

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 143

Country: Papua New Guinea

TABLE 1: Monthly Rainfall

Station (include data period)	May-2019	Jun-2019	Jul-2019				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
<i>Momase Region</i>							
Madang (1944-2019)				104.8	183.0	143.5	
Nadzab (1973-2019)	68.8	177.4	77.6	79.7	146.9	117.8	16/45
Wewak (1894-2019)	275.4	147.2	58.8	153.4	207.6	177.8	6/64
Vanimo (1918-2019)	102.0	179.8	206.8	145.3	221.5	193.2	39/65
<i>Highlands Region</i>							
Goroka (1948-2019)	60.6	86.0	45.2	44.6	71.7	56.5	20/56
<i>New Guinea Islands Region</i>							
Momote (1949-2019)	393.8	318.0	195.6	312.0	414.0	350.1	9/66
Kavieng (1916-2019)	311.6	351.8	212.8	192.3	279.9	224.4	16/45
<i>Southern Region</i>							
Misima (1917-2019)	107.8	93.8	131.4	85.0	190.6	139.2	45/94
Port Moresby (1875-2019)	101.6	82.8	26.8	6.0	25.1	13.0	84/120

TABLE 2: Three-month Rainfall for May to July 2019

Station	Three-month Total	33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities* based on NINO3.4 February-March 2019				Verification: Consistent, Near- consistent, Inconsistent?	
	Rainfall (mm)					B-N	N	A-N	LEPS		
<i>Momase Region</i>											
Madang (1944-2019)			630.9	816.7	744.2		54	33	13	20	
Nadzab (1973-2019)	323.8	Normal	274.0	373.0	305.8	24/44	32	33	35	-3	Near- consistent
Wewak (1894-2019)	481.4	Below normal	558.9	695.9	630.2	17/64	41	36	23	3	Consistent
Vanimo (1918-2019)	488.6	Below normal	578.7	687.7	608.2	14/64	34	30	36	-3	Inconsistent
<i>Highlands Region</i>											
Goroka (1948-2019)	191.8	Below normal	211.0	277.8	240.0	16/51	46	28	26	3	Consistent
<i>New Guinea Islands Region</i>											
Momote (1949-2019)	907.4	Normal	798.1	1041.6	907.2	34/65	27	38	35	0	Consistent
Kavieng (1917-2019)	876.2	Above normal	637.0	783.5	719.8	64/87	37	22	41	-1	Consistent
<i>Southern Region</i>											
Misima (1917-2019)	333.0	Below normal	473.4	709.0	573.5	15/92	54	41	5	30	Consistent
Port Moresby (1875-2019)	211.2	Above normal	86.2	154.6	118.8	89/109	44	31	25	3	Inconsistent

TABLE 3: Seasonal Climate Outlooks using SCOPIC for September to November 2019

Predictor and Period used: NINO3.4 for June to July 2019

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Momase Region						
Madang (1944-2019)	79	690.3	21		27	75
Nadzab(1973-2019)	66	279.2	34		12	67
Wewak (1894-2019)	66	589.1	34		11	60
Vanimo (1918-2019)	64	547.7	36		8	65
Highlands Region						
Goroka (1948-2019)	47	423.0	53		-2	52
New Guinea Islands Region						
Momote (1949-2019)	50	728.8	50		-2	28
Kavieng (1916-2019)	53	682.4	47		-1	54
Southern Region						
Misima (1917-2019)	71	676.0	29		19	75
Port Moresby (1875-2019)	71	109.6	29		16	62

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)	59	622.9	32	832.4	9	27	54
Nadzab (1973-2019)	48	239.0	34	340.8	18	15	42
Wewak (1894-2019)	57	528.3	23	666.1	20	19	52
Vanimo (1918-2019)	42	502.8	38	638.0	20	4	29
Highlands Region							
Goroka (1948-2019)	29	355.0	37	478.8	34	0	46
New Guinea Islands Region							
Momote (1949-2019)	35	657.0	36	800.9	29	-2	19
Kavieng (1916-2019)	35	554.4	35	765.6	30	-2	23
Southern Region							
Misima (1917-2019)	54	485.6	29	791.0	17	18	46
Port Moresby (1875-2019)	50	78.8	39	155.8	11	18	46

TABLE 4: Seasonal Climate Outlooks using POAMA2 for September to November 2019

Station	Below Normal (prob)	33%ile Rainfall (mm)	Normal (prob)	67%ile Rainfall (mm)	Above Normal (prob)
<i>Momase Region</i>					
Madang	40	551.0	24	698.0	36
Nadzab	40	196.0	15	297.0	45
Wewak	30	524.0	21	615.0	49
<i>New Guinea Islands Region</i>					
Momote	18	632.0	49	783.0	33
Kavieng	33	496.0	12	729.0	55
<i>Southern Region</i>					
Misima	76	340.0	12	699.0	12
Port Moresby	67	54.0	6	125.0	27

Summary Statements

Rainfall for July 2019:

Below normal rainfall was recorded at Nadzab, Wewak and Momote, whilst normal rainfall was recorded at Vanimo, Goroka, Kavieng and Misima. Port Moresby recorded above normal rainfall. Wewak recorded sixth wettest July on record.

One-month rainfall was not available for Madang.

Accumulated rainfall for May to July 2019, including outlook verification:

Below normal rainfall was recorded at Wewak, Vanimo and Goroka whilst normal rainfall was recorded at Nadzab and Momote. Kavieng and Port Moresby recorded above normal rainfall.

Forecast was consistent at Wewak, Goroka, Momote and Kavieng, near consistent at Nadzab whilst inconsistent Vanimo and Port Moresby.

Three-month rainfall totals were not available for Madang and Misima.

Outlooks for September to November 2019:

1. SCOPIC:

Madang, Nadzab, Wewak, Misima, Port Moresby: The outlook favours below normal rainfall, with normal rainfall as the next most likely.

Vanimo – The outlook shows a near- equal likelihood of below normal and normal rainfall. Above normal is the least likely.

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

Confidence range from very low to very high

2. POAMA:

POAMA model favours below normal rainfall at Misima and Port Moresby, and above normal at Kavieng.

At Madang, below normal is the most likely outcome, with above normal the next most likely, while the reverse is true for Nadzab and Wewak.

Normal rainfall is most likely at Momote, with above normal the next most likely.

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: $X \geq 35$

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

Product	Date: July 2019	Stakeholder	Total Number of Participant s	Number of male	Number of female
EAR Watch	19th July	DOT, Geohazard, UPNG, DAL, CASAPNG, NARI, NDC (PDC), NMSA, CCDA, DOE (Education), UNDP, FAO, PNGRC, USAID, CHILD FUND, AUS DFAT, IOM, OXFAM.	61	38	23
PNG State of the Environment Workshop	24th – 26th July	Lead : Center for Environment Protection Authority	46	27	19
Monthly Disaster Briefing	29th July	Disaster Managers Lead : UNDP and National Disaster Centre	20	12	8
Total			127	77	50