

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 189

Country: Papua New Guinea

Part 1: Recent climate

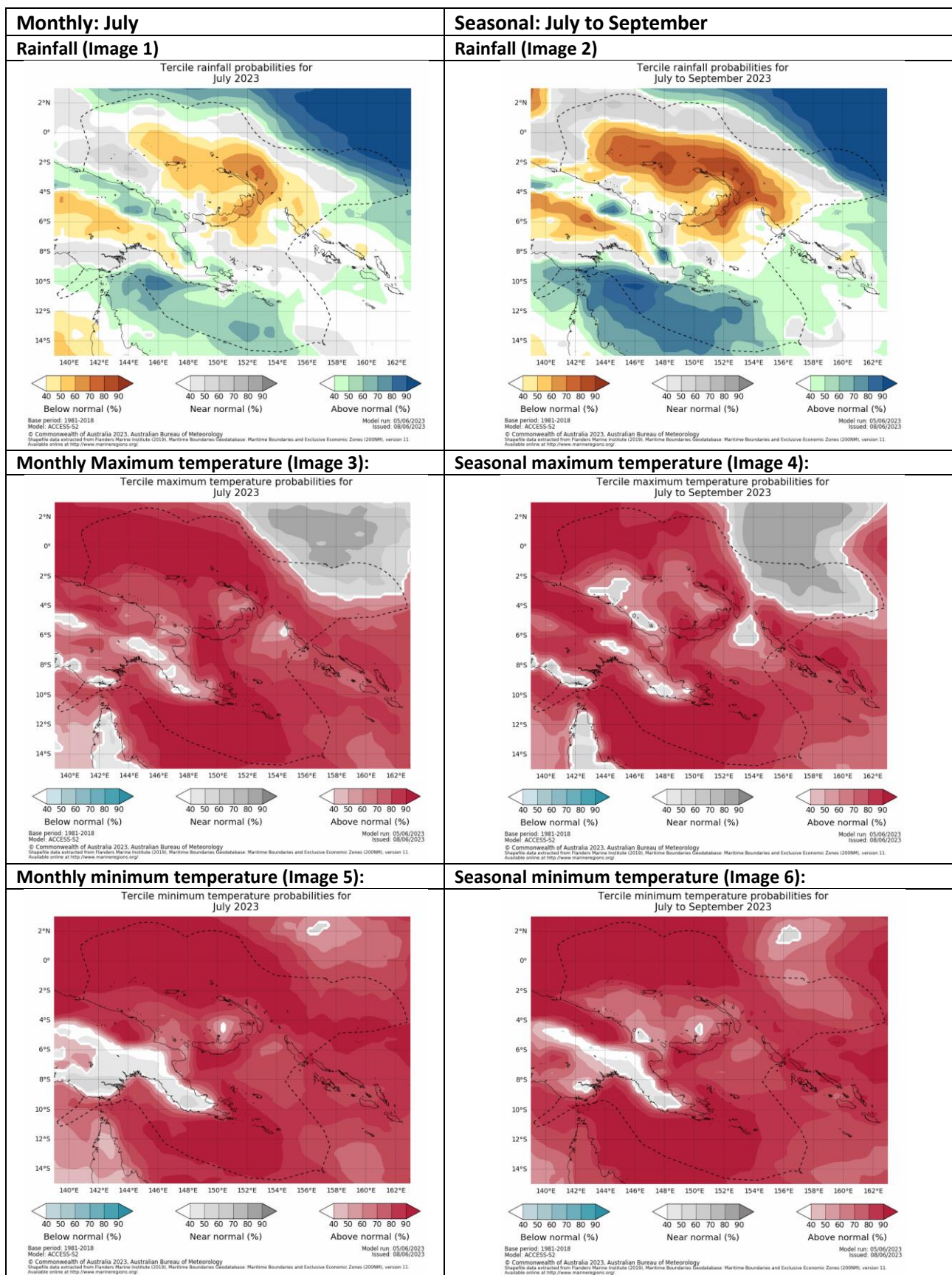
TABLE 1: Monthly Rainfall

| Station (include data period) | Mar-2023 | Apr-2023 | May-2023 | | | | |
|-------------------------------|------------|------------|---------------|---------|---------|--------|---------|
| | | | Total (mm) | 33%tile | 67%tile | Median | Rank |
| | Total (mm) | Total (mm) | Rainfall (mm) | | | | |
| | | | | | | | |
| Momase Region | | | | | | | |
| Madang (1944-2023) | | | | 299.7 | 409.8 | 333.8 | |
| Nadzab (1973-2023) | 25.6 | 67.0 | 129.0 | 67.8 | 103.1 | 73.5 | 39/49 |
| Wewak (1956-2023) | 137.0 | 135.2 | 241.6 | 177.2 | 272.8 | 220.2 | 38/68 |
| Vanimo (1918-2023) | 145.4 | 237.0 | 167.6 | 167.8 | 257.6 | 205.8 | 24/70 |
| Highlands Region | | | | | | | |
| Goroka (1948-2023) | 172.0 | 213.0 | 187.0 | 88.5 | 138.7 | 109.0 | 53/60 |
| New Guinea Islands Region | | | | | | | |
| Momote (1949-2023) | 136.2 | | | 196.1 | 258.3 | 232.8 | |
| Kavieng (1916-2023) | 376.0 | 453.0 | | 195.3 | 293.3 | 244.5 | |
| Southern Region | | | | | | | |
| Misima (1917-2023) | | | | 178.0 | 310.8 | 241.5 | |
| Port Moresby (1875-2023) | 132.2 | 247.0 | 354.8 | 32.4 | 74.8 | 51.0 | 130/131 |

