

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 160

Country: Papua New Guinea

TABLE 1: Monthly Rainfall

Station (include data period)	Oct-2020	Nov-2020	Dec-2020				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Momase Region							
Madang (1944-2020)	479.2		274.8	343.5	448.5	382.0	13/72
Nadzab (1973-2020)	103.0	71.2	185.8	118.8	190.5	154.0	30/48
Wewak (1956-2020)	280.4	350.8	116.6	121.6	172.2	142.7	17/65
Vanimo (1918-2020)	308.8	277.4	299.2	199.4	288.6	254.6	48/67
Highlands Region							
Goroka (1948-2020)	278.8	185.5	256.0	159.4	244.3	175.8	37/53
New Guinea Islands Region							
Momote (1949-2020)	382.2	190.6	234.0	254.5	339.5	288.0	15/67
Kavieng (1916-2020)	369.0	216.4	128.0	258.0	345.7	317.0	6/94
Southern Region							
Misima (1917-2020)	367.2	341.8	134.0	172.9	257.0	221.0	24/95
Port Moresby (1875-2020)	55.8	81.8	136.6	88.8	161.0	127.8	81/130

TABLE 2: Three-month Rainfall for October to December 2020

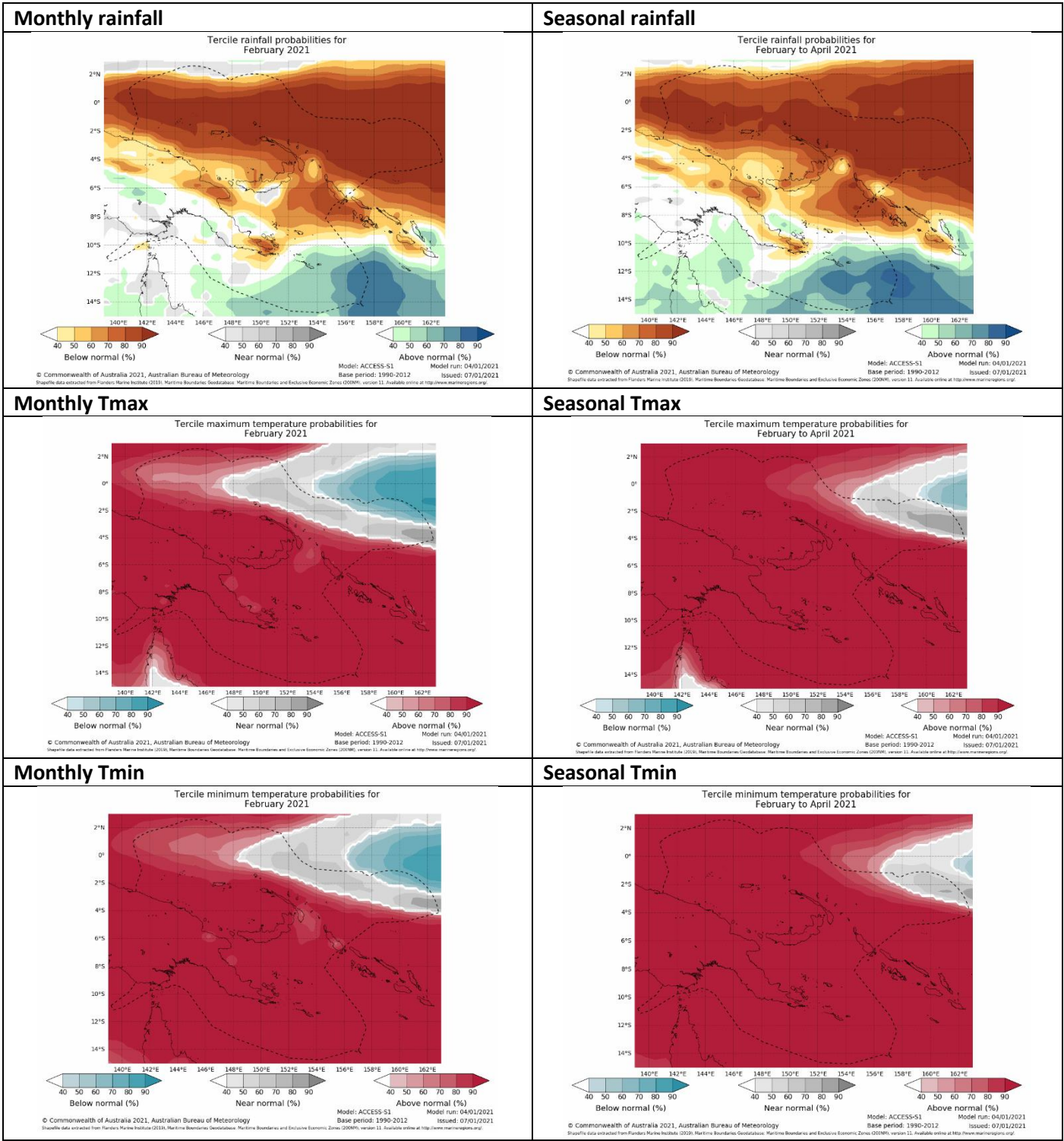
Station	Three-month Total		33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities based on NINO3.4 July-August 2020				Verification: Consistent, Near- consistent, Inconsistent?
	Rainfall (mm)						B-N	N	A-N	LEPS	
Momase Region											
Madang (1944-2020)			839.3	1083.8	964.8		25	37	38	15	
Nadzab (1973-2020)	360.0	Normal	317.7	397.3	343.1	26/45	25	39	36	6	Consistent
Wewak (1894-2020)	747.8	Above normal	536.2	647.8	572.0	56/62	28	33	39	13	Consistent
Vanimo (1918-2020)	885.4	Above normal	583.9	709.5	630.4	55/60	26	34	40	16	Consistent
Highlands Region											
Goroka (1948-2020)	720.3	Above normal	432.7	598.2	516.2	45/50	34	33	33	-3	Near-consistent
New Guinea Islands Region											
Momote (1949-2020)	806.8	Normal	692.7	866.8	787.1	36/67	34	31	35	-1	Near-consistent
Kavieng (1917-2020)	713.4	Below normal	713.6	869.4	803.3	33/92	34	31	35	-2	Inconsistent
Southern Region											
Misima (1917-2020)	843.0	Above normal	546.0	732.0	631.0	67/92	29	35	36	7	Consistent
Port Moresby (1875-2020)	274.2	Normal	160.0	290.5	201.1	80/116	22	40	38	33	Consistent

