

Pacific Islands - Online Climate Outlook Forum No 107

Country: **PAPUA NEW GUINEA**

**TABLE 1: Monthly Rainfall**

Station (include data period)	July 2016						
	May 2016 Total	Jun 2016 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
<b>Momase Region</b>							
Madang (1944-2016)	151.0	222.6	-	113.8	183.8	148.7	-
Nadzab(1973-2016)	72.2	67.2	97.0	67.3	132.1	117.0	19/42
Wewak (1894-2016)	149.2	306.2	-	153.4	207.6	180.2	-
Vanimo (1918-2016)	165.2	204.6	144.6	136.1	218.4	188.6	23/62
<b>Highlands Region</b>							
Goroka (1948-2016)	69.0	63.6	8.8	43.8	70.8	55.0	3/54
<b>New Guinea Islands</b>							
Momote (1949-2016)	383.6	336.0	292.8	305.2	398.8	349.2	21/68
Kavieng (1916-2016)	266.0	520.0	128.8	199.4	276.6	226.4	13/85
<b>Southern Region</b>							
Misima (1917-2016)	-	-	-				-
Port Moresby(1875-2016)	10.0	21.2	11.4	4.6	24.4	13.2	55/117

**TABLE 2: Three-monthly Rainfall (May - July 2016)**

Predictor *NINO3.4 SST Anomalies*:—Period: *February – March 2016*

[Please note that the data used in this verification should be sourced from table 3 of OCOF #103]

Station	Three-month Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking	Forecasted probs.* (include LEPS)	Verification (Consistent, Near-consistent Inconsistent?)
<b>Momase Region</b>							
Madang (1944-2016)	-	641.2	821.4	746.1	-	84/15/1 (19.2)	-
Nadzab (1973-2016)	236.4	269.2	377.7	288.0	10/40	28/46/26 (-3.5)	Near-consistent
Wewak (1894-2016)	-	553.9	677.3	630.4	-	68/23/9 (5.6)	-
Vanimo (1918-2016)	514.4	569.5	685.5	608.3	16/61	16/41/43 (-0.6)	Inconsistent
<b>Highlands Region</b>							
Goroka (1948-2016)	141.4	199.8	278.9	232.0	4/49	61/25/14 (1.6)	Consistent
<b>New Guinea Islands</b>							
Momote (1949-2016)	1012.4	791.8	1015.7	874.5	44/68	11/66/23 (0.1)	Consistent
Kavieng (1916-2016)	914.8	632.7	819.5	725.2	69/83	37/8/55 (0.1)	Consistent
<b>Southern Region</b>							
Misima (1917-2016)	-	488.0	849.0	625.4	-	94/6/0 (34.2)	-
PortMoresby (1875-2016)	42.6	81.4	149.7	118.2	14/108	55/36/9 (4.3)	Consistent

Period:\*below normal/normal/above normal

Forecast is consistent when observed and predicted (tercile with the highest probability) categories coincide (are in the same tercile).

Forecast is near-consistent when observed and predicted (tercile with the highest probability) differ by only one category (i.e. terciles 1 and 2 or terciles 2 and 3).

Forecast is inconsistent when observed and predicted (tercile with the highest probability) differ by two categories (i.e. terciles 1 and 3).

**TABLE 3: Seasonal Climate Outlooks for September to November 2016**

*Predictors: [NINO3.4 SST Anomalies-Period: June – July 2016](#)*

<b>Period:Station</b>	<b>Below Median (prob)</b>	<b>Median Rainfall (mm)</b>	<b>Above Median (prob)</b>		<b>LEPS (%)</b>	<b>Hit-rate (%)</b>
<b>Momase Region</b>						
Madang (1944-2016)	57	739.8	43		29.8	71.9
Nadzab(1973-2016)	50	274.6	50		9.7	64.1
Wewak (1894-2016)	51	593.9	49		10.4	61.0
Vanimo (1918-2016)	51	537.3	49		3.5	62.5
<b>Highlands Region</b>						
Goroka (1948-2016)	49	420.0	51		-1.7	60.9
<b>New Guinea Islands</b>						
Momote (1949-2016)	50	718.3	50		-0.9	57.6
Kavieng (1916-2016)	50	655.5	50		-1.4	47.5
<b>Southern Region</b>						
Misima(1917-2016)	55	686.4	45		23.8	73.4
Port Moresby(1875-2016)	53	109.2	47		22.2	69.7

