Pacific Islands - Online Climate Outlook Forum (OCOF) No. 136

Country: PAPUA NEW GUINEA

TABLE 1: Monthly Rainfall

Station (include data period)	Oct-2018	Nov-2018	Dec-2018				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Momase Region							
Madang (1944-2018)	98.6	332.4	352.0	343.5	448.5	389.4	28/70
Nadzab (1973-2018)	43.8	95.4	217.0	122.2	188.8	154.0	33/44
Wewak (1894-2018)	158.0	199.4	119.6	123.0	176.9	142.7	19/63
Vanimo (1918-2018)	81.8	243.4	250.0	180.6	283.8	243.8	34/65
Highlands Region							
Goroka (1948-2018)	176.8	117.8	286.8	157.0	234.0	174.5	40/51
New Guinea Islands Region							
Momote (1949-2018)	174.6	336.2	350.0	260.4	339.0	288.5	48/65
Kavieng (1916-2018)	306.2	304.2	344.2	256.7	341.2	310.6	62/92
Southern Region							
Misima (1917-2018)	288.4	117.0	303.6	167.7	256.7	215.0	72/93
Port Moresby (1875-2018)	10.2	2.8	122.8	77.5	152.0	116.0	69/128

TABLE 2: Three-month Rainfall for October to December 2018

Station	Three-month Total		33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities* based on NINO3.4 Jul-Aug 2018				Verification: Consistent, Near-consistent, Inconsistent?
	Rainfall (mm)						B-N	N	A-N	LEPS	
Momase Region											
Madang (1944-2018)	783.0	Below normal	847.7	1084.9	976.7	15/69	**41**	36	23	14	Consistent
Nadzab (1973-2018)	356.2	Normal	315.7	403.1	341.5	23/43	40	18	**42**	8	Near-consistent
Wewak (1894-2018)	477.0	Below normal	539.1	650.7	572.5	14/61	**39**	**39**	22	12	Near-consistent
Vanimo (1918-2018)	575.2	Normal	564.1	697.9	611.6	21/58	**39**	38	23	18	Near-consistent
Highlands Region											
Goroka (1948-2018)	581.4	Normal	424.0	601.6	500.2	37/47	**34**	32	**34**	-3	Near-consistent
New Guinea Islands Region											
Momote (1949-2018)	860.8	Normal	689.0	866.9	784.6	40/65	33	**37**	30	-1	Consistent
Kavieng (1917-2018)	954.6	Above normal	709.5	870.9	796.0	74/90	34	**36**	30	-1	Near-consistent
Southern Region											
Misima (1917-2018)	709.0	Normal	560.9	756.2	636.3	57/91	**39**	34	27	8	Near-consistent
Port Moresby (1875-2018)	135.8	Below normal	173.6	267.7	212.0	26/114	**41**	**41**	18	26	Near-consistent

TABLE 3: Seasonal Climate Outlooks using SCOPIC for February to April 2019

Predictor and Period used: NINO3.4 for October to November 2018

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Momase Region						
Madang (1944-2018)	49	1036.2	51		1	45
Nadzab(1973-2018)	40	457.7	60		1	60
Wewak (1894-2018)	53	480.4	47		-1	54
Vanimo (1918-2018)	42	783.5	58		1	54
Highlands Region						
Goroka (1948-2018)	35	673.4	65		5	60
New Guinea Islands Region						
Momote (1949-2018)	50	801.6	50		2	28
Kavieng (1916-2018)	40	899.9	60		4	53
Southern Region						
Misima (1917-2018)	65	844.9	35		7	59
Port Moresby (1875-2018)	64	517.2	36		6	57

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 (1944-2018)	27	931.7	37	1145.8	36	-1	30
Nadzab (1973-2018)	25	381.6	38	505.3	37	0	41
Wewak (1894-2018)	40	438.4	26	519.8	34	-1	41
Vanimo (1918-2018)	27	696.4	30	909.3	43	2	37
Highlands Region							
Goroka (1948-2018)	24	610.0	35	746.6	41	2	36
New Guinea Islands Region							
Momote (1949-2018)	37	761.1	32	935.8	31	-2	16
Kavieng (1916-2018)	20	806.7	40	977.9	40	4	23
Southern Region							
Misima (1917-2018)	54	747.5	36	959.0	10	17	46
Port Moresby (1875-2018)	49	433.7	29	589.3	22	8	43

TABLE 4: Seasonal Climate Outlooks using POAMA2 for February to April 2019

Station	Below Normal (prob)	33%ile Rainfall (mm)	Normal (prob)	67%ile Rainfall (mm)	Above Normal (prob)
Momase Region					
Madang	42	904.0	12	1154.0	**46**
Nadzab	**46**	319.0	12	464.0	42
Wewak	**55**	428.0	5	575.0	40
New Guinea Islands Region					
Momote	**58**	720.0	12	844.0	30
Kavieng	**42**	774.0	27	989.0	31
Southern Region					
Misima	**70**	708.0	6	930.0	24
Port Moresby	**58**	465.0	9	593.0	33
Daru	5	872.0	**83**	1015.0	12

Summary Statements

Rainfall for December 2018:

Normal to above normal rainfall received across the country except that Wewak in Momase Region received below normal.

Accumulated rainfall for October to December 2018, including outlook verification:

Momase & Southern Regions received below normal to normal rainfall. Highlands Region received normal rainfall and NGI received normal to above normal rainfall.

Forecast was consistent at Madang & Momote and near consistent for the rest of the stations.

Outlooks for February to April 2019:

1. **SCOPIC:**
   Wewak/Port Moresby/Misima: The outlook shows below normal as the most likely outcome with normal the next most likely for Port Moresby and Misima; and above normal next most likely for Wewak.

   Vanimo & Goroka: The outlook shows above normal as the most likely outcome with normal the next most likely and below normal the least likely.

   Madang, Nadzab & Kavieng: The outlook shows near-equal likelihood of above-normal and normal rainfall. Below-normal is the least likely.

   Momote: The outlook offers little guidance as the chances of above normal, normal and below normal are similar.

   Confidence is very low to high

2. POAMA:

The forecast shows below normal as the favoured or most likely outcome for all the stations except for Daru where normal is favoured and Madang where above normal is the most likely.

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

Country	Date: December 2018	Stakeholder	Total Number of Participants	Number of male	Number of female
PNG	11 December	Disaster Management Meeting	28	16	12
1. National Weather Service presented a Climate Update on 2018 El Nino episode.					

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