TABLE 3: Seasonal Climate Outlooks using SCOPIC for February to April 2021**Predictor and Period used: NINO3.4 for November to December 2020**

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Momase Region						
Madang (1944-2020)	50	1036.2	50		-2	21
Nadzab(1973-2020)	60	457.7	40		1	59
Wewak (1894-2020)	44	475.9	56		-1	57
Vanimo (1918-2020)	57	834.6	43		-1	55
Highlands Region						
Goroka (1948-2020)	63	671.0	37		6	62
New Guinea Islands Region						
Momote (1949-2020)	48	801.2	52		-1	52
Kavieng (1916-2020)	60	893.5	40		2	54
Southern Region						
Misima (1917-2020)	32	827.2	68		10	61
Port Moresby (1875-2020)	34	531.7	66		8	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 (1944-2020)	40	939.1	28	1145.8	32	-1	41
Nadzab (1973-2020)	45	397.6	26	512.9	29	2	25
Wewak (1894-2020)	26	433.9	40	519.7	34	-1	44
Vanimo (1918-2020)	41	725.2	35	911.8	24	2	36
Highlands Region							
Goroka (1948-2020)	46	612.0	28	746.2	26	3	37
New Guinea Islands Region							
Momote (1949-2020)	30	756.9	35	933.9	35	-1	16
Kavieng (1916-2020)	45	824.8	28	957.2	27	2	28
Southern Region							
Misima (1917-2020)	21	710.7	25	946.6	54	11	44
Port Moresby (1875-2020)	17	467.6	36	587.8	47	10	48

TABLE 4: Monthly and Seasonal Climate Outlooks using ACCESS-S for February to April 2021



Summary Statements

Rainfall for December 2020:

Rainfall was normal at Nadzab and Port Moresby, above normal at Vanimo and Goroka and below normal at all other monitoring stations.

Kavieng recorded its sixth driest December in 94 years of record.

Accumulated rainfall for October to December 2020, including outlook verification:

Rainfall was below normal Kavieng, normal at Port Moresby, Momote and Nadzab and above normal rest of the stations.

The forecast issued in September was inconsistent at Kavieng, near-consistent at Momote and Goroka and consistent at all other monitoring stations.

Vanimo and Goroka recorded their sixth wettest October to December periods on record, whilst Wewak had its seventh wettest.

Outlooks for February to April 2021:

1. SCOPIC:

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

Goroka, Vanimo, Kavieng, Madang, Nadzab, : The outlook shows below normal rainfall as the most likely, with normal to above normal the next most likely.

Port Moresby: The outlook for season shows above normal as the most likely outcome with normal the next most likely. Below normal is the least likely.

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

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

Confidence ranges from very low to good

2. ACCESS-S:

Monthly rainfall:

Below normal to normal rainfall is favoured in February across the country, except in northern parts of Western Province, and near the border of Gulf and Central Provinces where above normal rainfall is most likely. Above normal rainfall is more strongly indicated at Misima and over islands and ocean areas to the southeast.

Monthly maximum and minimum temperatures:

Above normal temperatures is favoured across the country for February.

Seasonal rainfall:

Below normal rainfall favoured across the PNG islands, Bougainville, and coastal areas from Vanimo to Alotau for February to April. For most remaining parts of the mainland, there is little guidance. Above normal rainfall is favoured at Misima and over islands and ocean areas to the southeast.

Seasonal maximum temperature:

Above normal temperatures favoured across the country February to April.

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: December 2020	Stakeholder	Total Number of Participants	Number of male	Number of female
DMT Meeting	17th December	National Disaster Centre, National Weather Service, University of Papua New Guinea, Centre of Environmental Protection Authority, National Agriculture Research Institute, Department of Works, Dept. Of Mineral Policy and Geohazard Management,	13	7	6
Total			13		

