

Pacific Islands - Online Climate Outlook Forum No 98

Country: PAPUA NEW GUINEA

TABLE 1: Monthly Rainfall

Station (include data period)			October 2015				
	Aug 2015 Total	Sept 2015 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Momase Region							
Madang (1944-2015)	-	-	-	208.2	288.0	254.5	-
Nadzab(1973-2015)	41.4	9.6	30.0	76.6	111.7	98.6	7/41
Wewak (1894-2015)	147.2	69.8	132.6	196.7	271.1	223.3	7/60
Vanimo (1918-2015)	209.6	30.8	99.4	143.5	222.8	174.0	11/57
Highlands Region							
Goroka (1948-2015)	5.8	45.2	63.0	116.3	167.8	147.0	6/50
New Guinea Islands							
Momote (1949-2015)	70.4	189.2	85.0	194.8	265.0	229.6	4/67
Kavieng (1916-2015)	2.6	87.8	29.6	159.8	275.1	212.2	3/88
Southern Region							
Misima (1917-2015)	18.0	44.8	108.8	124.8	313.8	227.5	26/90
PortMoresby(1875-2015)	0.0	2.2	1.8	10.0	32.2	18.5	14/120

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

Predictor NINO3.4 SST Anomalies:--Period: April- May 2015

[Please note that the data used in this verification should be sourced from table 3 of OCOF #94]

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)	-	404.8	635.6	496.6	-	85/12/3 (23.9)	-
Nadzab (1973-2015)	81	257.1	397.5	335.7	4/39	51/23/26 (1.0)	Consistent
Wewak (1894-2015)	349.6	503.5	664.3	576.5	10/60	83/13/4 (21.7)	Consistent
Vanimo (1918-2015)	339.8	486.3	552.8	521.2	5/54	36/34/30 (-2.4)	Consistent
Highlands Region							
Goroka (1948-2015)	114.0	275.0	373.8	335.2	2/50	30/35/35 (-2.7)	Near-consistent
New Guinea Islands							
Momote (1949-2015)	344.6	646.4	901.2	772.5	4/66	29/29/42 (-1.0)	Inconsistent
Kavieng (1916-2015)	119.8	508.6	716.0	625.4	2/82	31/32/37 (-2.0)	Inconsistent
Southern Region							
Misima (1917-2015)	171.6	456.0	780.3	625.8	9/89	73/25/2 (27.3)	Consistent
PortMoresby (1875-2015)	4.0	58.9	96.3	75.2	1/109	43/21/36 (-1.0)	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 December 2015 to February 2016

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

Period:Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%)	Hit-rate (%)
Momase Region						
Madang (1944-2014)	16	1014.7	84		8.5	63.1
Nadzab(1973-2014)	30	489.2	70		0.8	56.4
Wewak (1894-2014)	75	412.2	25		4.4	56.9
Vanimo (1918-2014)	42	807.8	58		-1.8	55.3
Highlands Region						
Goroka (1948-2015)	35	702.0	65		-1.4	54.5
New Guinea Islands						
Momote (1949-2014)	28	819.2	72		3.1	50.8
Kavieng (1916-2014)	9	918.3	91		16.9	61
Southern Region						
Misima(1917-2014)	76	769.0	24		4	58.7
Port Moresby(1875-2014)	83	496.2	17		8.4	66.2

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)	3	941.0	50	1125.0	47	11.2	41.5
Nadzab(1973-2014)	20	425.4	23	515.9	57	0.6	28.2
Wewak (1894-2014)	54	364.0	26	461.2	20	0.6	43.1
Vanimo (1918-2014)	18	718.6	47	918.0	35	-1.7	42.6
Highlands Region							
Goroka (1948-2015)	31	635.8	26	738.7	43	-2.1	38.6
New Guinea Islands							
Momote (1949-2014)	16	757.5	37	90.5	47	1.6	40
Kavieng (1916-2014)	4	840.8	47	985.3	49	10.8	32.2
Southern Region							
Misima(1917-2014)	44	689.4	45	887.2	11	2.1	23.8
Port Moresby(1875-2014)	64	420.5	29	564.2	7	9.1	43.1

TABLE 4: Seasonal Climate Outlooks using POAMA2 for Dec 2015 to Feb 2016

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)
Momase Region					
Madang	12	940	21	1110	67
Wewak	27	381	5	461	68
Nadzab	27	416	12	504	61
New Guinea Islands					
Momote	31	753	33	872	36
Kavieng	30	846	12	956	58
Southern Region					
Misima	45	646	13	881	42
Port Moresby	36	423	5	508	59

Summary Statements:

Rainfall for October 2015

Below normal received at all the monitoring stations in PNG. We have included Goroka station in the Highlands region in this outlook.

Accumulated rainfall for August to October 2015, including outlook verification

Below normal rainfall received at all monitoring stations in PNG. Goroka and Kavieng station recorded their 2nd lowest three month total and Port Moresby recorded its lowest three month total.

The forecasts were consistent at five stations with very low to very high skills, inconsistent for two stations and one station was near-consistent with very low skills.

Outlook for – December 2015 to February 2016:

1. SCOPIC:

The SCOPIC seasonal rainfall outlook for December 2015 to February 2016 shows:

- **Momase Region:** Outlook is mixed with below normal rainfall favoured for Wewak whilst above normal rainfall is favoured for Nadzab and normal rainfall for Vanimo.
- **New Guinea Islands:** Above normal rainfall is favoured for NGI with normal the next most likely outcome.
- **Southern Region:** Below normal rainfall is favoured for Port Moresby with normal being the next most likely. There is an equal likelihood chance of normal to below normal rainfall for Misima.
- **Highlands Region:** Above normal rainfall is favoured for Goroka station with normal to below normal being the next.
- Confidence is very low for Vanimo and Goroka, low to good skills at the rest of the stations whilst Kavieng had high skills.

2. POAMA:

The POAMA model favours above normal rainfall for all the stations except Misima with below normal rainfall.

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: $X \geq 35$