

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 132

Country: Papua New Guinea

TABLE 1: Monthly Rainfall

Station (include data period)	Jun-2018	Jul-2018	Aug-2018				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
Momase Region							
Madang (1944-2018)	211.4	97.6	260.4	63.2	141.5	99.0	66/69
Nadzab (1973-2018)	71.2	173.0		81.9	151.0	111.3	
Wewak (1894-2018)	257.0	178.0	116.0	115.2	209.7	141.5	22/63
Vanimos (1918-2018)	189.0	177.4	145.0	133.9	193.3	163.6	25/63
Highlands Region							
Goroka (1948-2018)	86.6	80.0	114.4	47.0	84.0	65.2	44/55
New Guinea Islands Region							
Momote (1949-2018)	334.8	435.4	299.0	221.0	326.0	270.7	38/64
Kavieng (1916-2018)	163.8	289.8	261.4	160.6	255.3	206.0	63/87
Southern Region							
Misima (1917-2018)	124.8	223.4	142.2	85.9	185.0	132.0	49/93
Port Moresby (1875-2018)	1.4	21.6	79.4	6.8	24.3	13.7	112/119

TABLE 2: Three-month Rainfall for June to August 2018

Station	Three-month Total		33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities* based on NINO3.4 March-April 2018				Verification: Consistent, Near- consistent, Inconsistent?
	Rainfall (mm)						B-N	N	A-N	LEPS	
<i>Momase Region</i>											
Madang (1944-2018)	569.4	Above normal	402.0	528.0	466.2	51/68	10	37	53	31	Consistent
Nadzab (1973-2018)			294.8	404.6	329.0		34	29	37	-3	
Wewak (1894-2018)	551.0	Normal	481.8	620.5	560.1	31/63	20	34	46	12	Near-consistent
Vanimos (1918-2018)	511.4	Below normal	513.2	632.3	559.4	21/61	39	31	30	0	Consistent
<i>Highlands Region</i>											
Goroka (1948-2018)	281.0	Above normal	170.6	240.0	191.0	44/51	30	36	34	-2	Near-consistent
<i>New Guinea Islands Region</i>											
Momote (1949-2018)	1069.2	Above normal	812.0	1064.7	967.0	42/63	41	30	29	2	Inconsistent
Kavieng (1917-2018)	715.0	Normal	581.3	801.0	711.4	44/86	34	34	32	-2	Near-consistent
<i>Southern Region</i>											
Misima (1917-2018)	490.4	Normal	362.0	681.3	510.5	41/90	14	37	49	26	Near-consistent
Port Moresby (1875-2018)	102.4	Normal	53.0	103.7	81.8	69/105	23	32	45	10	Near-consistent

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

Predictor and Period used: NINO3.4 for July to August 2018

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Momase Region						
Madang (1944-2018)	58	976.7	42		8	69
Nadzab(1973-2018)	52	341.5	48		-1	55
Wewak (1894-2018)	56	572.5	44		10	57
Vanimo (1918-2018)	62	611.6	38		28	69
Highlands Region						
Goroka (1948-2018)	52	500.2	48		-2	44
New Guinea Islands Region						
Momote (1949-2018)	49	784.6	51		-2	29
Kavieng (1916-2018)	50	796.0	50		-2	44
Southern Region						
Misima (1917-2018)	56	636.3	44		7	67
Port Moresby (1875-2018)	69	212.0	31		32	71

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)	41	847.7	36	1084.9	23	14	48
Nadzab (1973-2018)	40	315.7	18	403.1	42	8	60
Wewak (1894-2018)	39	539.1	39	650.7	22	12	50
Vanimo (1918-2018)	39	564.1	38	697.9	23	18	59
Highlands Region							
Goroka (1948-2018)	34	424.0	32	601.6	34	-3	22
New Guinea Islands Region							
Momote (1949-2018)	33	689.0	37	866.9	30	-1	38
Kavieng (1916-2018)	34	709.5	36	870.9	30	-1	34
Southern Region							
Misima (1917-2018)	39	560.9	34	756.2	27	8	41
Port Moresby (1875-2018)	41	173.6	41	267.7	18	26	56

TABLE 4: Seasonal Climate Outlooks using POAMA2 for October to December 2018

Station	Below Normal (prob)	33%ile Rainfall (mm)	Normal (prob)	67%ile Rainfall (mm)	Above Normal (prob)
<i>Momase Region</i>					
Madang	36	816.0	24	1031.0	40
Nadzab	55	252.0	12	347.0	33
Wewak	21	505.0	18	610.0	61
<i>New Guinea Islands Region</i>					
Momote	21	689.0	18	827.0	61
Kavieng	18	672.0	12	854.0	70
<i>Southern Region</i>					
Misima	43	506.0	21	649.0	36
Port Moresby	58	119.0	6	245.0	36
Daru	5	249.0	65	337.0	30

Summary Statements

Rainfall for August 2018:

Normal to above normal rainfall was received across the country. Nadzab station's rainfall was not available. Madang recorded the 4th highest rainfall on record for the month of August while Port Moresby recorded the 8th highest.

Accumulated rainfall for Jun to Aug 2018, including outlook verification:

Below normal rainfall was received at Vanimo. Madang, Goroka and Momote received above normal rainfall, whilst the rest of the monitoring stations received normal.

The forecasts were consistent at Madang and Vanimo, inconsistent at Momote and near-consistent for the rest of the monitoring stations.

Three months total was not available for Nadzab station.

Outlooks for October to December 2018:

1. SCOPIC:

Madang and Misima: The outlook shows below normal as the most likely outcome, with normal the next most likely. Above normal is the least likely.

Nadzab: Mixed outlook with similar chances for below normal and above normal; near normal is the least likely outcome.

Wewak, Vanimo and Port Moresby: The outlook shows near-equal likelihood of below normal and normal rainfall. Above normal is the least likely.

Highlands & NGI Region: The outlook offers little guidance as the chances of above normal, normal and below normal is similar.

The confidence score ranges from very low to high skill.

2. POAMA:

The POAMA model favours below normal for Nadzab, Misima and Port Moresby. Normal is favoured for Daru and above normal is the favoured or most likely outcome for the rest of the monitoring stations.

Stakeholder Engagement- Evaluations of how effective NMS engage with stakeholders

Country	Date	Stakeholder	Total Number of Participants	Number of male	Number of female
PNG	10-11 Aug	CCDA, NDC, NWS,DMPGM	89	59	30
PNG	21-23 Aug	NWS, CCDA, STS	177	117	60
PNG	23-24 Aug	UNDP, NDC	47	37	10

10-11 Aug - APEC 14th Emergency Preparedness Working Group meeting

21-23 Aug - APEC Climate Symposium 2018

23-24 Aug - DRM Project Sub-national Stakeholder Review Meeting

Lead coordinating agencies in these meetings were CCDA: Climate Change Development Authority, NDC: PNG National Disaster Centre, NWS: PNG National Weather Service, DMPGM: Dept. of Mineral Policy & Geohazards Management, STS: PNG Science & Technology Secretariat, UNDP: United Nations Development Programme.

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: $X \geq 35$