

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 158

Country: Papua New Guinea

TABLE 1: Monthly Rainfall

Station (include data period)	Aug-2020	Sep-2020	Oct-2020				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Momase Region							
Madang (1944-2020)	218.4	211.6	479.2	198.5	282.6	250.0	64/71
Nadzab (1973-2020)	148.0	156.4	103.0	70.3	115.4	97.4	27/46
Wewak (1956-2020)	230.0	214.2	280.4	188.5	260.6	223.0	47/64
Vanimo (1918-2020)	263.0	66.4	308.8	152.2	225.8	183.6	59/62
Highlands Region							
Goroka (1948-2020)	52.4	76.0	278.8	120.5	174.9	155.0	52/54
New Guinea Islands Region							
Momote (1949-2020)	292.6	188.0	382.2	179.5	265.7	226.0	62/67
Kavieng (1916-2020)	302.8	123.2	369.0	171.3	281.5	216.3	79/93
Southern Region							
Misima (1917-2020)	175.6	302.4	367.2	125.8	301.4	227.5	71/95
Port Moresby (1875-2020)	20.4	5.2	55.8	11.1	39.7	25.0	102/123

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

Station	Three-month Total		33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities based on NINO3.4 May-June 2020				Verification: Consistent, Near- consistent, Inconsistent?
	Rainfall (mm)						B-N	N	A-N	LEPS	
Momase Region											
Madang (1944-2020)	909.2	Above normal	386.7	606.5	471.4	67/71	25	41	34	27	Near-consistent
Nadzab (1973-2020)	407.4	Above normal	275.7	395.9	335.8	31/45	30	35	35	1	Near-consistent
Wewak (1956-2020)	724.6	Above normal	487.1	652.4	571.9	49/63	23	41	36	26	Near-consistent
Vanimo (1918-2020)	638.2	Above normal	487.7	561.5	523.0	50/59	32	34	34	-1	Near-consistent
Highlands Region											
Goroka (1948-2020)	407.2	Above normal	276.0	389.5	343.8	39/53	34	34	32	-1	Near-consistent
New Guinea Islands Region											
Momote (1949-2020)	862.8	Normal	649.3	898.7	758.0	40/66	33	34	33	-2	Near-consistent
Kavieng (1917-2020)	795.0	Above normal	520.2	716.0	631.8	64/87	33	33	34	-2	Near-consistent
Southern Region											
Misima (1917-2020)	845.2	Above normal	420.0	675.0	546.2	71/94	29	39	32	23	Near-consistent
Port Moresby (1875-2020)	81.4	Normal	59.7	113.1	80.8	61/108	33	34	33	-2	Near-consistent

