Pacific Islands - Online Climate Outlook Forum (OCOF) No. 137

Country: PAPUA NEW GUINEA

TABLE 1: Monthly Rainfall

Station (include data period)	Nov-2018	Dec-2018	Jan-2019				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Momase Region							
Madang (1944-2019)	332.4	352.0	303.0	265.6	381.4	340.4	28/71
Nadzab (1973-2019)	95.4	217.0	343.6	134.0	178.9	154.5	**44/45**
Wewak (1894-2019)	199.4	119.6	189.0	107.5	158.0	134.4	54/64
Vanimo (1918-2019)	243.4	250.0	425.8	202.6	339.8	269.0	55/68
Highlands Region							
Goroka (1948-2019)	117.8	286.8	196.8	203.3	266.6	226.0	19/57
New Guinea Islands Region							
Momote (1949-2019)	336.2	350.0	282.9	244.3	319.5	277.7	35/63
Kavieng (1916-2019)	304.2	344.2	213.6	272.6	362.0	334.6	19/88
Southern Region							
Misima (1917-2019)	117.0	303.6	208.8	197.1	317.4	276.0	33/91
Port Moresby (1875-2019)	2.8	122.8	593.4	133.1	223.8	177.8	**131/131**

TABLE 2: Three-month Rainfall for November 2018 to January 2019

Station	Three-month Total		33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities based on NINO3.4 August-September 2018				Verification: Consistent, Near-consistent, Inconsistent?
	Rainfall (mm)						B-N	N	A-N	LEPS	
Momase Region											
Madang (1944-2019)	987.4	Normal	957.0	1123.6	1036.6	29/70	31	**35**	34	-1	Consistent
Nadzab (1973-2019)	656.0	Above normal	381.2	471.0	406.6	**43/44**	32	**34**	**34**	-3	Near-consistent
Wewak (1894-2019)	508.0	Normal	437.9	548.5	480.2	36/61	**38**	36	26	9	Near-consistent
Vanimo (1918-2019)	919.2	Above normal	640.2	822.8	727.7	48/60	**34**	**34**	32	-2	Near-consistent
Highlands Region											
Goroka (1948-2019)	601.4	Normal	517.6	641.9	575.4	29/49	33	34	33	-2	Near-consistent
New Guinea Islands Region											
Momote (1949-2019)	969.1	Above normal	731.8	891.0	829.0	49/62	32	32	**36**	0	Consistent
Kavieng (1917-2019)	862.0	Normal	794.0	963.7	855.8	44/86	31	**35**	34	-1	Consistent
Southern Region											
Misima (1917-2019)	629.4	Normal	602.8	780.6	702.0	36/88	**37**	32	31	2	Near-consistent
Port Moresby (1875-2019)	719.0	Above normal	297.5	426.6	365.0	**116/119**	**40**	37	23	18	Inconsistent

TABLE 3: Seasonal Climate Outlooks using SCOPIC for March to May 2019

Predictor and Period used: NINO3.4 for December 2018 to January 2019

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Momase Region						
Madang (1944-2019)	55	1131.8	45		0	59
Nadzab(1973-2019)	47	389.0	53		-2	51
Wewak (1894-2019)	56	604.1	44		0	64
Vanimo (1918-2019)	50	705.6	50		-2	26
Highlands Region						
Goroka (1948-2019)	42	558.9	58		2	55
New Guinea Islands Region						
Momote (1949-2019)	48	830.3	52		-2	38
Kavieng (1916-2019)	48	842.2	52		-2	48
Southern Region						
Misima (1917-2019)	80	801.8	20		31	71
Port Moresby (1875-2019)	60	382.0	40		6	61

Station	Below Normal (prob)	33%ile Rainfall (mm)	Normal (prob)	67%ile Rainfall (mm)	Above Normal (prob)	LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Momase Region							
Madang (1944-2019)	33	999.3	34	1203.0	33	-2	29
Nadzab (1973-2019)	30	362.1	32	428.7	38	0	15
Wewak (1894-2019)	42	511.8	25	645.9	33	1	43
Vanimo (1918-2019)	35	615.9	29	839.9	36	-2	34
Highlands Region							
Goroka (1948-2019)	26	492.0	29	610.0	45	5	43
New Guinea Islands Region							
Momote (1949-2019)	34	744.0	31	928.0	35	-2	36
Kavieng (1916-2019)	21	772.8	42	943.8	37	3	49
Southern Region							
Misima (1917-2019)	51	698.1	33	995.3	16	19	46
Port Moresby (1875-2019)	41	308.1	35	450.4	24	4	39

TABLE 4: Seasonal Climate Outlooks using POAMA2 for March to May 2019

Station	Below Normal (prob)	33%ile Rainfall (mm)	Normal (prob)	67%ile Rainfall (mm)	Above Normal (prob)
Momase Region					
Madang	49	1002.0	18	1201.0	33
Nadzab	58	298.0	9	409.0	33
Wewak	49	508.0	9	630.0	42
New Guinea Islands Region					
Momote	55	698.0	15	854.0	30
Kavieng	49	769.0	12	998.0	39
Southern Region					
Misima	79	665.0	6	941.0	15
Port Moresby	82	327.0	6	498.0	12
Daru	15	828.0	79	939.0	6

Summary Statements

Rainfall for January 2019:

Below normal rainfall was received at Goroka and Kavieng. Normal rainfall was received at Madang, Momote and Misima, whilst above normal was received at Port Moresby and the remaining monitoring stations at Momase Region. Port Moresby and Nadzab experienced the 1st and 2nd wettest January respectively on record.

Accumulated rainfall for November 2018 to January 2019, including outlook verification:

Normal to above normal rainfall was received for the country.

The forecasts were inconsistent at Port Moresby, consistent at Madang and the New Guinea Islands Region, whilst near-consistent for the rest of the monitoring stations.

Outlooks for March to May 2019:

1. **SCOPIC:**
   Madang, Nadzab, Vanimo & Momote: The outlook offers little guidance as the chances of above normal, normal and below normal are similar.

   Misima: The outlook favours below normal with normal the next most likely.

   Wewak: The outlook shows below normal as the most likely outcome, with above normal the next most likely. Normal is the least likely.

Goroka: The outlook shows above normal as the most likely outcome, with normal the next most likely outcome. Below normal is the least likely.

Kavieng: The outlook shows normal as the most likely outcome, with above normal the next most likely. Below normal is the least likely.

Port Moresby: The outlook shows below normal as the most likely outcome, with normal the next most likely. Above normal is the least likely.

Confidence range from very low to high.

2. POAMA:

The POAMA model favours normal for Daru and below normal for all the other monitoring stations.

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

Table: 5 Stakeholder Engagement- Evaluations of how effective NMS engage with stakeholders

Country	Date: January 2019	Stakeholder	Total Number of Participants	Number of male	Number of female