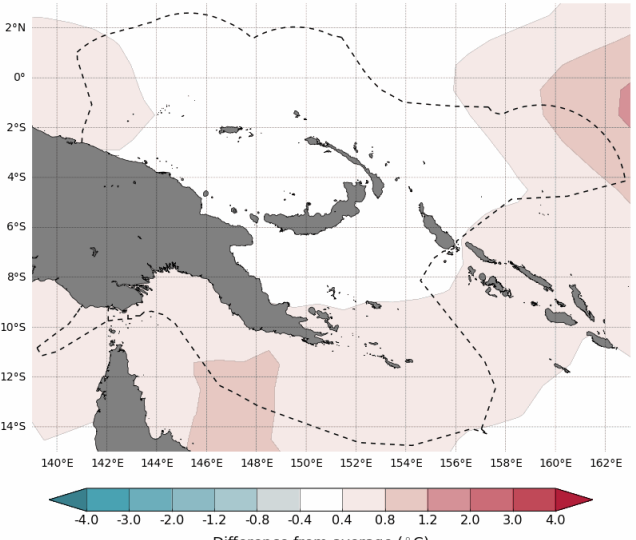
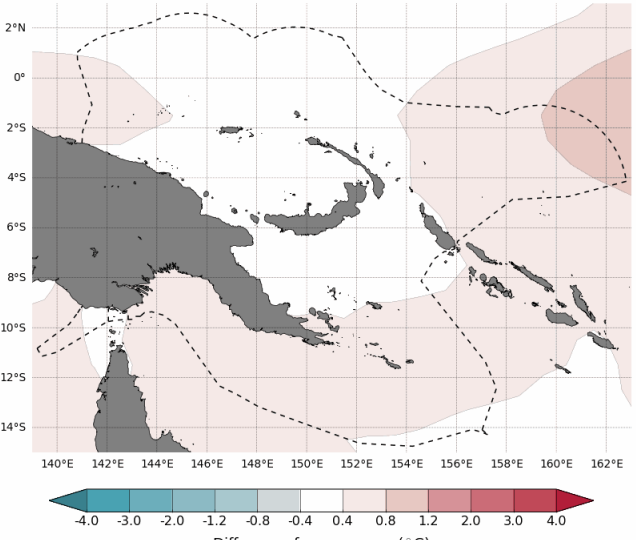
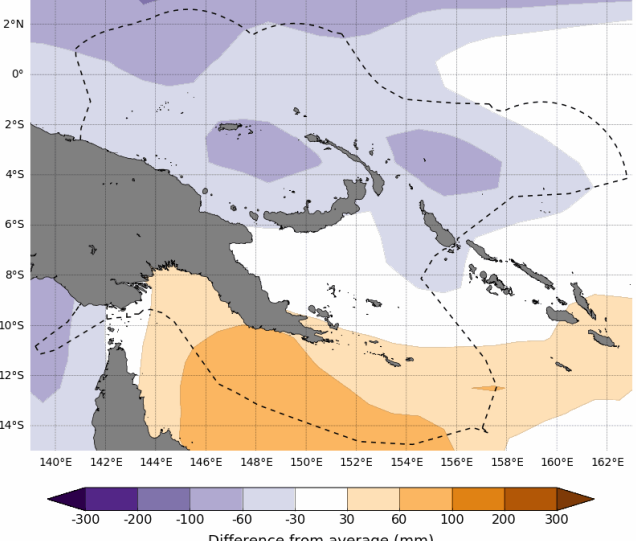
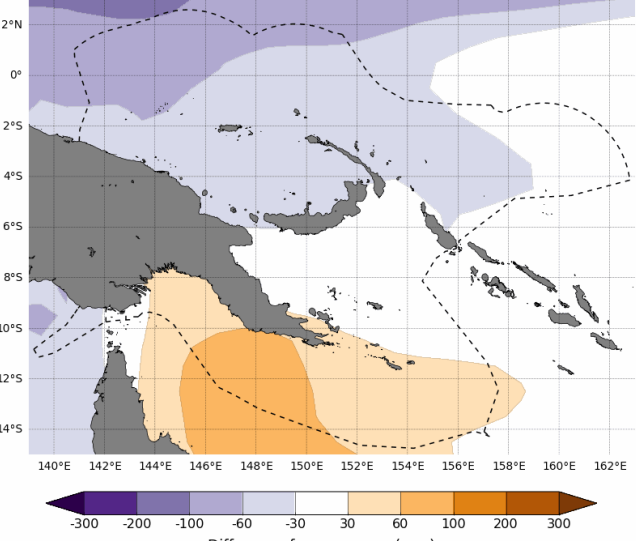
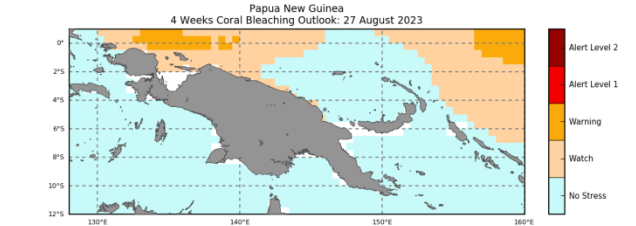
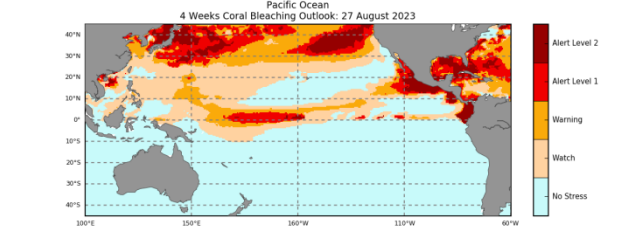


