

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 151

Country: Tonga

TABLE 1: Monthly Rainfall

Station (include data period)	Jan-2020	Feb-2020	Mar-2020				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Northern Division							
Niuafo'ou (1971-2020)	280.0	135.0	87.0	212.0	344.7	270.6	3/49
Niuaatoputapu (1947-2020)	253.7	325.5	61.9	177.1	278.7	227.0	1/70
Central Division							
Vava'u (1947-2020)	220.2	351.7	135.3	227.8	343.0	292.0	8/74
Ha'apai (1947-2020)	222.5	189.5	133.1	180.0	313.0	233.9	15/74
Southern Division							
Fua'amotu (1979-2020)	305.3	88.8	339.8	156.0	253.0	190.5	36/41
Nuku'alofa (1944-2020)	257.0	62.5	539.0	184.0	266.0	222.0	76/76

TABLE 2: Three-month Rainfall for January to March 2020

Station	Three-month Total		33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities based on NINO3.4 October-November 2019				Verification: Consistent, Near- consistent, Inconsistent?
	Rainfall (mm)						B-N	N	A-N	LEPS	
Northern Division											
Niuafo'ou (1971-2020)	502.0	Below normal	745.0	964.9	904.0	8/44	42	28	30	6	Consistent
Niuaatoputapu (1947-2020)	641.1	Normal	640.0	931.7	805.4	23/70	46	39	15	20	Near-consistent
Central Division											
Vava'u (1947-2020)	707.2	Below normal	722.0	928.0	856.4	24/74	40	35	25	6	Consistent
Ha'apai (1947-2020)	545.1	Below normal	566.0	787.0	651.0	22/74	46	33	21	17	Consistent
Southern Division											
Fua'amotu (1979-2020)	733.9	Normal	468.9	790.9	649.5	23/41	44	42	14	26	Near-consistent
Nuku'alofa (1944-2020)	858.5	Above normal	518.0	832.0	669.5	56/76	43	37	20	12	Inconsistent

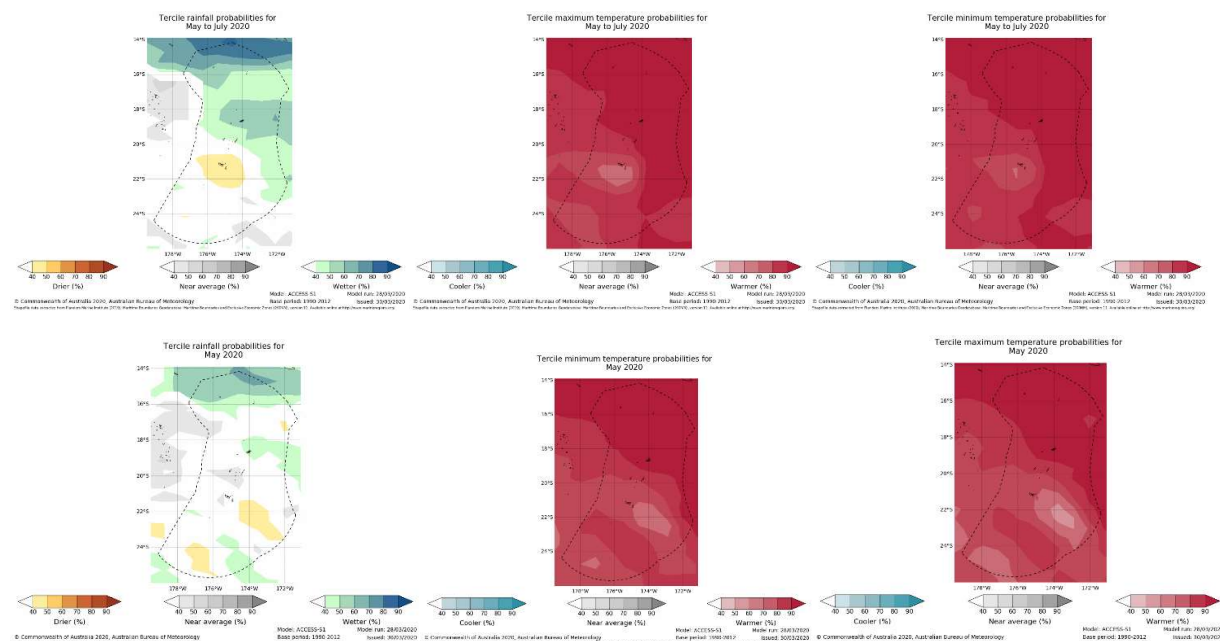
TABLE 3: Seasonal Climate Outlooks using SCOPIC for May to July 2020

