Pacific Islands - Online Climate Outlook Forum (OCOF) No. 147

Country: Papua New Guinea

TABLE 1: Monthly Rainfall

Station (include data period)	Sep-2019	Oct-2019	Nov-2019				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Momase Region							
Madang (1944-2019)	14.0	96.0	294.2	275.7	368.7	328.6	29/71
Nadzab (1973-2019)	75.0	163.2	90.0	80.3	118.1	91.4	23/46
Wewak (1956-2019)	225.4		319.6	153.8	236.2	195.6	55/62
Vanimo (1918-2019)	137.0	183.6	156.0	163.3	241.7	202.0	20/63
Highlands Region							
Goroka (1948-2019)	75.4	201.6	154.4	127.9	181.3	156.0	26/53
New Guinea Islands Region							
Momote (1949-2019)	135.8	321.6	294.2	193.0	292.0	245.8	47/66
Kavieng (1916-2019)	135.6	202.0	557.4	197.5	270.7	233.0	**92/92**
Southern Region							
Misima (1917-2019)	82.6	234.6		124.4	219.7	166.0	
Port Moresby (1875-2019)	102.4	64.6	87.8	22.1	74.7	45.5	90/122

TABLE 2: Three-month Rainfall for September toNovember 2019

Station	Three-month Total		33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities based on NINO3.4 June-July 2019				Verification: Consistent, Near-consistent, Inconsistent?
	Rainfall (mm)						B-N	N	A-N	LEPS	
Momase Region											
Madang (1944-2019)	404.2	Below normal	622.9	832.4	690.3	8/70	**59**	32	9	27	Consistent
Nadzab (1973-2019)	328.2	Normal	239.0	340.8	279.2	27/44	**48**	34	18	15	Near-consistent
Wewak (1956-2019)			528.3	666.1	589.1		**57**	23	20	19	
Vanimo (1918-2019)	476.6	Below normal	502.8	638.0	547.7	15/59	**42**	38	20	4	Consistent
Highlands Region											
Goroka (1948-2019)	431.4	Normal	355.0	478.8	423.0	29/51	29	**37**	34	0	Consistent
New Guinea Islands Region											
Momote (1949-2019)	751.6	Normal	657.0	800.9	728.8	38/66	35	**36**	29	-2	Consistent
Kavieng (1916-2019)	895.0	Above normal	554.4	765.6	682.4	77/90	**35**	**35**	30	-2	Near-consistent
Southern Region											
Misima (1917-2019)			485.6	791.0	676.0		**54**	29	17	18	
Port Moresby (1875-2019)	254.8	Above normal	78.8	155.8	109.6	**102/111**	**50**	39	11	18	Inconsistent

TABLE 3: Seasonal Climate Outlooks using SCOPIC for Januaryto March2020

Predictor and Period used: NINO3.4 for Octoberto November 2019

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Momase Region						
Madang (1944-2019)	36	975.8	64		13	63
Nadzab(1973-2019)	39	470.9	61		12	61
Wewak (1956-2019)	59	427.9	41		6	65
Vanimo (1918-2019)	43	878.7	57		4	61
Highlands Region						
Goroka (1948-2019)	40	709.5	60		6	65
New Guinea Islands Region						
Momote (1949-2019)	47	811.3	53		0	56
Kavieng (1916-2019)	43	927.5	57		5	57
Southern Region						
Misima (1917-2019)	59	783.3	41		7	59
Port Moresby (1875-2019)	57	601.4	43		3	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)	20	901.2	40	1083.5	40	9	46
Nadzab (1973-2019)	23	435.3	38	525.8	39	7	41
Wewak (1956-2019)	40	367.8	33	454.4	27	4	43
Vanimo (1918-2019)	30	767.8	30	944.1	40	2	30
Highlands Region							
Goroka (1948-2019)	25	643.0	30	781.0	45	8	35
New Guinea Islands Region							
Momote (1949-2019)	31	764.8	30	923.6	39	2	22
Kavieng (1916-2019)	26	852.9	37	993.5	37	3	44
Southern Region							
Misima (1917-2019)	42	688.8	35	916.9	23	9	49
Port Moresby (1875-2019)	39	536.0	32	680.6	29	2	42

TABLE 4: Seasonal Climate Outlooks using POAMA2 for January to March 2020

Station	Below Normal (prob)	33%ile Rainfall (mm)	Normal (prob)	67%ile Rainfall (mm)	Above Normal (prob)
Momase Region					
Madang	49	910.0	21	1082.0	30
Nadzab	64	403.0	9	484.0	27
Wewak	52	368.0	15	441.0	33
New Guinea Islands Region					
Momote	46	724.0	18	837.0	36
Kavieng	33	853.0	15	987.0	52
Southern Region					
Misima	58	715.0	15	893.0	27
Port Moresby	70	520.0	5	651.0	25
Daru	5	718.0	80	872.0	15

Summary Statements

Rainfall for November 2019:

Rainfall was generally normal to above normal across PNG, apart from Vanimo where the November total was below normal. Kavieng recorded its wettest November on record.

Misima total was not included as it had more than 5 days of nil observations.

Accumulated rainfall for September to November 2019, including outlook verification:

Normal to above normal rainfall was recorded at most parts of the country, except for Madang and Vanimo which recorded below normal rainfall. Port Moresby recorded its tenth wettest September to November on record.

The rainfall outlooks issued in August were generally near-consistent or consistent, with the exception of Port Moresby with an inconsistent forecast.

Misima and Wewak's three-month totals were unavailable.

Outlooks forJanuaryto March2020:

1. **SCOPIC:**
   Wewak and Misima: The outlook shows below-normal as the most likely outcome, with normal the next most likely. Above-normal is the least likely.

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

   Vanimo and Goroka: The outlook shows above-normal as the most likely outcome, with normal the next most likely for Goroka, while normal and below-normal are equally the next most likely for Vanimo.

   Kavieng: The outlook shows near-equal chances of normal and above normal rainfall; below normal is the least likely.

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

   Confidence range from low to moderate skill.

2. **POAMA:**
   Kavieng: The outlook favours above-normal.
   Daru: The outlook favours normal rainfall.

   All other stations: The outlook generally favours below-normal rainfall.

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

Product	Date: November2019	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin	N/A				
EAR Watch	25/11/2019	Govt, UN Agencies, NGOs, Private sector, Media and Universities	115	76	39
EAR Watch (recirculated)	26/11/2019	Humanitarian partners of DMT	28	16	12
Agricultural Meteorology & Climate Change Impact Survey (FAO)	12/11/2019	NDAL, NARI, NWS, other agriculture related sector	N/A		(2 from NWS)
		Total	143	92	51