

Pacific Islands - Online Climate Outlook Forum No 109

Country: **PAPUA NEW GUINEA**

TABLE 1: Monthly Rainfall

Station (include data period)	October 2016						
	Aug 2016 Total	Sep 2016 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Momase Region							
Madang (1944-2016)	133.4	243.2	81.0	208.2	288.0	254.5	7/67
Nadzab(1973-2016)	110.2	283.0	-	76.6	111.7	98.6	-
Wewak (1894-2016)	108.6	-	251.4	196.7	271.1	223.3	-
Vanimo (1918-2016)	175.0	283.8	196.4	143.5	222.8	174.0	35/58
Highlands Region							
Goroka (1948-2016)	99.8	151.2	249.0	116.3	167.8	147.0	45/51
New Guinea Islands							
Momote (1949-2016)	186.0	290.6	185.4	194.8	265.0	229.6	23/68
Kavieng (1916-2016)	150.0	286.6	254.2	159.4	273.8	212.0	57/89
Southern Region							
Misima (1917-2016)	-	-	-	124.9	313.9	227.5	-
PortMoresby(1875-2016)	100.6	10.2	30.6	10.0	32.2	18.5	77/121

TABLE 2: Three-monthly Rainfall (August - October 2016)

Predictor NINO3.4 SST Anomalies:--Period: May - June 2016

[Please note that the data used in this verification should be sourced from table 3 of OCOF #106]

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 (1944-2016)	457.6	404.8	635.6	496.6	31/66	70/22/8 (25.7)	Near-consistent
Nadzab (1973-2016)	-	242.1	395.1	331.8	-	51/22/27 (3.1)	-
Wewak (1894-2016)	-	495.8	662.1	574.8	-	72/20/8 (26.4)	-
Vanimo (1918-2016)	655.2	484.5	551.8	517.2	48/55	37/34/29 (-1.9)	Inconsistent
Highlands Region							
Goroka (1948-2016)	500.0	269.7	372.5	335.1	47/51	34/32/34(-2.7)	Near-consistent
New Guinea Islands							
Momote (1949-2016)	662.0	643.5	901.6	772.5	26/67	33/30/37(-1.5)	Near-consistent
Kavieng (1916-2016)	690.8	506.2	712.0	625.0	50/83	36/31/32(-1.9)	Near-consistent
Southern Region							
Misima (1917-2016)	-	456.0	766.7	617.1	-	65/32/4(29.1)	-
PortMoresby (1875-2016)	141.4	58.7	96.2	74.8	95/110	42/24/34(-0.3)	Inconsistent

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 December 2016 to February 2017

Predictors: [NINO3.4 SST Anomalies-Period: September - October 2016](#)

Period:Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%)	Hit-rate (%)
Momase Region						
Madang (1944-2016)	60	1014.7	40		8.5	63.1
Nadzab(1973-2016)	58	493.1	42		4.3	60.0
Wewak (1894-2016)	41	412.0	59		6.3	55.9
Vanimo (1918-2016)	52	807.8	48		-1.8	55.3
Highlands Region						
Goroka (1948-2016)	50	681.0	50		-2.3	19.6
New Guinea Islands						
Momote (1949-2016)	55	816.4	45		1.3	48.5
Kavieng (1916-2016)	65	912.4	35		12.6	61.7
Southern Region						
Misima(1917-2016)	42	766.5	58		5.2	59.4
Port Moresby(1875-2016)	38	466.8	62		10.0	63.6

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	Leps (%)	Hit-rate (%)
Momase Region							
Madang (1944-2016)	45	941.0	27	1125.0	28	11.2	41.5
Nadzab(1973-2016)	39	429.0	37	527.8	24	3.0	35.0
Wewak (1894-2016)	26	362.5	36	460.9	38	2.3	40.7
Vanimo (1918-2016)	38	718.6	29	918.0	33	-1.7	42.6
Highlands Region							
Goroka (1948-2016)	32	629.7	34	734.4	34	-2.4	10.9
New Guinea Islands							
Momote (1949-2016)	39	757.6	30	894.5	31	1.4	22.7
Kavieng (1916-2016)	47	840.9	25	985.1	28	10.4	38.3
Southern Region							
Misima(1917-2016)	29	682.5	31	886.2	40	2.8	48.4
Port Moresby(1875-2016)	21	420.0	34	562.0	45	10.1	43.9

TABLE 4: Seasonal Climate Outlooks using POAMA2 for November 2016 to January 2017

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)
Momase Region					
Madang					
Nadzab					
Wewak					
New Guinea Islands					
Momote					
Kavieng					
Southern Region					
Misima					
Port Moresby					
Daru					

Summary Statements:

Rainfall for October 2016

Rainfall for the month of October was below normal for Madang and Momote and above normal for Goroka whilst the rest of the monitoring stations received normal rainfall.

Accumulated rainfall for August to October 2016, including outlook verification

Rainfall for the last three months was normal to above normal for the country.

Forecasts were inconsistent for Vanimo and Port Moresby and near-consistent for the rest of the monitoring stations. The skills range from very low to very high.

Outlook for – December 2016 to February 2017:

1. SCOPIC:

The SCOPIC seasonal rainfall outlook for December 2016 to February 2017 shows:

- **Momase Region:** The most likely outcome for Madang = is below normal rainfall. There is a near equal likelihood of below-normal and normal rainfall for Nadzab and near equal likelihood of normal and above normal rainfall for Wewak. At Vanimo the outlook offers little guidance as the chances of above-normal, normal and below-normal rainfall are similar. .
- **New Guinea Islands:** Below normal is favoured for Kavieng. At Momote the outlook offers little guidance as the chances of above-normal, normal and below-normal rainfall are similar
- **Highlands Region:** There is little guidance as chances of below normal, normal and above normal are similar.
- **Southern Region:** Above normal is favoured for Misima and Port Moresby.

Confidence ranges from very low to good.

2. POAMA:

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: $X \geq 35$