Pacific Islands - Online Climate Outlook Forum No 117

Country: PAPUA NEW GUINEA

TABLE 1: Monthly Rainfall

Station (include data period)			May 2017				
	Mar 2016 Total	Apr 2017 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Momase Region							
Madang (1944-2017)		-					
Nadzab(1973-2017)	203.2	201.4	**87.0**	64.7	103.3	75.4	25/43
Wewak (1894-2017)	140.6						
Vanimo (1918-2017)	147.0	263.0	**269.8**	165.5	266.9	205.8	43/64
Highlands Region							
Goroka (1948-2017)	239.0	168.6	**98.8**	91.0	141.0	112.0	20/53
New Guinea Islands							
Momote (1949-2017)	457.2	405.2	**394.0**	197.1	259.4	233.0	63/69
Kavieng (1916-2017)		367.0					
Southern Region							
Misima (1917-2017)	-	-	-				
Port Moresby(1875-2017)	324.1	94.4	**0.6**	27.3	73.6	50.5	5/126

TABLE 2: Three-monthly Rainfall (Mar-May 2017)

Predictor NINO3.4 SST Anomalies*:–Period: *Dec 2016 –Jan 2017

[Please note that the data used in this verification should be sourced from table 3 of OCOF #113]

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)	-	997.9	1205.6	1145.3		31/**35**/34(-1.5)	
Nadzab (1973-2017)	**491.6**	361.8	428.6	388.7	33/41	**38**/32/30(0.5)	Inconsistent
Wewak (1894-2017)	-	511.5	648.7	595.5		27/**39**/34(1.0)	
Vanimo (1918-2017)	**679.8**	605.5	840.2	708.4	28/62	33/**36**/31(-1.8)	Consistent
Highlands Region							
Goroka (1948-2017)	**506.4**	491.7	611.3	560.8	20/52	**38**/36/26(3.8)	Near Consistent
New Guinea Islands							
Momote (1949-2017)	**1256.4**	716.8	894.3	821.0	67/67	**34**/**34**/32(-1.4)	Near Consistent
Kavieng (1916-2017)	-	751.0	946.8	832.6		**39**/27/34(1.9)	
Southern Region							
Misima (1917-2017)	-	686.2	1010.0	794.4		19/38/**43**(19.3)	
PortMoresby (1875-2017)	**419.1**	303.6	450.5	381.3	70/123	27/34/**39**(5.0)	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 Jul- Sep 2017

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

Period:Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%)	Hit-rate (%)
Momase Region						
Madang (1944-2017)	71	409.5	29		9.4	66.2
Nadzab(1973-2017)	52	372.6	48		-2.3	55
Wewak (1894-2017)	90	551.1	10		34.3	76.7
Vanimo (1918-2017)	41	516.0	59		0.0	56.9
Highlands Region						
Goroka (1948-2017)	46	248.0	54		-1.4	52.9
New Guinea Islands						
Momote (1949-2017)	40	885.7	60		1.7	61.2
Kavieng (1916-2017)	49	611.6	51		-1.8	29.3
Southern Region						
Misima(1917-2016)	88	464.0	12		30.0	79.4
Port Moresby(1875-2017)	48	66.6	52		-2.3	55.0

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)	52	333.4	39	481.0	9	12.7	52.3
Nadzab(1973-2016)	40	257.8	27	464.0	33	-1.9	40.0
Wewak (1894-2016)	72	467.1	21	589.9	7	26.3	50.0
Vanimo (1918-2016)	27	458.5	31	558.7	42	-0.1	37.3
Highlands Region							
Goroka (1948-2016)	**32**	200.0	**32**	284.0	**36**	-2.1	15.7
New Guinea Islands							
Momote (1949-2016)	27	748.4	30	1047.0	43	0.6	22.4
Kavieng (1916-2016)	**30**	509.8	**35**	724.1	**35**	-1.6	37.9
Southern Region							
Misima(1917-2016)	73	332.0	24	609.2	3	32.5	63.5
Port Moresby(1875-2016)	**37**	43.4	**29**	87.3	**34**	-1.9	40.0

TABLE 4: Seasonal Climate Outlooks using POAMA2 for July - Sep 2017

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)
Momase Region					
Madang	39	280	16	426	45
Nadzab	33	204	15	384	52
Wewak	28	432	**36**	590	**36**
New Guinea Islands					
Momote	39	779	16	1011	45
Kavieng	33	489	19	699	48
Southern Region					
Misima	52	265	21	500	27
Port Moresby	58	37	9	70	33
Daru	5	81	83	150	12

Summary Statements:

Rainfall for May 2017

Rainfall for the month of May was below normal for Port Moresby, normal for Goroka and Nadzab whilst above normal recorded for Vanimo and Momote.

Accumulated rainfall for March to May 2017, including outlook verification

Rainfall for the last three months was normal at Goroka, Port Moresby and Vanimo whilst above normal at Momote and Nadzab

Forecasts were inconsistent at Nadzab, consistent at Vanimo and near consistent at Goroka, Momote and Port Moresby

The skills range from very low to high

Outlook for July to September 2017:

1. **SCOPIC:**

   The SCOPIC seasonal rainfall outlook for June to August 2017 shows:

   - **Momase Region**: Below normal is favoured for three monitoring stations with normal the next most likely for Madang. Above normal is the most likely outcome for Vanimo.
   - **Highlands Region:** The outlook offers little guidance for the coming season as the chances of above-normal, normal and below-normal rainfall are similar.
   - **New Guinea Islands**: Above normal is the most likely outcome for Momote whilst Kavieng has roughly equal chances of below normal, normal or above normal occurring.
   - **Southern Region:** Below normal is favoured for Misima whilst Port Moresby has roughly equal chances of below normal, normal and above normal occurring.

     Confidence range from very low to very high.

2. **POAMA:**

   The POAMA model favours below normal for Port Moresby and Misima, whilst normal is favoured for Daru. Above normal is the favoured or most likely outcome for the New Guinea Islands Region, Nadzab and Madang, while little guidance is offered for Wewak.

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: $X \geq 35$