

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 163

Country: Papua New Guinea

TABLE 1: Monthly Rainfall

Station (include data period)	Jan-2021	Feb-2021	Mar-2021				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
Momase Region							
Madang (1944-2021)	106.2	274.2	415.2	310.6	401.1	343.6	56/72
Nadzab (1973-2021)	128.0	234.4	107.2	142.1	206.8	162.6	7/46
Wewak (1956-2021)	145.2	319.0	185.8	132.0	182.4	153.4	45/65
Vanimo (1918-2021)	250.0	793.6	141.6	214.8	360.0	276.8	6/69
Highlands Region							
Goroka (1948-2021)	133.4	372.0	242.8	208.1	285.8	240.0	30/59
New Guinea Islands Region							
Momote (1949-2021)	91.2	408.2	225.2	275.0	336.0	304.2	12/65
Kavieng (1916-2021)	116.0	359.2	230.8	283.8	373.3	342.0	22/88
Southern Region							
Misima (1917-2021)	163.0	208.4	387.6	217.2	320.7	254.1	79/96
Port Moresby (1875-2021)	273.8	281.0	283.8	160.5	275.9	216.0	100/133

TABLE 2: Three-month Rainfall for January to March 2021

Station	Three-month Total		33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities based on NINO3.4 October-November 2020				Verification: Consistent, Near-consistent, Inconsistent?
	Rainfall (mm)						B-N	N	A-N	LEPS	
<i>Momase Region</i>											
Madang (1944-2021)	795.6	Below normal	901.2	1078.9	975.8	18/72	54	20	26	9	Consistent
Nadzab (1973-2021)	469.6	Normal	436.7	533.3	471.4	22/46	52	27	21	10	Near-consistent
Wewak (1956-2021)	650.0	Above normal	368.4	453.2	428.3	63/65	21	34	45	4	Consistent
Vanimo (1918-2021)	1185.2	Above normal	761.9	943.9	876.4	55/66	38	41	21	1	Near-consistent
<i>Highlands Region</i>											
Goroka (1948-2021)	748.2	Normal	647.9	785.8	709.8	33/55	44	42	14	9	Near-consistent
<i>New Guinea Islands Region</i>											
Momote (1949-2021)	724.6	Below normal	765.2	923.0	811.2	16/65	39	38	23	2	Consistent
Kavieng (1917-2021)	706.0	Below normal	852.9	993.5	927.5	20/85	47	26	27	3	Consistent
<i>Southern Region</i>											
Misima (1917-2021)	759.0	Normal	705.5	916.9	787.9	43/92	18	32	50	8	Near-consistent
Port Moresby (1875-2021)	838.6	Above normal	537.3	680.2	607.8	126/133	24	36	40	2	Consistent

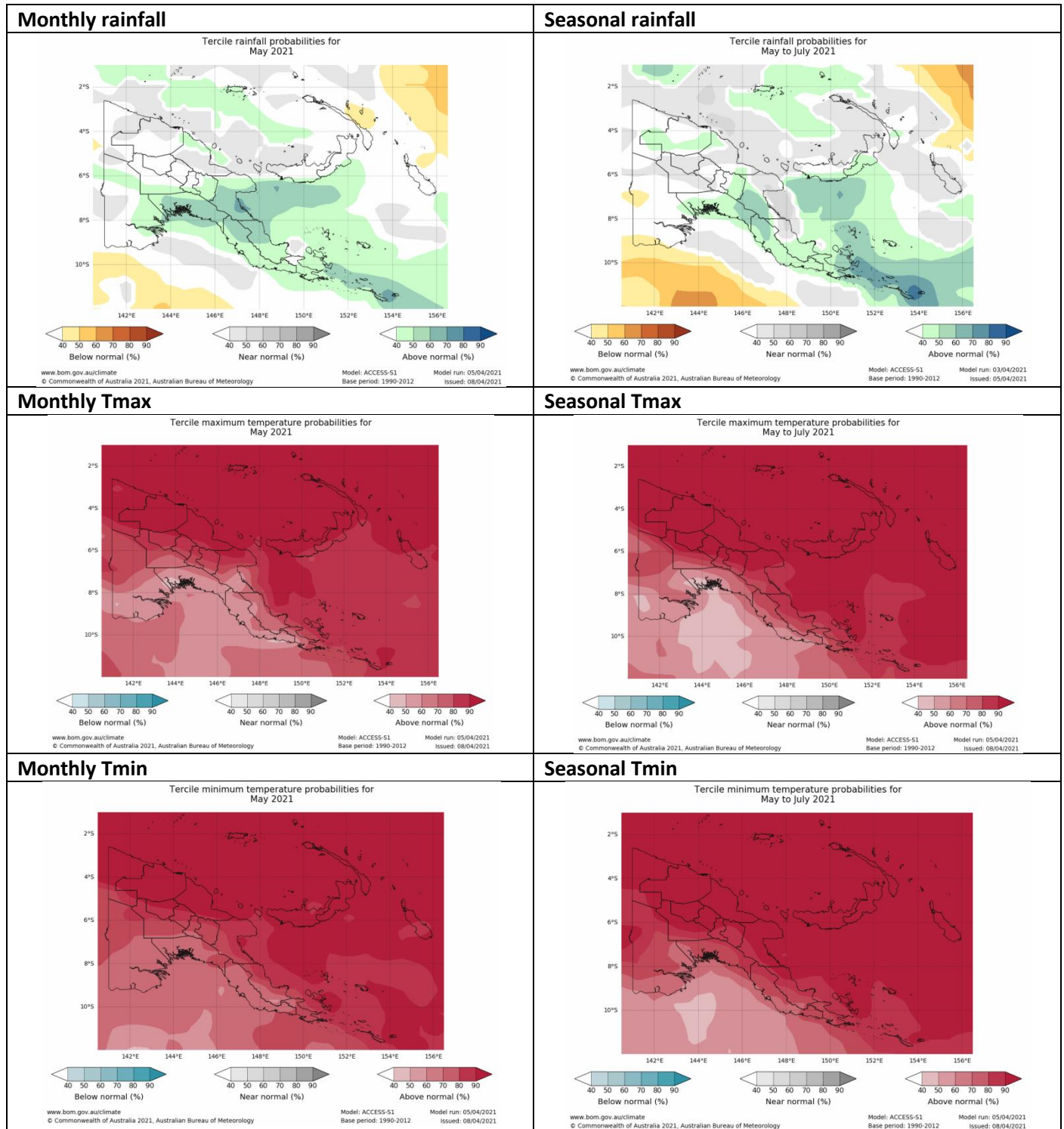
TABLE 3: Seasonal Climate Outlooks using SCOPIC for May to July 2021