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

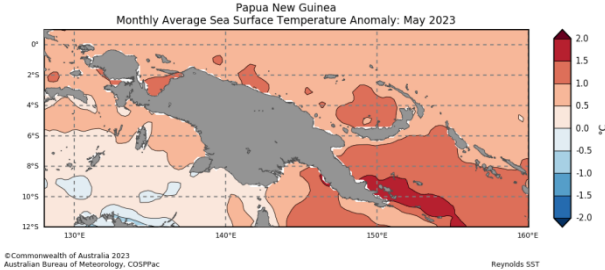
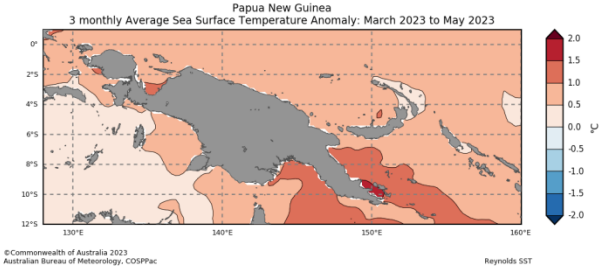
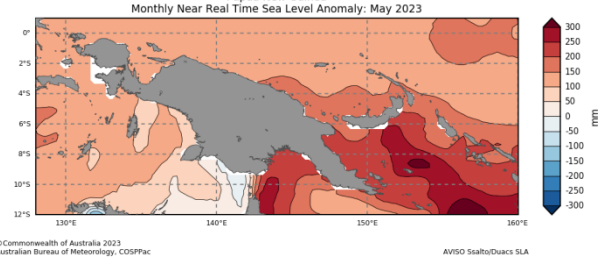
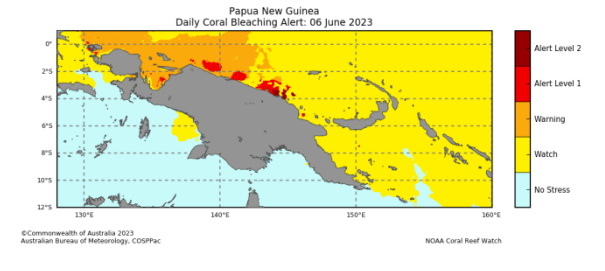
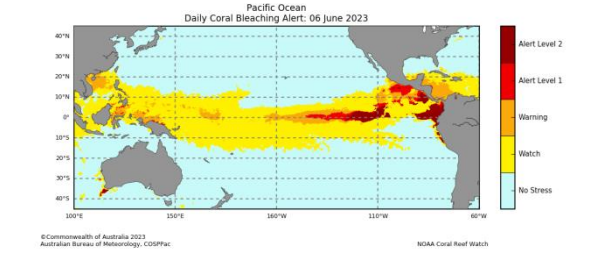
| Station | Three-month Total | | 33%tile | 67%tile | Median | Rank |
|---------------------------|-------------------|--------------|---------|---------|--------|---------|
| | Rainfall (mm) | | | | | |
| Momase Region | | | | | | |
| Madang (1944-2023) | | | 1000.2 | 1202.2 | 1130.2 | |
| Nadzab (1973-2023) | 221.6 | Below normal | 345.3 | 427.8 | 385.0 | 4/45 |
| Wewak (1894-2023) | 513.8 | Normal | 511.4 | 645.9 | 595.5 | 25/65 |
| Vanimo (1918-2023) | 550.0 | Below normal | 663.1 | 831.3 | 720.1 | 12/66 |
| Highlands Region | | | | | | |
| Goroka (1948-2023) | 572.0 | Normal | 491.9 | 595.3 | 553.5 | 33/59 |
| New Guinea Islands Region | | | | | | |
| Momote (1949-2023) | | | 713.0 | 905.4 | 824.0 | |
| Kavieng (1917-2023) | | | 798.1 | 942.7 | 860.8 | |
| Southern Region | | | | | | |
| Misima (1917-2023) | | | 698.1 | 955.6 | 781.8 | |
| Port Moresby (1875-2023) | 734.0 | Above normal | 365.2 | 479.7 | 428.0 | 125/126 |

