

# Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 178

Country: Papua New Guinea

## Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Apr-2022	May-2022	Jun-2022				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Momase Region							
Madang (1944-2022)	515.2			158.4	226.3	205.9	
Nadzab (1973-2022)	100.6			64.7	122.0	83.8	
Wewak (1956-2022)	106.6	75.2	202.6	173.2	232.3	207.0	33/67
Vanimo (1918-2022)	227.2	241.6	122.4	176.7	247.0	208.6	13/68
Highlands Region							
Goroka (1948-2022)				45.0	79.2	59.0	
New Guinea Islands Region							
Momote (1949-2022)	221.2	170.2	124.2	225.7	316.7	281.0	8/73
Kavieng (1916-2022)	299.4			192.3	269.6	214.1	
Southern Region							
Misima (1917-2022)				119.0	252.0	165.5	
Port Moresby (1875-2022)	99.0	182.8	33.0	10.7	44.9	24.0	74/124

TABLE 2: Three-month Total Rainfall for April to June 2022

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Momase Region						
Madang (1944-2022)			904.9	1073.7	1007.2	
Nadzab (1973-2022)			271.8	346.7	324.6	
Wewak (1894-2022)	384.4	Below normal	566.3	671.6	642.4	7/65
Vanimo (1918-2022)	591.2	Normal	580.4	740.6	653.0	25/64
Highlands Region						
Goroka (1948-2022)			333.6	422.4	386.3	
New Guinea Islands Region						
Momote (1949-2022)	515.6	Below normal	704.2	897.1	812.6	6/72
Kavieng (1917-2022)			689.3	884.8	784.6	
Southern Region						
Misima (1917-2022)			602.7	883.3	741.6	
Port Moresby (1875-2022)	314.8	Above normal	195.4	292.5	249.6	91/117