Predictor and Period used: NINO3.4 for February to March 2021

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Momase Region						
Madang (1944-2021)	24	743.2	76		21	76
Nadzab(1973-2021)	44	314.4	56		-1	62
Wewak (1956-2021)	34	629.8	66		8	60
Vanimo (1918-2021)	51	606.6	49		-2	46
Highlands Region						
Goroka (1948-2021)	38	239.0	62		4	55
New Guinea Islands Region						
Momote (1949-2021)	55	907.2	45		-1	49
Kavieng (1916-2021)	53	719.8	47		-1	52
Southern Region						
Misima (1917-2021)	14	561.3	86		37	75
Port Moresby (1875-2021)	35	119.8	65		7	55

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)	11	636.1	33	813.3	56	20	50
Nadzab (1973-2020)	36	274.5	31	372.9	33	-3	31
Wewak (1956-2020)	20	544.9	33	685.9	47	7	51
Vanimo (1918-2020)	33	572.6	35	683.2	32	-3	22
Highlands Region							
Goroka (1948-2020)	22	203.1	34	265.2	44	6	41
New Guinea Islands Region							
Momote (1949-2020)	41	798.0	25	1034.7	34	-1	28
Kavieng (1916-2020)	30	636.7	46	785.3	24	-1	43
Southern Region							
Misima (1917-2020)	9	471.8	21	697.6	70	32	50
Port Moresby (1875-2020)	26	87.5	35	157.7	39	2	36

TABLE 4: Monthly and Seasonal Climate Outlooks using ACCESS-S for May to July 2021



Summary Statements

Rainfall for March 2021:

Below normal rainfall was received at New Guinea Islands region, Nadzab and Vanimo. The remaining stations recorded above normal rainfall, except for Goroka which received normal rainfall. Vanimo had its sixth driest March on record.

Accumulated rainfall for January to March 2021, including outlook verification:

Accumulated rainfall was below normal over the New Guinea Islands region and Madang, normal at Nadzab, Goroka and Misima, and above normal at the remaining three stations. Wewak and Port Moresby recorded their third wettest and eighth wettest January to March periods respectively.

The forecast issued in December was verified consistent at five sites and near-consistent at four sites.

Outlooks for May to July 2021:

1. SCOPIC:

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

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

Momote: Below normal rainfall is the most likely outcome, with above normal the next most likely. Normal is the least likely.

Kavieng: The outlook favours normal rainfall with below normal the next most likely. Above normal is the least likely.

Vanimo and Nadzab: The outlooks offer little guidance as the chances of below normal, normal and above normal are similar.

Confidence ranges from very low to very high.

2. ACCESS-S:

Monthly rainfall:

Southern half of the PNG mainland and Manus Island: Above normal rainfall is favoured in May.

Western Province including Highlands region, Momase region and rest of New Guinea Islands: A mix of patches where normal rainfall is the most likely outcome and where there is little guidance.

Monthly maximum and minimum temperatures:

Above normal temperatures are favoured across the country in May.

Seasonal rainfall:

Manus Island, south of New Britain, Morobe, Eastern Highlands and Southern region: Above normal rainfall is favoured for May to July for these areas.

Other areas: Normal rainfall is the most likely in Highlands region and parts of Momase, Kavieng and Bougainville but there's little guidance for Western Province for the coming season.

Seasonal maximum and minimum temperatures:

Above normal temperatures are favoured across the country for May to July.

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: March 2021	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin	9th	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.	142	102	40
EAR Watch	17th	Govt: National Disaster Centre, National Weather Service Station Managers, 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 Management, PNG DFAT, Centre of Environmental Protection Authority, National Capital District Commission, Dept. of Education, DAL Provincial Officers. UN Agencies : UNDP, FAO, IOM, Oxfam. NGOs : Childfund, WVI, PNGRC. Private: Water PNG, Pacific Hydro Services, PNG Power, Ok Tedi Mining Ltd, Media, Aus DFAT.	137	87	50
DMT Meeting					
Total			279	189	90