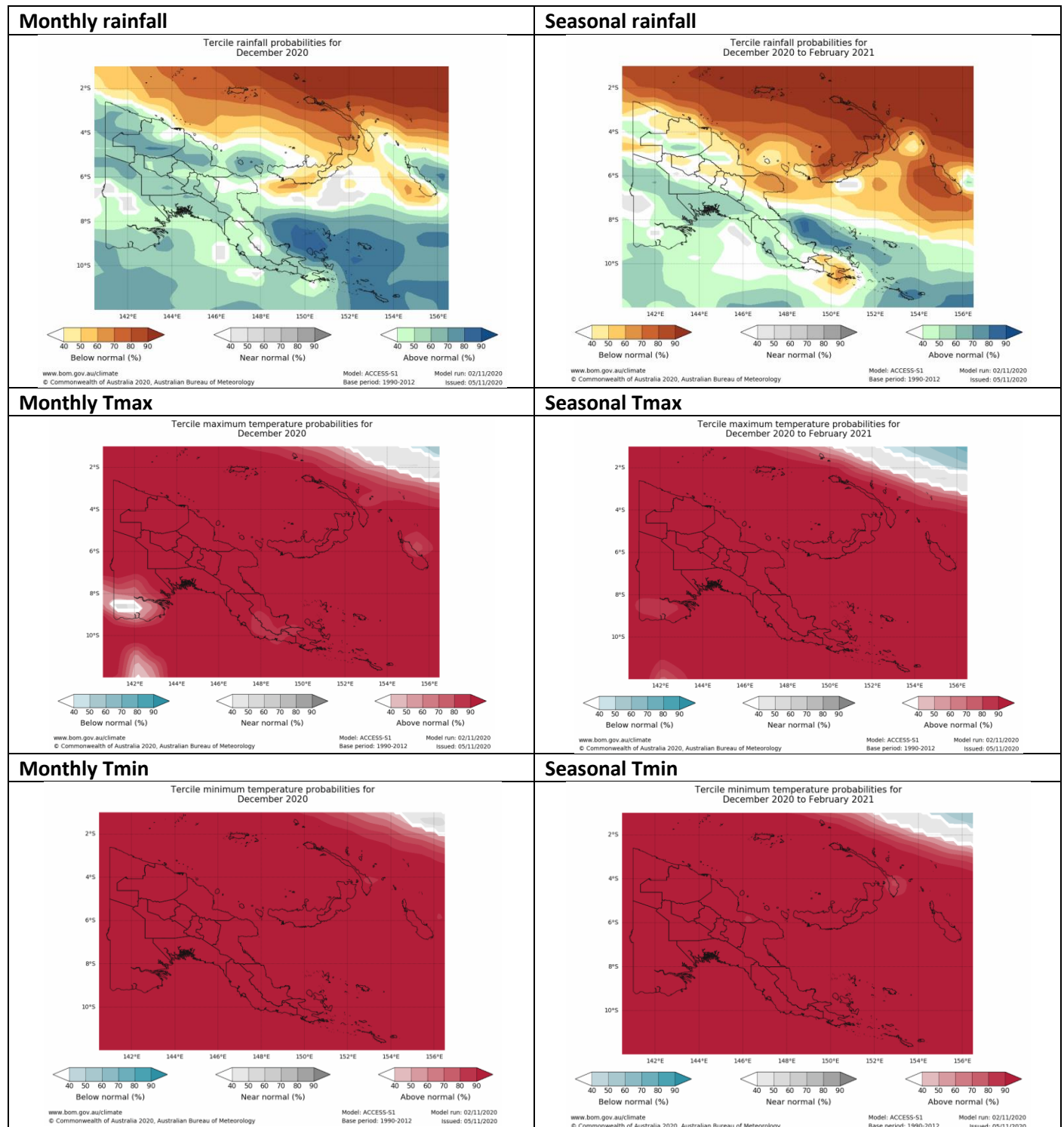
TABLE 3: Seasonal Climate Outlooks using SCOPIC for December 2020 to February 2021

Predictor and Period used: NINO3.4 for September to October 2020

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Momase Region						
Madang (1944-2020)	66	1023.4	34		8	58
Nadzab(1973-2020)	63	489.0	37		3	58
Wewak (1956-2020)	37	414.4	63		5	56
Vanimo (1918-2020)	51	810.3	49		-2	40
Highlands Region						
Goroka (1948-2020)	48	700.8	52		-2	54
New Guinea Islands Region						
Momote (1949-2020)	56	813.0	44		0	52
Kavieng (1916-2020)	68	884.7	32		10	59
Southern Region						
Misima (1917-2020)	39	761.6	61		4	60
Port Moresby (1875-2020)	27	496.0	73		19	70

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)	53	936.0	22	1111.5	25	9	44
Nadzab (1973-2020)	43	437.3	36	515.9	21	4	42
Wewak (1956-2020)	24	363.3	37	460.5	39	2	40
Vanimo (1918-2020)	35	735.8	32	918.0	33	-3	17
Highlands Region							
Goroka (1948-2020)	30	636.3	36	740.9	34	-2	18
New Guinea Islands Region							
Momote (1949-2020)	40	759.5	28	890.5	32	0	38
Kavieng (1916-2020)	50	835.5	23	970.0	27	6	39
Southern Region							
Misima (1917-2020)	27	663.9	31	877.1	42	2	43
Port Moresby (1875-2020)	21	440.8	37	596.0	42	6	44