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

Very Low:  $X < 0.0$

Low:  $0 \leq X < 5$

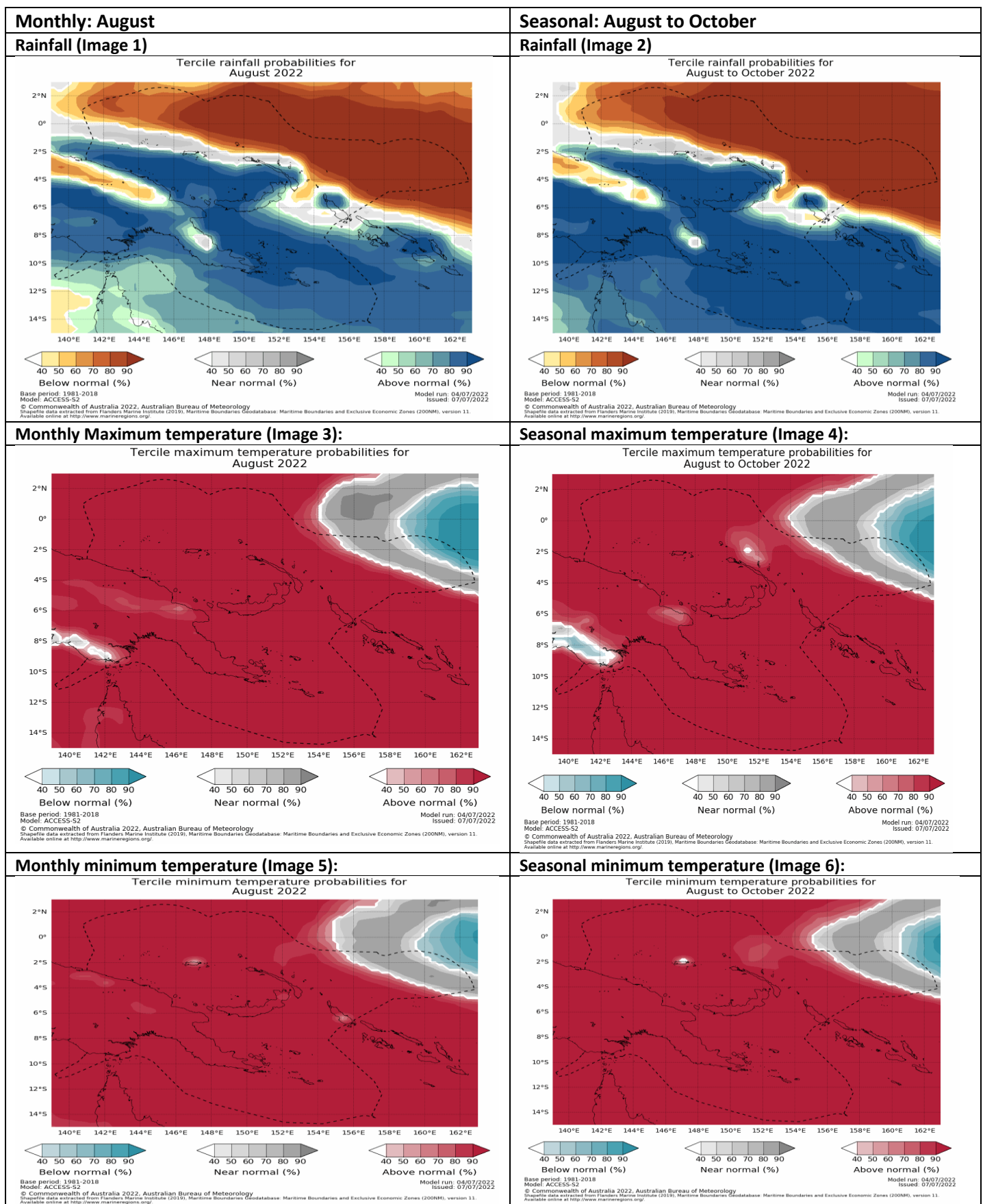
Moderate  $5 \leq X < 10$

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 August and August to October 2022



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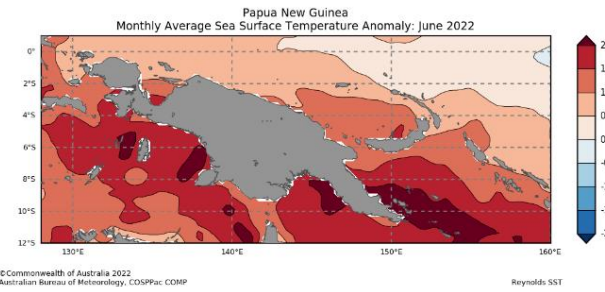
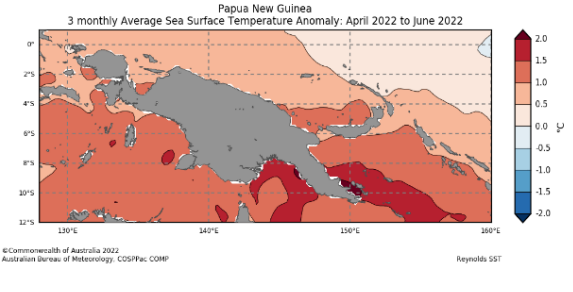
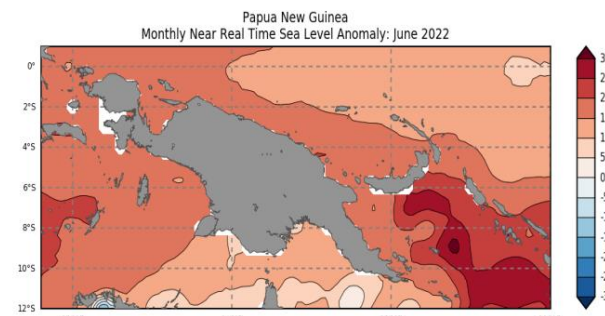
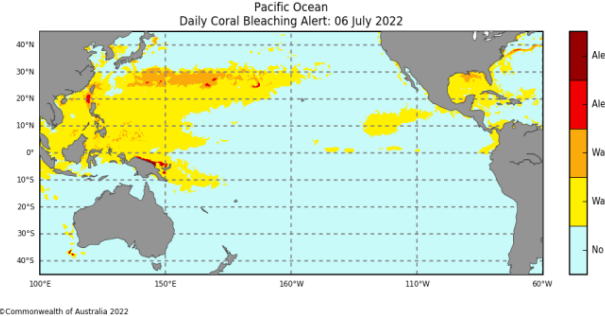
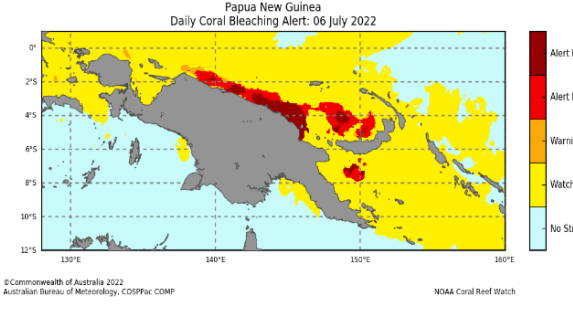
Good:  $10 \leq X < 15$

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## Part 2: Recent Ocean observations