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

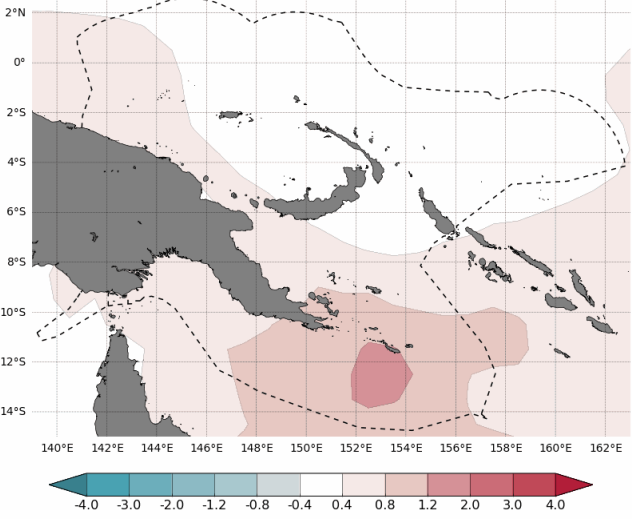
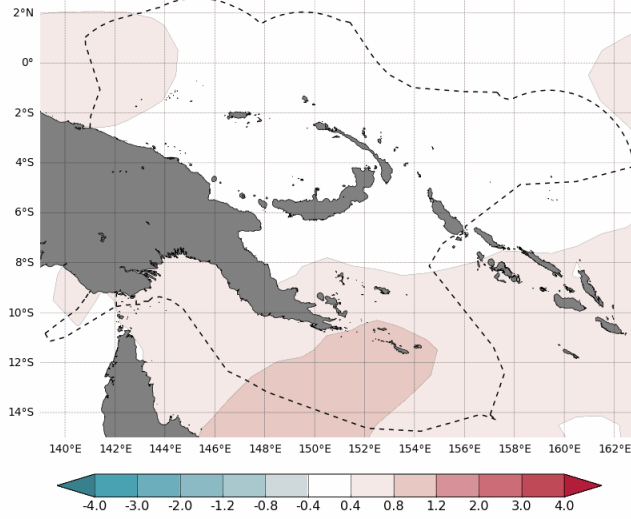
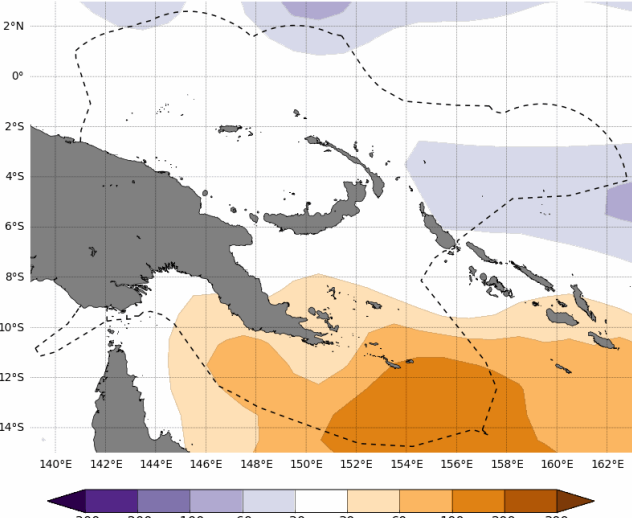
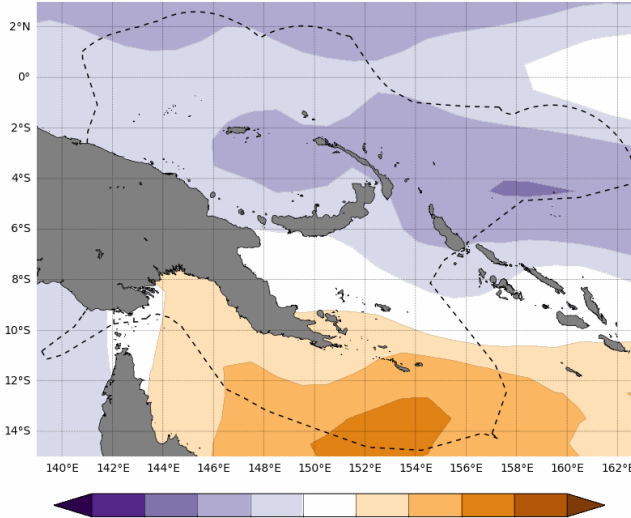
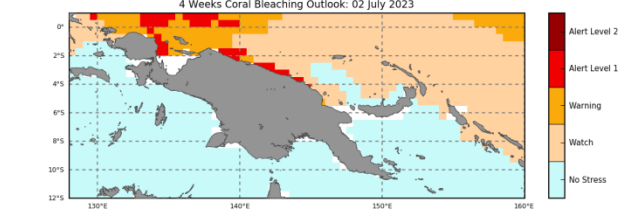
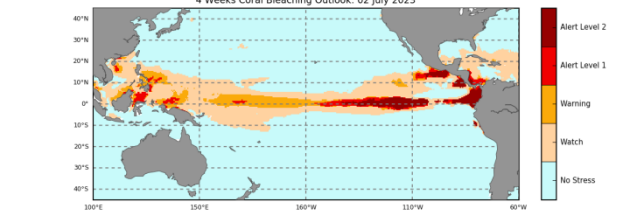


Part 2: Recent Ocean Observation

Monthly/Three months: May and March to May 2023

| Monthly: May | Last three months: March to May 2023: |
|--|---|
| <p>Sea Surface Temperature (Image 1):</p>  <p>Papua New Guinea Monthly Average Sea Surface Temperature Anomaly: May 2023</p> <p>© Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>Reynolds SST</p> | <p>Sea Surface Temperature (Image 4):</p>  <p>Papua New Guinea 3 monthly Average Sea Surface Temperature Anomaly: March 2023 to May 2023</p> <p>© Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>Reynolds SST</p> |
| <p>Sea level (Image 2):</p>  <p>Papua New Guinea Monthly Near Real Time Sea Level Anomaly: May 2023</p> <p>© Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>AVISO SeaWiFS SLA</p> | |
| <p>Daily coral bleaching alert (Image 3):</p>  <p>Papua New Guinea Daily Coral Bleaching Alert: 06 June 2023</p> <p>© Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p> |  <p>Pacific Ocean Daily Coral Bleaching Alert: 06 June 2023</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 July to July to September 2023

