Pacific Islands - Online Climate Outlook Forum(OCOF) No.127

Country Name: Papua New Guinea

TABLE 1: Monthly Rainfall

Station (include data period)			March2018				
	January 2018 Total	February2018 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Momase Region							
Madang (1944-2018)	241.2	-	-	301.4	396.7	337.0	-
Nadzab(1973-2018)	86.0	101.2	**177.0**	142.0	203.2	158.8	25/43
Wewak (1894-2018)	112.4	61.0	**123.2**	132.3	184.0	157.7	18/62
Vanimo (1918-2018)	110.2	418.0	**331.4**	214.7	353.5	272.7	43/66
Highlands Region							
Goroka (1948-2018)	155.2	261.8	**262.0**	208.1	285.8	240.0	34/56
NGI Region							
Momote (1949-2018)	150.0	326.8	**341.8**	275.0	339.9	304.2	42/62
Kavieng (1916-2018)	497.0	323.2	**428.0**	255.8	369.7	313.0	74/85
Southern region							
Misima (1917-2018)	262.2	146.0	-	206.3	317.3	252.9	-
Port Moresby (1875-2018)	320.8	131.0	**326.4**	137.0	245.9	184.1	**117/130**

TABLE 2: Three-monthly Rainfall
January2018to March2018
[Please note that the data used in this verification should be sourced from table 3of OCOF #123]

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)	-	894.0	1074.7	951.8	-	**42**/27/31(11.1)	-
Nadzab(1973-2018)	**364.2**	436.7	525.8	470.9	9/43	**41**/31/28(7.8)	Consistent
Wewak (1894-2018)	**296.6**	368.4	456.7	428.8	**5/62**	25/36/**39**(4.8)	Inconsistent
Vanimo (1918-2018)	**859.6**	726.8	944.1	872.3	29/63	**39**/35/26(2.7)	Near-consistent
Highlands Region							
Goroka (1948-2018)	**679.0**	642.3	791.8	724.0	21/52	**40**/36/24(8.4)	Near-consistent
NGI Region							
Momote (1949-2018)	**818.6**	764.0	924.8	811.3	32/62	**37**/33/30(1.4)	Near-consistent
Kavieng (1916-2018)	**1248.2**	853.5	1012.1	948.1	**74/82**	**41**/30/29(3.4)	Inconsistent
Southern Region							
Misima (1917-2018)	**-**	715.0	933.0	787.9	-	24/35/**41**(8.4)	-
Port Moresby (1875-2018)	**778.2**	504.1	636.7	574.0	**117/130**	28/34/**38**(3.6)	Consistent

Period:*below normal/normal/above normal

Predictors and Period used for January2018to March2018Outlooks (refer to OCOF #123):
NINO3.4 SST anomalies for October-November 2017

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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 Mayto July2018

Predictors and Period used: NINO3.4 SST anomalies for February-March 2018

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
Mamose Region						
Madang (1944-2018)	27	743.2	**73**		19.9	75.4
Nadzab(1973-2018)	46	301.5	**54**		-1.5	59.5
Wewak (1894-2018)	37	630.0	**63**		6.2	58.1
Vanimo (1918-2018)	**51**	608.3	49		-2.0	38.5
Highlands Region						
Goroka (1948-2018)	42	239.0	**58**		2.2	52.1
NGI Region						
Momote (1949-2018)	**53**	901.2	47		-1.1	50.0
Kavieng (1916-2018)	**52**	730.6	48		-1.6	48.3
Southern Region						
Misima (1917-2018)	21	625.2	**79**		35.6	73.8
Port Moresby (1875-2018)	39	118.3	**61**		5.4	56.1

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)	13	630.3	34	813.3	**53**	19.6	50.8
Nadzab(1973-2018)	35	269.2	32	373.4	33	-2.8	23.8
Wewak (1894-2018)	25	556.7	31	685.9	**44**	4.4	46.8
Vanimo (1918-2018)	**36**	566.3	33	687.7	31	-2.6	40.4
Highlands Region							
Goroka (1948-2018)	25	204.6	35	277.8	**40**	4.0	37.5
NGI Region							
Momote (1949-2018)	**40**	798.1	28	1041.6	32	0.1	32.3
Kavieng (1916-2018)	28	634.1	**45**	820.2	27	-0.3	46.7
Southern Region							
Misima (1917-2018)	11	487.0	32	791.5	**57**	32.7	50.8
Port Moresby (1875-2018)	23	82.7	35	151.3	**42**	4.9	39.4

TABLE 4: Seasonal Climate Outlooks using POAMA2 for

Mayto July2018

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	67%ile rainfall (mm)	Upper Tercile (prob)		
Momase Region							
Madang	25	626	**39**	787	36		
Nadzab	33	241	25	300	**42**		
Wewak	30	575	28	667	**42**		
New Guinea Islands Region							
Momote	24	796	18	1046	**58**		
Kavieng	27	636	18	805	**55**		
Southern Region							
Misima	**88**	453	5	622	7		
Port Moresby	**58**	90	6	151	36		
Daru	5	222	**77**	394	18		

Summary Statements

Rainfall for March 2018:
Rainfall for the month of March was normal at Momase and Highlands region except for Wewak station with below normal. Above normal was recorded at New Guinea Islands region and Port Moresby.

Accumulated rainfall for January2018to March2018, including outlook verification:
Rainfall for the last three months was below normal at Nadzab and Wewak; above normal at Kavieng and Port Moresby; while the rest of the monitoring stations recorded normal rainfall.

Forecasts were consistent for Nadzab and Port Moresby; near consistent for Vanimo, Goroka and Momote; whilst inconsistent for Wewak and Kavieng stations.

Skills range from low to good.

Outlooks for May to July 2018:

1. **SCOPIC:**
   Madang Wewak, Goroka and Southern Region: above-normal as the most likely and or favoured outcome, with normal the next most likely except for Misima where below normal is the next most likely. Below-normal is the least likely.

   NGI Region: below normal is the most likely outcome at Momote and normal rainfall is the most likely outcome at Kavieng.

Nadzab and Vanimo: little guidance as the chances of above-normal, normal and below normal rainfall are similar.

Confidence range from very low to very high skill

2. POAMA:

For Momase and the New Guinea Islands region, the favoured or most likely outcome is above normal rainfall. The exception is Madang where the outlook shows a near-equal likelihood of normal and above normal rainfall.

Southern region: At Misima and Port Moresby the outlook favours below-normal rainfall, with above normal the next most likely. At Daru, the POAMA model favours normal rainfall, with above-normal the next most likely.

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