<b>Station</b>	<b>Below Normal (prob)</b>	<b>33%ile rainfall (mm)</b>	<b>Normal (prob)</b>	<b>66%ile rainfall (mm)</b>	<b>Above Normal (prob)</b>	<b>Leps (%)</b>	<b>Hit-rate (%)</b>
<b>Momase Region</b>							
Madang (1944-2016)	32	635.1	41	845.8	27	31.4	53.1
Nadzab(1973-2016)	31	227.6	37	349.4	32	15.6	48.7
Wewak (1894-2016)	30	529.6	36	648.6	34	18.2	40.7
Vanimo (1918-2016)	35	493.1	36	617.9	29	8.1	37.5
<b>Highlands Region</b>							
Goroka (1948-2016)	33	355.0	33	464.7	34	-0.5	43.5
<b>New Guinea Islands</b>							
Momote (1949-2016)	33	633.8	34	791.0	33	-1.9	27.3
Kavieng (1916-2016)	34	553.8	33	763.4	33	-0.5	26.2
<b>Southern Region</b>							
Misima(1917-2016)	34	522.3	35	856.0	31	16.4	39.1
Port Moresby(1875-2016)	34	85.0	38	151.4	28	19.1	50.0

**TABLE 4: Seasonal Climate Outlooks using POAMA2 for September to November 2016**

<b>Station</b>	<b>Lower Tercile (prob)</b>	<b>33%ile rainfall (mm)</b>	<b>Middle Tercile (prob)</b>	<b>66%ile rainfall (mm)</b>	<b>Upper Tercile (prob)</b>
<b>Momase Region</b>					
Madang	6	551	36	698	58
Nadzab	25	196	33	297	42
Wewak	12	524	18	615	70
<b>New Guinea Islands</b>					
Momote	48	632	30	783	22
Kavieng	64	496	12	729	24
<b>Southern Region</b>					
Misima	33	340	16	699	51
Port Moresby	45	54	5	125	50
Daru	5	73	59	170	36

## Summary Statements:

### Rainfall for July 2016

Rainfall for the month of July was below-normal in the New Guinea Islands and Highlands and normal at the selected stations in the Momose and Southern region.

### Accumulated rainfall for May to July 2016, including outlook verification

Rainfall for the last three months was normal at Momote and above normal at Kavieng whilst rest of the stations observed below normal rainfall.

Forecasts were consistent for all the monitoring stations whilst inconsistent for Vanimo and near-consistent for Nadzab. The skills range from very low to very high.

### Outlook for – September to November 2016:

#### 1. SCOPIC:

The SCOPIC seasonal rainfall outlook for September to November 2016 shows:

- **Momase Region:** Normal is favoured at Madang There is little guidance for Nadzab, Wewak and Vanimo as chances of below normal, normal and above normal rainfall are similar
- **New Guinea Islands:** There is little guidance as chances of below normal, normal and above normal rainfall are similar.
- **Highlands Region:** There is little guidance as chances of below normal, normal and above normal rainfall are similar.
- **Southern Region:** There is little guidance as chances of below normal, normal and above normal are similar.
- Confidence is very low for the New Guinea and Highlands Regions and moderate to very high for the Momase and Southern Regions.

#### 2. POAMA:

The POAMA model favours below normal for New Guinea Islands Region whilst above normal is favoured for Momase and two monitoring stations (Misima and Port Moresby) in the Southern Region. Normal rainfall is favoured at Daru

**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:  $X \geq 35$