| Monthly: July | Seasonal: July to September |
|--|---|
| Monthly sea surface temperature (Image 5): Difference from average sea surface temperature forecast for July 2023  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/ Model run: 05/06/2023 Issued: 07/06/2023 | Seasonal sea surface temperature (Image 6): Difference from average sea surface temperature forecast for July to September 2023  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/ Model run: 05/06/2023 Issued: 07/06/2023 |
| Monthly sea level (Image 7): Difference from average sea surface height forecast for July 2023  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/ Model run: 05/06/2023 Issued: 07/06/2023 | Seasonal sea level (Image 8): Difference from average sea surface height forecast for July to September 2023  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/ Model run: 05/06/2023 Issued: 07/06/2023 |
| 4-week Coral Bleaching (Image 9): Papua New Guinea 4 Weeks Coral Bleaching Outlook: 02 July 2023  © Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac NOAA Coral Reef Watch | 4-week Coral Bleaching (Image 9): Pacific Ocean 4 Weeks Coral Bleaching Outlook: 02 July 2023  © Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac NOAA Coral Reef Watch |

Summary Statement

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

Rainfall for May was below normal Vaimo, above normal for Nadzab, Goroka and Port Moresby, and normal for Wewak. Goroka and Port Moresby recorded their eighth and second wettest May on record, respectively.

May rainfall was not available for Madang, Momote, Kavieng and Misima.

Rainfall for March to May was below normal at Nadzab and Vaimo, above normal at Port Moresby and normal at Wewak and Goroka. Nadzab received its fourth driest and Port Moresby received its second wettest March to May on record.

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

Monthly /Seasonal rainfall and temperature Outlook statements

The rainfall for July is likely to be above normal over the Momase region and the eastern Milne Bay Islands. Below normal is likely for the New Guinea Islands, and near-normal rainfall is likely over the Western Province and parts of Central and Oro.

The rainfall for July to September is very likely to be below normal for the Islands and Highlands Regions. Near-normal to above normal rainfall is likely over the Momase and Southern Regions.

Maximum and Minimum temperatures during July are likely to be near-normal over parts of the Southern and Highlands region, but above normal for the rest of PNG.

Maximum and minimum temperatures averaged over July to September are likely to be near-normal to above normal over PNG.

Part 2: Recent Ocean summary statement

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

May ocean temperatures around PNG were 0.5 to 1.5 °C above normal.

Averaged over March to May, ocean temperatures around PNG were 0.5 to 1.5 °C above normal.

May sea levels around PNG were 50mm to 300mm above normal.

PNG has a 'Alert Level 1 and 2' coral bleaching status over the waters of West and East Sepik.

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

Ocean Variable statement

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

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

July sea levels around PNG are predicted to be 30mm to 100mm above normal.

Averaged over July to September, sea levels around PNG are predicted to be 30mm to 100mm above normal for northern PNG and -30mm to -100 below normal for southern PNG.

The four-week coral bleaching outlook to 02 July shows PNG has a 'Alert level 1' status over the West and East Sepik waters.

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

| Product | Date: May 2023 | Stakeholder | Total Number of Participants | Number of Male | Number of Female | Comments (If there are comments from you Stakeholders) |
|--------------------------------|----------------------|--|------------------------------------|-------------------|---------------------|--|
| Seasonal Climate Outlook | 30 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 Drought Update | 26 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 | 214 | 163 | 51 | |

| | | | | | | |
|-------------------------------|-----|---|------------|------------|------------|--|
| | | 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 120 75 45 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 | | | | |
| Monthly OTML Climate Briefing | 8th | Ok Tedi Mine Limited, PNGNWS, BOM | 14 | 11 | 3 | |
| Climate data request | | Insurance Loss adjustors, Kramer Ausenco, Consultant | 5 | 4 | 1 | |
| Total | | | 455 | 350 | 105 | |