Part 2: Recent Ocean Observation

Monthly/Three months: May and May to July 2023

Monthly: July	Last three months: May to July 2023:
<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 SeaWiFS/QuikSCAT 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 September and September to November 2023

Monthly: September	Seasonal: September to November
Monthly sea surface temperature (Image 5):	Seasonal sea surface temperature (Image 6):
<p>Difference from average sea surface temperature forecast for September 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.marinerregions.org/</p> <p>Model run: 05/08/2023 Issued: 07/08/2023</p>	<p>Difference from average sea surface temperature forecast for September to November 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.marinerregions.org/</p> <p>Model run: 05/08/2023 Issued: 07/08/2023</p>
Monthly sea level (Image 7):	Seasonal sea level (Image 8):
<p>Difference from average sea surface height forecast for September 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.marinerregions.org/</p> <p>Model run: 05/08/2023 Issued: 07/08/2023</p>	<p>Difference from average sea surface height forecast for September to November 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.marinerregions.org/</p> <p>Model run: 05/08/2023 Issued: 07/08/2023</p>
4-week Coral Bleaching (Image 9):	
<p>Papua New Guinea 4 Weeks Coral Bleaching Outlook: 27 August 2023</p>  <p>© Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>	<p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 27 August 2023</p>  <p>© Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>

Summary Statement

Monthly and last three months: July 2023/May to July 2023 statement

Rainfall for July was below normal at Wewak, above normal at Nadzab, and near-normal at Vanimo, Goroka, Kavieng and Port Moresby.

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

Rainfall for May to July was below normal at Wewak and Vanimo, and above normal at Nadzab, Goroka, Kavieng and Port Moresby. Port Moresby and Kavieng received their fifth and eighth wettest May to July periods on record, respectively.

Part 1i. Monthly and Seasonal Outlooks for September and September to November 2023

Monthly /Seasonal rainfall and temperature Outlook statements

The rainfall for September is very likely to be below normal over most of the regions of PNG, apart from the Momase region where above normal is likely..

The rainfall for September to November is very likely to be below normal for most of PNG, apart from the Momase region where there is generally little guidance, although above normal is likely in a few isolated patches.

Maximum temperatures during September and averaged over September to November are likely or very likely to be above normal over PNG.

Minimum temperatures for September are likely to be near-normal over most parts of the Southern Region, and above normal for the rest of PNG.

Minimum temperatures averaged over September to November are likely to be near-normal over parts of the Highlands, Western and Central, but for the rest of PNG above normal temperatures are likely or very likely

Part 2: Recent Ocean summary statement

Monthly and last three months: July 2023/May to July 2023

July ocean temperatures around PNG were 0.5 to 2.0 °C above normal.

Averaged over May to July, ocean temperatures around PNG were 0.5 to 2.0 °C above normal.

July sea levels around PNG were 50mm to 200mm above normal.

PNG has a 'No Stress to Watch' coral bleaching status over the waters of PNG.

Part 2i. Monthly and Seasonal Outlooks for September and September to November 2023

Ocean Variable statement

September ocean temperatures around PNG are predicted to be 0.4 to 1.2 °C above normal.

Averaged over September to November, ocean temperatures around PNG are predicted to be 0.4 to 0.8 °C above normal.

Averaged over September and September to November, sea levels around PNG are predicted to be 30mm to 100mm below normal in northern PNG and 30mm to 60mm above normal in the south.

The four-week coral bleaching outlook to 27 August shows PNG has a ‘No Stress to Watch’ status over PNG waters.

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

Product	Date: July 2023	Stakeholder	Total Number of Participants	Number of Male	Number of Female	Comments (If there are comments from you Stakeholders)
Monthly Drought Update						
Monthly OTML Climate Briefing	30th	Ok Tedi Mine Limited, PNGNWS, BOM	14	11	3	
Climate data request		DHV Engineers, BECE International, NARI, Paga Hill, Student (University of Goroka), PNGNWS, Student (University of Southern Queensland)	7	5	2	
Total			21	16	5	