Predictor and Period used: NINO3.4 for February to March 2020

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Northern Division						
Niuafu'ou (1971-2020)	56	429.0	44		2	62
Niuatoputapu (1947-2020)	54	360.6	46		0	56
Central Division						
Vava'u (1947-2020)	59	364.5	41		6	59
Ha'apai (1947-2020)	59	246.0	41		5	54
Southern Division						
Fua'amotu (1979-2020)	56	354.8	44		4	50
Nuku'alofa (1944-2020)	56	298.0	44		3	51

Station	Below Normal (prob)	33%ile Rainfall (mm)	Normal (prob)	67%ile Rainfall (mm)	Above Normal (prob)	LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Northern Division							
Niuafu'ou (1971-2020)	35	362.5	35	472.1	30	0	42
Niuatoputapu (1947-2020)	38	321.3	35	411.7	27	2	33
Central Division							
Vava'u (1947-2020)	40	303.0	32	407.0	28	3	36
Ha'apai (1947-2020)	39	214.3	30	313.2	31	1	49
Southern Division							
Fua'amotu (1979-2020)	40	268.0	25	430.2	35	5	55
Nuku'alofa (1944-2020)	43	239.7	26	343.2	31	5	50

Monthly and Seasonal Climate Outlooks using ACCESS-S for April to June 2020



Summary Statements

Rainfall for March 2020:

Above normal rainfall occurred at Fua'amotu and Nuku'alofa, while below normal rainfall occurred in the Northern and Central Divisions.

Accumulated rainfall for January to March 2020, including outlook verification:

Rainfall was Below Normal for Niuafo'ou, Vava'u and Ha'apai, Normal at Niuatoputapu and Fua'amotu, and Above Normal at Nuku'alofa.

The forecast issued in December was verified as Consistent for Niuafo'ou, Vava'u and Ha'apai, Near-consistent for Niuatoputapu and Fua'amotu, and Inconsistent for Nuku'alofa.

Outlooks for May to July 2020:

1. SCOPIC:

Vava'u: The outlook for the season shows below normal is the most likely outcome. Normal is the next most likely.

Fua'amotu and Nuku'alofa: The outlook for the season shows below normal is the most likely outcome, with above normal the next most likely.

Niuatoputapu: The outlook shows a near-equal chance of below normal or normal rainfall; above normal is the least likely.

Niuafo'ou, Ha'apai: The outlook offers little guidance as the chances of above normal, normal and below normal are similar.

2. ACCESS-S:

Seasonal rainfall: May – July 2020

Niuafo'ou: Wetter than average rainfall is the most likely.

Central and Southern Divisions and Niuatoputapu: Near-Average rainfall is the most likely.

Seasonal maximum and minimum temperatures: May – July 2020

Warmer than average days and nights are favoured for all of Tonga.

Monthly rainfall: May 2020

Northern Division: Above average rainfall is the most likely.

Central Division: Near-Average rainfall is the most likely in Vava'u, while Drier than average is the most likely outcome for Ha'apai.

Southern Division: Near-average rainfall is the most likely.

Monthly maximum and minimum temperatures: May 2020

Warmer than average days and nights are favoured for all of Tonga.

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 2020	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin	03/03/2020	General public	100	66	34
EAR Watch					
Monthly Climate Briefing					
Ocean Bulletin	03/03/2020	General public	100	66	34
Total			200	132	68