Pacific Islands - Online Climate Outlook Forum No 108

Country: PAPUA NEW GUINEA

TABLE 1: Monthly Rainfall

Station (include data period)			August 2016				
	Jun 2016 Total	Jul 2016 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Momase Region							
Madang (1944-2016)	222.6	76.6	133.4	62.5	141.5	98.3	42/67
Nadzab(1973-2016)	67.2	97.0	110.2	80.1	167.0	106.0	22/43
Wewak (1894-2016)	306.2	109.0	108.6	116.3	213.0	146.7	18/61
Vanimo (1918-2016)	204.6	144.6	175.0	133.6	196.2	164.8	35/61
Highlands Region							
Goroka (1948-2016)	63.6	8.8	99.8	46.3	81.0	64.0	38/54
New Guinea Islands							
Momote (1949-2016)	336.0	292.8	186.0	214.2	333.7	275.1	19/67
Kavieng (1916-2016)	520.0	128.8	150.0	162.4	254.7	205.1	24/86
Southern Region							
Misima (1917-2016)	-	-	-	82.7	188.3	131.5	-
PortMoresby(1875-2016)	21.2	11.4	100.6	6.8	23.6	13.1	116/119

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

Predictor NINO3.4 SST Anomalies:–Period: March - April 2016

[Please note that the data used in this verification should be sourced from table 3 of OCOF #104]

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)	432.6	403.5	532.9	471.8	29/66	95/5/0 (32.8)	Near-consistent
Nadzab (1973-2016)	274.4	294.8	404.6	328.5	14/41	33/41/26 (-3.3)	Consistent
Wewak (1894-2016)	523.8	467.1	619.7	547.2	29/61	91/7/2 (18.0)	Near-consistent
Vanimo (1918-2016)	524.2	506.9	632.0	559.4	25/59	14/31/55 (2.0)	Near-consistent
Highlands Region							
Goroka (1948-2016)	172.2	169.3	240.0	191.0	19/51	52/16/32 (-1.3)	Near-consistent
New Guinea Islands							
Momote (1949-2016)	814.8	742.3	1056.9	947.3	27/67	15/46/38 (0.7)	Consistent
Kavieng (1916-2016)	798.8	560.7	802.9	700.0	55/84	28/29/44 (-1.5)	Near-consistent
Southern Region							
Misima (1917-2016)	-	362.5	688.3	510.6	-	92/8/0 (28.9)	-
PortMoresby (1875-2016)	133.2	55.1	101.9	81.4	85/106	60/36/4 (10.2)	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 October to December 2016

Predictors: NINO3.4 SST Anomalies-*Period:* July - August 2016

Period:Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%)	Hit-rate (%)
Momase Region						
Madang (1944-2016)	43	977.0	57		9.9	70.8
Nadzab(1973-2016)	45	338.6	55		1.8	60.0
Wewak (1894-2016)	40	573.0	60		13.8	61.0
Vanimo (1918-2016)	32	573.0	68		29.9	75.0
Highlands Region						
Goroka (1948-2016)	50	499.6	50		-2.3	31.1
New Guinea Islands						
Momote (1949-2016)	50	782.4	50		-1.5	37.9
Kavieng (1916-2016)	50	780.3	50		-1.6	45.2
Southern Region						
Misima(1917-2016)	45	636.3	55		5.8	65.6
Port Moresby(1875-2016)	36	213.9	64		27.9	71.2

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	Leps (%)	Hit-rate (%)
Momase Region							
Madang (1944-2016)	18	865.3	41	1090.8	41	21.8	53.8
Nadzab(1973-2016)	16	313.2	46	389.0	38	9.6	52.5
Wewak (1894-2016)	27	537.6	32	645.8	41	42.4	42.9
Vanimo (1918-2016)	16	559.9	40	697.9	44	25.0	62.5
Highlands Region							
Goroka (1948-2016)	32	423.0	35	594.8	33	-2.7	20.0
New Guinea Islands							
Momote (1949-2016)	34	688.0	31	866.4	35	-1.0	40.9
Kavieng (1916-2016)	33	705.4	30	867.7	37	-1.0	41.9
Southern Region							
Misima(1917-2016)	27	559.4	36	763.0	37	7.0	43.8
Port Moresby(1875-2016)	23	175.1	34	268.3	43	22.3	56.1

TABLE 4: Seasonal Climate Outlooks using POAMA2 for October to December 2016

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)
Momase Region					
Madang	27	816	18	1031	55
Nadzab	33	252	15	347	52
Wewak	24	505	12	610	64
New Guinea Islands					
Momote	33	689	30	827	37
Kavieng	42	672	12	854	46
Southern Region					
Misima	30	506	30	649	40
Port Moresby	33	119	15	245	52
Daru	5	249	65	337	30

Summary Statements:

Rainfall for August 2016

Rainfall for the month of August was normal for most of the the Momase region with Wewak receiving below normal together with New Guinea Islands Region. The monitoring station in Highlands Region and the Southern Region received above normal rainfall.

Accumulated rainfall for June to August 2016, including outlook verification

Rainfall for the last three months was normal in most of the monitoring stations except Port Moresby and Nadzab where rainfall was above normal and below normal respectively.

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

Outlook for – October to December 2016:

1. **SCOPIC:**

The SCOPIC seasonal rainfall outlook for October to December 2016 shows:

- **Momase Region**: Nadzab favours normal, Wewak favours above normal and for Madang and Vanimo the chances of normal and above normal are similar.
- **New Guinea Islands**: There is little guidance for Momote and Kavieng as chances of below normal, normal and above normal are similar.
- **Highlands Region:** There is little guidance as chances of below normal, normal and above normal are similar.
- **Southern Region:** Port Moresby favours above normal whilst for Misima the chances of normal and above normal are similar.
- Confidence is very low for the Highlands and the New Guinea Islands Regions whilst moderate to exceptional for the Momase and Southern Region.

2. **POAMA:**

The POAMA model favours below normal for New Guinea Islands Region whilst above normal is favoured for Momase and two monitoring stations in the Southern Region except Daru where normal rainfall is favoured.

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: $X \geq 35$