### Monthly: June 2022

<b>Monthly: June</b>	<b><u>Last three months: April to June 2022:</u></b>
<b>Sea Surface Temperature (Image 1):</b>	<b>Sea Surface Temperature (Image 4):</b>
 <p>Papua New Guinea Monthly Average Sea Surface Temperature Anomaly: June 2022</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>Reynolds SST</p>	 <p>Papua New Guinea 3 monthly Average Sea Surface Temperature Anomaly: April 2022 to June 2022</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>Reynolds SST</p>
<b>Sea level (Image 2):</b>	
 <p>Papua New Guinea Monthly Near Real Time Sea Level Anomaly: June 2022</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>AVISO Ssalto/Duacs SLA</p>	
<b>Daily coral bleaching alert (Image 3):</b>	
 <p>Pacific Ocean Daily Coral Bleaching Alert: 06 July 2022</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>NOAA Coral Reef Watch</p>	 <p>Papua New Guinea Daily Coral Bleaching Alert: 06 July 2022</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>NOAA Coral Reef Watch</p>

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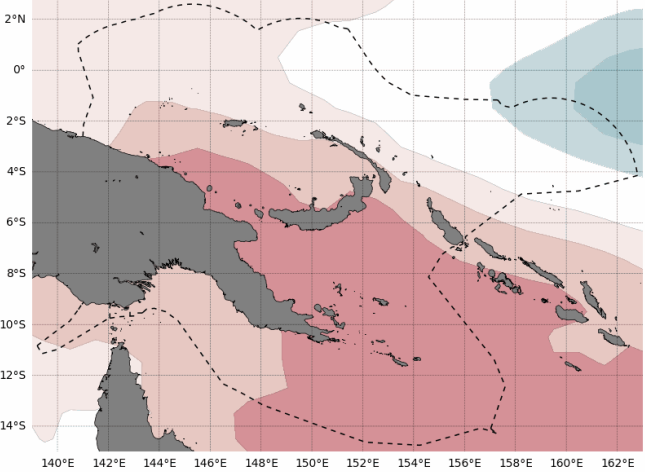
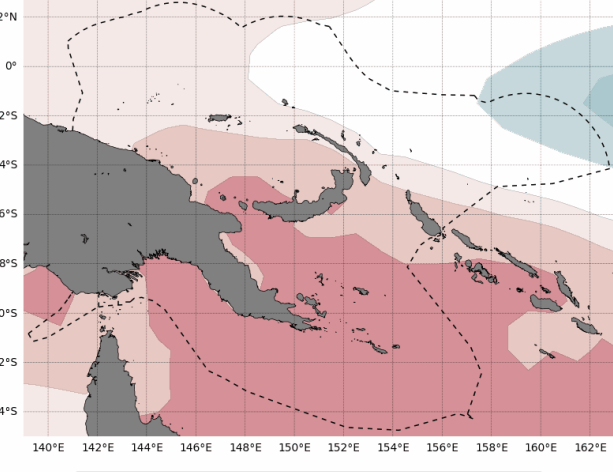
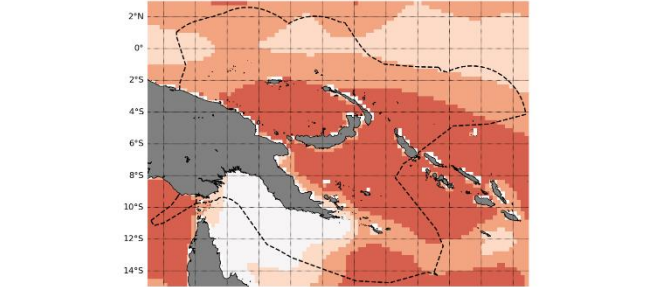
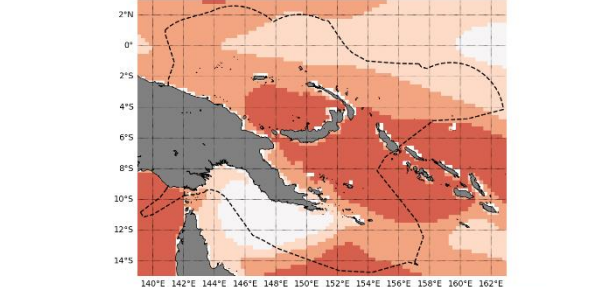
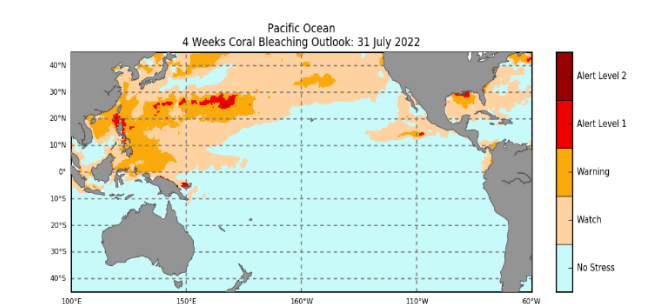
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## Part 2i. Monthly and Seasonal Outlooks for August and August to October 2022

