

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 126

Country Name: Papua New Guinea

TABLE 1: Monthly Rainfall

Station (include data period)	February 2018						
	December 2017 Total	January 2017 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Momase Region							
Madang (1944-2018)	483.8	241.2	-	230.9	333.1	265.6	
Nadzab(1973-2018)	267.0	86.0	101.2	110.0	188.0	153.0	15/44
Wewak (1894-2018)	164.6	112.4	61.0	104.2	142.6	117.8	6/62
Vanimo (1918-2018)	280.4	110.2	418.0	202.3	308.5	264.8	55/63
Highlands Region							
Goroka (1948-2018)	330.0	155.2	261.8	195.3	268.7	238.6	34/55
NGI Region							
Momote (1949-2018)	197.4	150.0	326.8	202.2	284.0	223.7	52/68
Kavieng (1916-2018)	506.2	497.0	323.2	234.9	308.2	265.1	65/88
Southern region							
Misima (1917-2018)	170.4	262.2	146.0	229.0	355.3	301.4	12/94
Port Moresby (1875-2018)	172.0	320.8	131.0	140.5	220.1	167.9	42/130

**TABLE 2: Three-monthly Rainfall
December 2017 to February 2018**

[Please note that the data used in this verification should be sourced from table 3 of OCOF #122]

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 (1944-2018)	-	926.1	1107.0	1008.4		36/30/34(9.6)	
Nadzab(1973-2018)	454.2	422.8	515.9	493.0	19/43	37/35/28(3.3)	Near-consistent
Wewak (1894-2018)	338.0	363.3	460.5	413.2	16/61	28/36/36(2.5)	Near-consistent
Vanimo (1918-2018)	808.6	716.9	918.0	807.8	30/58	34/32/34(-2.6)	Near-consistent
Highlands Region							
Goroka (1948-2018)	747.0	632.1	738.7	691.5	35/49	33/34/33(-2.2)	Near-consistent
NGI Region							
Momote (1949-2018)	674.2	759.6	915.9	820.4	13/61	35/32/33(-0.2)	Consistent
Kavieng (1916-2018)	1326.4	841.0	985.3	927.8	81/83	39/29/32(10.4)	In-consistent
Southern Region							
Misima (1917-2018)	578.6	685.2	879.7	769.0	16/88	32/33/35(1.1)	In-consistent
Port Moresby (1875-2018)	623.8	421.2	554.1	468.0	101/126	26/36/38(11.2)	Consistent

Period:*below normal/normal/above normal

Predictors and Period used for December 2017 to February 2018 Outlooks (refer to OCOF #122): NINO 3.4 SST anomalies for September- October 2017

* 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 using SCOPIC for
April to June 2018**

Predictors and Period used: NINO 3.4 SST anomalies for January- February 2018

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
Mamose Region						
Madang (1944-2018)	41	1007.2	59		3.9	58.5
Nadzab(1973-2018)	50	322.3	50		-2.5	31.0
Wewak (1894-2018)	50	642.5	50		-1.5	21.0
Vanimo (1918-2018)	45	650.4	55		-0.3	52.8
Highlands Region						
Goroka (1948-2018)	48	391.5	52		-2.2	45.8
NGI Region						
Momote (1949-2018)	49	812.5	51		-1.4	48.5
Kavieng (1916-2018)	54	784.6	46		0.0	55.9
Southern Region						
Misima (1917-2018)	37	764.5	63		12.8	63.1
Port Moresby (1875-2018)	32	207.8	68		14.7	64.7

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	67%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
Momase region							
Madang (1944-2018)	24	894.8	29	1073.7	47	8.4	41.5
Nadzab (1973-2018)	32	270.7	37	350.3	31	-2.6	26.2
Wewak (1894-2018)	29	570.1	37	672.8	34	-1.3	38.7
Vanimo (1918-2018)	34	576.0	33	723.6	33	-2.4	13.2
Highlands Region							
Goroka (1948-2018)	32	331.0	35	426.7	33	-2.5	14.6
NGI Region							
Momote (1949-2018)	30	711.0	38	897.3	32	-1.4	33.8
Kavieng (1916-2018)	38	688.6	35	898.0	27	-0.1	27.1
Southern Region							
Misima (1917-2018)	19	614.6	29	915.3	52	19.1	47.7
Port Moresby (1875-2018)	20	170.5	34	267.6	46	10.5	44.1

**TABLE 4: Seasonal Climate Outlooks using POAMA2 for
April to June 2018**

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	67%ile rainfall (mm)	Upper Tercile (prob)		
Momase Region							
Madang	52	878	15	1091	33		
Nadzab	48	249	13	342	39		
Wewak	61	560	12	671	27		
New Guinea Islands Region							
Momote	28	703	27	860	45		
Kavieng	27	689	15	838	58		
Southern Region							
Misima	79	612	12	823	9		
Port Moresby	70	189	5	294	25		
Daru	5	548	71	816	24		

Summary Statements

Rainfall for February 2018:

Rainfall for the month of February was below-normal at Wewak and across the Southern Region, but mainly above normal elsewhere. The sixth driest February was recorded at Wewak.

Accumulated rainfall for December 2017 to February 2018, including outlook verification:

Rainfall for the last three months was below normal at Wewak, Momote and Misima; above normal at Goroka, Kavieng and & Port Moresby; and normal at Nadzab and Vanimo.

Forecasts were consistent for Momote and Port Moresby; near-consistent for Goroka and MOMASE stations; whilst inconsistent for Kavieng and Misima.

Skills range from very low to good.

Outlooks for April to June 2018:

1. SCOPIC:

Madang station and Southern Region: above-normal as the most likely outcome, with normal the next most likely. Below-normal is the least likely.

All other monitoring stations: little guidance as the chances of above-normal, normal and below normal rainfall are similar.

Confidence range from very low to high

2. POAMA:

The POAMA model favours normal rainfall for Daru with above-normal the next most likely.

Above normal rainfall is the most likely for the New Guinea islands region, with below normal the next most likely and normal the least likely.

MOMASE, Misima and Port Moresby: below-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: $X \geq 35$