TABLE 4: Monthly and Seasonal Climate Outlooks using ACCESS-S for December 2020 to February 2021



Summary Statements

Rainfall for October 2020:

Above normal rainfall was received across the country except for Nadzab which recorded normal rainfall. The rainfall at Madang, Vanimo, Goroka and Momote ranked above the 90 percentile. Madang, Momote, Vanimo and Wewak had daily totals over 100mm of rain in October (6th, 10th, 1st, and 17th), while Goroka had a hail storm on the 9th of October.

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

Accumulated rainfall was generally above normal across the country, except for Momote and Port Moresby that received normal rainfall. Madang recorded its fifth wettest August to October in 71 years.

The forecast issued in July was verified as near-consistent for all the stations.

Outlooks for December 2020 February 2021:

1. SCOPIC:

Madang and Kavieng: The outlook favours below normal rainfall.

Nadzab and Momote: Below normal is the most likely outcome, with above normal the next most likely for Momote and normal the next most likely for Nadzab.

Misima, Port Moresby: Above normal is the most likely outcome with normal the next most likely. Below normal is the least likely.

Wewak: There's a near-equal likelihood of above normal and near-normal rainfall; below normal is the least likely.

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

Confidence ranges from very low to moderate.

2. ACCESS-S:

Monthly rainfall:

New Guinea Islands regions: Below normal rainfall is favoured in December for the region.

Southern region, Highlands, Momase: Above normal is favoured in December for these parts of the country.

Monthly maximum and minimum temperatures:

Above normal temperatures are favoured across the country in December.

Seasonal rainfall:

MOMASE & Highlands: Below normal rainfall for December to February is favoured for the northern parts of the regions, while above normal is favoured in the southern parts of these regions.

New Guinea Islands region: Below normal rainfall is favoured for December 2020 to February 2021.

Southern Region: Above normal rainfall for December to February is the most likely outcome, except in Misima where below normal rainfall is favoured.

Seasonal maximum & minimum temperatures:

Above normal temperatures are favoured across the country for December to February.

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: October 2020	Stakeholder	Total Number of Participants	Number of males	Number of females
Climate Bulletin	20 th October	Govt: National Disaster Centre, Dept. of Agriculture and Livestock, Climate Change Development Authority, National Agriculture Research Institute, Dept. of Transport, Dept. of Mineral Policy and Geohazard Management, Dept. of Works, PNG Fire, National Maritime Safety Authority, Civil Aviation Safety Authority, PNG Forest Authority, National Capital District Commission, PNG Customs Authority, National Dept. Of Health, Dept. of Education, Centre for Environmental Protection Authority. UN agencies: UNDP, IOM, UNOCH. Private: PNG Air Services Limited, ExxonMobil, Ok Tedi Mining Ltd, PNG Power Ltd, Global Construction Ltd, Datec, Interoil, Air Niugini, Bank South Pacific, PNG Ports, Media and Universities.	212	157	55

EAR Watch	13th October	Govt: National Disaster Centre, Dept. Of Transport, National Agriculture Research Institute, Dept. Of Agriculture and Livestock, Provincial Disaster Coordinators, Civil Aviation Safety Authority, Climate Change Development Authority, Dept. Of Mineral Policy and Geohazard Managment, PNG DFAT, Centre of Environmental Protection Authority, National Capital District Commission, Dept. of Education. UN Agencies : UNDP, FAO, IOM, Oxfam. NGOs : Childfund, WVI, PNGRC. Private: Pacific Hydo Services, PNG Power, Ok Tedi Mining Ltd, Media. Aus DFAT, DAL Provincial Officers	140	91	49
National Disaster Awareness and Preparedness Committee (NDAPC)	08th October	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 Managment,	13	7	6
Stakeholder meeting for LA NINA preparedness items	30th October	IOM and NWS	5	2	3
Total			370	257	113