

Pacific Islands - Online Climate Outlook Forum No 121

Country: PAPUA NEW GUINEA

TABLE 1: Monthly Rainfall

Station (include data period)	September 2017						
	Jul 2017 Total	Aug 2017 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Momase Region							
Madang (1944-2017)	-	-	-	75.4	180.4	121.4	-
Nadzab(1973-2017)	487.6	119.6	104.6	55.8	132.8	104.6	22/43
Wewak (1894-2017)	101.0	-	238.4	147.2	207.0	180.4	50/61
Vanimo (1918-2017)	384.2	145.4	315.2	124.1	188.7	149.3	59/62
Highlands Region							
Goroka (1948-2017)	-	27.0	30.0	68.0	123.0	96.6	6/55
New Guinea Islands							
Momote (1949-2017)	808.4	267.0	450.6	195.0	277.0	248.1	61/64
Kavieng (1916-2017)	384.4	256.8	207.8	141.3	201.0	165.8	62/90
Southern Region							
Misima (1917-2017)	188.4	131.2	-	105.1	257.7	193.0	-
Port Moresby(1875-2017)	0.2	34.4	8.0	10.3	33.4	18.5	31/120

TABLE 2: Three-monthly Rainfall (Jul - Sept 2017)

Predictor *NINO3.4 SST Anomalies*:—Period: April - May 2017

[Please note that the data used in this verification should be sourced from table 3 of OCOF #117]

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 (1944-2017)	-	333.4	481.0	409.5	-	52/39/9 (12.7)	-
Nadzab (1973-2017)	711.8	257.8	464.0	372.6	41/42	40/27/33 (-1.9)	Inconsistent
Wewak (1894-2017)	-	467.1	589.9	551.1	-	72/21/7 (26.3)	-
Vanimo (1918-2017)	844.8	458.5	558.7	516.0	54/58	27/31/42 (-0.1)	Consistent
Highlands Region							
Goroka (1948-2017)	-	200.0	284.0	248.0	-	32/32/36 (-2.1)	-
New Guinea Islands							
Momote (1949-2017)	1526.0	748.4	1047.0	885.7	66/68	27/30/43 (0.6)	Consistent
Kavieng (1916-2017)	849.0	509.8	724.1	611.6	68/84	30/35/35 (-1.6)	Near-consistent
Southern Region							
Misima (1917-2017)	-	332.0	609.2	464.0	-	73/24/3 (32.5)	-
Port Moresby (1875-2017)	42.6	41.8	89.2	66.6	33/107	37/29/34 (-1.9)	Near-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 Nov 2017 to Jan 2018

Predictors: [NINO3.4 SST Anomalies-Period: Aug - Sep 2017](#)

Period:Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%)	Hit-rate (%)
Momase Region						
Madang (1944-2017)	50	1036.2	50		-1.4	49.2
Nadzab(1973-2017)	51	409.7	49		-0.5	52.4
Wewak (1894-2017)	46	479.9	54		7.2	61.0
Vanimo (1918-2017)	50	734.8	50		-2.2	25.0
Highlands Region						
Goroka (1948-2017)	50	569.4	50		-1.9	60.0
New Guinea Islands						
Momote (1949-2017)	51	833.0	49		-0.9	48.3
Kavieng (1916-2017)	53	849.0	47		4.6	55.0
Southern Region						
Misima(1917-2017)	48	691.5	52		6.5	60.3
Port Moresby(1875-2017)	42	365.0	58		23.9	70.8

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	Leps (%)	Hit-rate (%)
Momase Region							
Madang (1944-2017)	34	953.0	32	1120.0	34	-0.8	40.0
Nadzab(1973-2017)	34	370.7	33	474.5	33	-2.6	14.3
Wewak (1894-2017)	29	435.9	35	544.7	36	9.1	50.8
Vanimo (1918-2017)	33	642.2	33	832.5	34	-1.4	31.2
Highlands Region							
Goroka (1948-2017)	34	516.4	32	642.0	34	-2.3	24.4
New Guinea Islands							
Momote (1949-2017)	34	736.6	34	894.7	32	-0.0	38.3
Kavieng (1916-2017)	34	784.7	32	945.1	34	-0.9	35.0
Southern Region							
Misima(1917-2017)	31	599.3	34	780.6	35	2.3	38.1
Port Moresby(1875-2017)	27	299.7	37	424.6	36	16.3	46.2

TABLE 4: Seasonal Climate Outlooks using POAMA2 for Nov 17 - Jan 2018

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)
Momase Region					
Madang	24	960.0	37	1116.0	39
Nadzab	42	345.0	12	416.0	46
Wewak	39	427.0	25	506.0	36
New Guinea Islands					
Momote	30	720.0	18	888.0	52
Kavieng	39	767.0	12	942.0	49
Southern Region					
Misima	36	553.0	22	738.0	42
Port Moresby	42	272.0	9	411.0	49
Daru	5	441.0	59	531.0	36

Summary Statements:

Rainfall for September 2017

Rainfall for the month of September was below normal for Goroka and Port Moresby, normal at Nadzab, and above normal for the rest of the monitoring stations in the country.

Accumulated rainfall for July to September 2017, including outlook verification

Rainfall for the last three months was normal for Port Moresby whilst above normal for the other stations.

Forecasts were consistent at Vanimo and Momote, near-consistent for Port Moresby and Kavieng, and inconsistent for Nadzab.

The skills range from very low to very high.

Outlook for November 2017 to January 2018:

1. SCOPIC:

The SCOPIC seasonal rainfall outlook for November 2017 to January 2018 shows little guidance as the chances of above-normal, normal and below-normal rainfall are similar for the country (climatological). At Port Moresby there is a near-equal chance of normal or above-normal rainfall; the least likely outcome is below-normal at the nation's capital.

Confidence range from very low to high skill.

2. POAMA:

The POAMA model shows below-normal rainfall as the most likely for Wewak, normal the most likely for Daru, while at all the other stations above-normal rainfall is the favoured or 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: $X \geq 35$