Monthly: August	Seasonal: August to October
Monthly sea surface temperature (Image 5):	Seasonal sea surface temperature (Image 6):
<p>Difference from average sea surface temperature forecast for August 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.maritimerregions.org/">http://www.maritimerregions.org/</a></p> <p>Model run: 16/07/2022 Issued: 18/07/2022</p>	<p>Difference from average sea surface temperature forecast for August to October 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.maritimerregions.org/">http://www.maritimerregions.org/</a></p> <p>Model run: 16/07/2022 Issued: 18/07/2022</p>
Monthly sea level (Image 7):	Seasonal sea level (Image 8):
<p>Difference from average sea surface height forecast for August 2022</p>  <p>© Commonwealth of Australia 2022 Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base Period: 1981-2018</p> <p>Model Run: 28/06/2022 Issued: 12/07/2022</p>	<p>Difference from average sea surface height forecast for August 2022 to October 2022</p>  <p>© Commonwealth of Australia 2022 Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base Period: 1981-2018</p> <p>Model Run: 28/06/2022 Issued: 12/07/2022</p>
4-week Coral Bleaching (Image 9):	
<p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 31 July 2022</p>  <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac CORP</p> <p>NOAA Coral Reef Watch</p>	

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## Summary Statement

### **Monthly and last three months: June 2022/April to June 2022 statement (Highly significant changes)**

Below normal rainfall was recorded at Vanimo and Momote whilst normal rainfall recorded at Port Moresby and Wewak.

Rainfall data for June was not available for other monitoring stations.

Rainfall for April to June was below normal at Wewak and Momote, normal at Vanimo and above normal at Port Moresby. Momote recorded its 6<sup>th</sup> driest April to June rainfall on record

Rainfall data for April to June was not available for other monitoring stations.

## Part 1i. Monthly and Seasonal Outlooks for August and August to October 2022

### **Monthly /Seasonal rainfall and temperature Outlook statements (Highly significant changes)**

The outlook for August shows rainfall is very likely to be above normal across PNG except for Vanimo and Wewak, are very likely to be below normal. Southern Bougainville is likely to experience near normal rainfall.

The outlook for PNG for August to October shows rainfall is very likely to be above normal except inland Madang, southern parts of Bougainville and southern coastline of New Ireland which are likely to be below normal.

The maximum and minimum temperature outlook for PNG for August and August to October is very likely to be above normal across the country except for parts of western PNG that are likely to be below normal.

## Part 2: Recent Ocean observations

### **Monthly and last three months: June/April to June 2022 (Highly significant changes)**

In June, most of PNG experienced above average SSTs. There are significant above normal SSTs at 1.0 to 2.00 degree Celsius in the coastal waters of Central, Milne Bay, Western, Gulf and Northern Provinces.

For April to June, observations show that PNG experienced above average SSTs. Significant warmer SSTs up to 2.00 degrees Celsius are found around Western, Gulf, Central and Milne Bay waters.

The sea level anomaly for PNG in June was above normal. Sea level is highest around southern waters of East New Britain and Bougainville ranging from 200 to 300mm.

PNG has an 'Alert level 2' coral bleaching status around the waters of Vanimo, Wewak Madang and West New Britain.

## Part 2i. Monthly and Seasonal Outlooks for August and August to October 2022

### **Ocean Variable statement (Highly significant changes)**

The monthly and seasonal outlook for sea surface temperature for PNG shows above normal temperature differences of 0.8 to 2.0°C.

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The outlook for sea level for PNG shows near normal in Western, Gulf, Central, and Milne Bay waters whilst above average in the north and north eastern waters of PNG ranging from 60mm to 200mm for August and August to October.

The outlook for coral bleaching for PNG is at 'alert level 1' in the waters of Western New Britain and significant patches of Madang, Wewak and Vanimo in the next one to three months.

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

Product	Date: June 2022	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin	18 <sup>th</sup>	Govt: National Disaster Centre, Dept. of Agriculture and Livestock, ClimateChange 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. 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, PNG Ports, Media and Universities.	108	79	29
Drought Early Warning Update	15th	Bom, UNDP, PNG NWS	11	7	4
<b>Total</b>			<b>119</b>	<b>86</b>	<b>33</b>

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