

Pacific Islands - Online Climate Outlook Forum No 100

Country: **PAPUA NEW GUINEA**

TABLE 1: Monthly Rainfall

Station (include data period)			December 2015				Ranking
	Oct 2015 Total	Nov 2015 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	
Momase Region							
Madang (1944-2015)	-	-	-				
Nadzab(1973-2015)	30.0	160.6	280.0	112	188.6	152.9	38/41
Wewak (1894-2015)	132.6	66.4	121.6	122.8	176.9	142.6	21/60
Vanimo (1918-2015)	99.4	-	294.8	180.2	281.6	237.4	44/62
Highlands Region							
Goroka (1948-2015)	63.0	126.8	108.0	154.6	239	178.6	3/47
New Guinea Islands							
Momote (1949-2015)	85.0	151.4	270.0	249.7	335.7	284.7	27/67
Kavieng (1916-2015)	29.6	287.8	255.4	255	337	301.8	30/88
Southern Region							
Misima (1917-2015)	108.8	151.4	-				
PortMoresby(1875-2015)	1.8	2.4	82.2	74.6	151.9	116	46/125

TABLE 2: Three-monthly Rainfall (October-December 2015)

Predictor NINO3.4 SST Anomalies:-Period: August-September 2015

[Please note that the data used in this verification should be sourced from table 3 of OCOF #96]

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?)
Momase Region							
Madang (1944-2015)	-						-
Nadzab (1973-2015)	470.6	310.6	385.0	337.0	36/40	92/1/7	Inconsistent
Wewak (1894-2015)	320.6	540.5	647.4	573.8	3/59	54/41/5	Consistent
Vanimo (1918-2015)	-						
Highlands Region							
Goroka (1948-2015)	297.8	424	600.7	499.6	1/45	25/31/45	Inconsistent
New Guinea Islands							
Momote (1949-2015)	506.4	692.0	866.3	782.4	2/67	25/57/18	Near-consistent
Kavieng (1916-2015)	572.8	708.3	868	787.4	18/86	28/55/17	Near-Consistent
Southern Region							
Misima (1917-2015)	-	562.9	385.0	643.8		68/21/11	
PortMoresby (1875-2015)	86.4	176.7	647.4	214.2	14/114	73/25/2	Consistent

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).

Period: *below normal/normal/above normal

TABLE 3: Seasonal Climate Outlooks for February to April 2016

Predictors: NINO3.4 SST Anomalies-Period: October-November 2015

Period:Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%)	Hit-rate (%)
Momase Region						
Madang (1944-2014)						
Nadzab(1973-2014)	52	460.9	48		-2.7	45
Wewak (1894-2014)	55	486.4	45		-1.7	35.6
Vanimo (1918-2014)	31	812.1	69		1.2	51.9
Highlands Region						
Goroka (1948-2015)	22	673.4	78		2.6	56.3
New Guinea Islands						
Momote (1949-2014)	58	794.4	42		-1.3	46.2
Kavieng (1916-2014)	21	881.7	79		5.1	55.9
Southern Region						
Misima(1917-2014)	91	848.2	9		13.5	62.9
Port Moresby(1875-2014)	79	517	21		5.6	60

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	Leps (%)	Hit-rate (%)
Momase Region							
Madang (1944-2014)							
Nadzab(1973-2014)	15	360	56	497.8	29	-0.8	37.5
Wewak (1894-2014)	51	433.9	11	525.4	38	-1.1	44.1
Vanimo (1918-2014)	18	680.6	20	920.5	62	2.6	23.1
Highlands Region							
Goroka (1948-2015)	24	577.6	30	746.2	46	-1.6	47.9
New Guinea Islands							
Momote (1949-2014)	37	749.1	28	922.9	35	-2	21.5
Kavieng (1916-2014)	10	791.2	40	975.3	50	4.2	33.9
Southern Region							
Misima(1917-2014)	83	762.7	16	979	1	22.7	50
Port Moresby(1875-2014)	69	434.8	20	594.6	11	5.4	40

TABLE 4: Seasonal Climate Outlooks using POAMA2 for February to April 2016

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)
Momase Region					
Madang	27	904	15	1154	58
Wewak	15	428	12	575	73
Nadzab	36	319	6	464	58
New Guinea Islands					
Momote	39	720	12	844	49
Kavieng	45	774	10	989	45
Southern Region					
Misima	49	708	18	930	33
Port Moresby	49	465	9	593	42

Summary Statements:

Rainfall for December 2015

Normal rainfall was received at three monitoring stations in the Southern region and Islands region. In the MOMASE region rainfall ranged from below normal at Wewak and above normal at Vanimo and Nadzab. In the Highlands region below normal rainfall was received.

Accumulated rainfall for October to December 2015, including outlook verification

Below normal rainfall was received at all monitoring stations in PNG except Nadzab received above normal rainfall.

Forecasts were consistent in the Southern and Wewak in the MOMASE region, near consistent for New Guinea Islands, inconsistent for Goroka in the Highlands region and Nadzab in the MOMASE region.

Outlook for – February to April 2016:

1. SCOPIC:

The SCOPIC seasonal rainfall outlook for February to April 2016 shows:

- **Momase Region:** Normal rainfall is favoured for Nadzab and above normal rainfall is favoured for Vanimo. Below normal rainfall is favoured for Wewak with above normal the next most likely outcome.
- **New Guinea Islands:** Below normal rainfall is favoured for Momote with above normal the next most likely outcome. At Kavieng above normal rainfall is favoured with normal the next most likely outcome.
- **Southern Region:** Below normal rainfall is favoured in the Southern region.
- **Highlands Region:** Above normal rainfall is favoured in the Highlands region.
- Confidence is very low to low at all stations except Southern region with moderate to high confidence.

2. POAMA:

The POAMA model favours above normal rainfall for MOMASE and New Guinea Islands regions. There is an equal chance of above normal and below normal rainfall occurring in Kavieng.

Below normal rainfall is favoured for southern region with above normal the next most likely outcome

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: $X \geq 35$