Pacific Islands - Online Climate Outlook Forum (OCOF) No.122

Country Name: Papua New Guinea

TABLE 1: Monthly Rainfall

Station (include data period)	August 2017 Total	September 2017 Total	October 2017				
			Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Momase Region							
Madang (1944-2017)	8.0	3.4	239.0	207.1	284.4	252.9	30/68
Nadzab(1973-2017)	119.6	104.6	54.4	71.0	114.0	97.4	11/43
Wewak (1894-2017)	137.2	238.4	152.6	191.5	265.6	223.3	10/62
Vanimo (1918-2017)	145.4	315.2	-	144.6	221.3	175.1	-
Highlands Region							
Goroka (1948-2016)	27.0	30.0	-	117.7	169.5	148.0	-
New Guinea Islands Region							
Momote (1949-2017)	267.0	450.6	287.4	183.0	265.0	227.7	48/64
Kavieng (1916-2017)	256.8	207.8	304.4	163.1	275.1	213.9	67/90
Southern region							
Misima (1917-2017)	131.2	255.8	259.6	124.7	309.5	227.5	50/92
Port Moresby (1875-2017)	34.4	8.0	113.2	10.1	32.2	18.7	115/120

TABLE 2: Three-monthly Rainfall
August to October2017
[Please note that the data used in this verification should be sourced from table 3of OCOF #118]

Station	Three-month Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking	Forecast probs.* (include LEPS)	Verification* (Consistent, Near-consistent Inconsistent)?
Momase Region							
Madang (1944-2017)	250.4	406.4	629.5	495.6	11/68	**70**/23/7 (25)	Consistent
Nadzab(1973-2017)	278.6	242.1	395.1	331.8	15/42	**51**/22/27 (3.1)	Near-consistent
Wewak (1894-2017)	528.2	495.8	662.1	574.8	25/61	**72**/20/8 (26.4)	Near-consistent
Vanimo (1918-2017)	-	485.6	553.8	521.2	-	**36/36**/28 (-1.8)	-
Highlands Region							
Goroka (1948-2016)	-	272.3	378.2	335.2	-	**34**/32/**34** (-2.6)	-
New Guinea Islands Region							
Momote (1949-2017)	1005.0	646.4	901.2	758.0	54/63	33/30/**37** (-1.5)	Consistent
Kavieng (1916-2017)	769.0	507.4	711.5	625.4	61/84	**35**/31/34 (-2.0)	Inconsistent
Southern Region							
Misima (1917-2017)	646.6	456.0	766.7	617.1	50/91	**65**/31/4 (29.1)	Near-consistent
Port Moresby (1875-2017)	155.6	58.8	96.4	75.1	96/105	**42**/23/35 (-0.5)	Inconsistent

Period:*below normal/normal/above normal

Predictors and Period used for August to October2017 Outlooks (refer to OCOF #118):

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[*]Forecast is <u>consistent</u> when observed and predicted (tercile with the highest probability) categories coincide (are in the same tercile).
Forecast is <u>near-consistent</u> 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 <u>inconsistent</u> when observed and predicted (tercile with the highest probability) differ by two categories (i.e. terciles 1 and 3).

TABLE 3: Seasonal Climate Outlooks using SCOPIC for December 2017 to February 2018

Predictors and Period used: Nino3.4 SST anomalies for September-October 2017

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
Momase Region						
Madang (1944-2017)	46	1008.4	54		6.4	57.6
Nadzab(1973-2017)	55	493.0	45		5.3	59.5
Wewak (1894-2017)	45	413.2	55		6.3	56.7
Vanimo (1918-2017)	50	807.8	50		-2.2	12.2
Highlands Region						
Goroka (1948-2016)	50	691.5	50		-2.2	21.3
New Guinea Islands Region						
Momote (1949-2017)	52	820.4	48		-0.5	51.7
Kavieng (1916-2017)	58	927.8	42		11.7	60.7
Southern Region						
Misima (1917-2017)	47	769.0	53		2.7	60.0
Port Moresby (1875-2017)	43	468.0	57		11.0	62.7

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	67%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
Momase region							
Madang (1944-2017)	36	926.1	30	1107.0	34	9.6	45.5
Nadzab (1973-2017)	37	422.8	35	515.9	28	3.3	42.9
Wewak (1894-2017)	28	363.3	36	460.5	36	2.5	43.3
Vanimo (1918-2017)	34	716.9	32	918.0	34	-2.6	24.5
Highlands Region							
Goroka (1948-2016)	33	632.1	34	738.7	33	-2.2	34.0
New Guinea							

Islands Region							
Momote (1949-2017)	**35**	759.6	32	915.9	33	-0.2	30.0
Kavieng (1916-2017)	**39**	841.0	29	985.3	32	10.4	45.9
Southern Region							
Misima (1917-2017)	**32**	685.2	33	879.7	35	1.1	36.9
Port Moresby (1875-2017)	26	421.2	36	554.1	**38**	11.2	43.3

TABLE 4: Seasonal Climate Outlooks using POAMA2 for December2017 to February2018

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	67%ile rainfall (mm)	Upper Tercile (prob)		
Momase Region							
Madang	25	940	30	1110	**45**		
Nadzab	30	416	12	504	**58**		
Wewak	**49**	381	30	461	21		
New Guinea Islands Region							
Momote	25	753	30	872	**45**		
Kavieng	27	846	21	956	**52**		
Southern Region							
Misima	12	646	5	881	**83**		
Port Moresby	30	423	6	508	**64**		
Daru	5	634	40	804	**55**		

Summary Statements

Rainfall for October 2017:
Rainfall for the month of October was below-normal at Nadzab & Wewak stations; normal at Madang & Misima; and above normal at New Guinea islands and Port Moresby.

Accumulated rainfall for August to October2017, including outlook verification:
Rainfall for the last three months was below normal at Madang; normal at Nadzab, Wewak & Misima; while the remaining three stations recorded above normal.

Forecasts were consistent at Madang & Momote; inconsistent at Kavieng & Port Moresby; and near-consistent at the other monitoring stations.

Skills range from very low to very high.

Outlooks for December 2017 to February2018:

1. **SCOPIC:**

   The SCOPIC seasonal rainfall outlook for December 2017 to February 2018 shows little guidance as the chances of above-normal, normal and below normal rainfall are similar for the country (climatology). The exception is the outlook for Port Moresby which shows a near-equal likelihood of above-normal and normal rainfall. Below-normal is the least likely.

   Confidence range from very low to good skill.

2. **POAMA:**

   The POAMA model favours below-normal rainfall for Wewak with normal the next most likely. 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 ≤ X < 5   Moderate 5 ≤ X < 10   Good: 10 ≤ X< 15   High: 15≤ X < 25

Very High: 25 ≤X < 35   Exceptional: X ≥ 35