

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 157

Country: Tonga

TABLE 1: Monthly Rainfall

Station (include data period)	Jul-2020	Aug-2020	Sep-2020				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Northern Division							
Niuafo'ou (1971-2020)	115.0	101.1	178.9	82.3	156.4	115.0	37/48
Niuaatoputapu (1947-2020)	168.6	267.9	235.1	54.0	131.4	101.0	64/71
Central Division							
Vava'u (1947-2020)	84.5	57.2	175.8	80.0	167.0	109.8	52/74
Ha'apai (1947-2020)	135.0	118.8	302.0	50.0	132.7	90.0	71/74
Southern Division							
Fua'amotu (1979-2020)	271.8	126.0	111.5	78.0	153.0	105.0	23/41
Nuku'alofa (1944-2020)	231.5	163.0	145.0	76.0	148.0	103.0	51/76

TABLE 2: Three-month Rainfall for July to September 2020

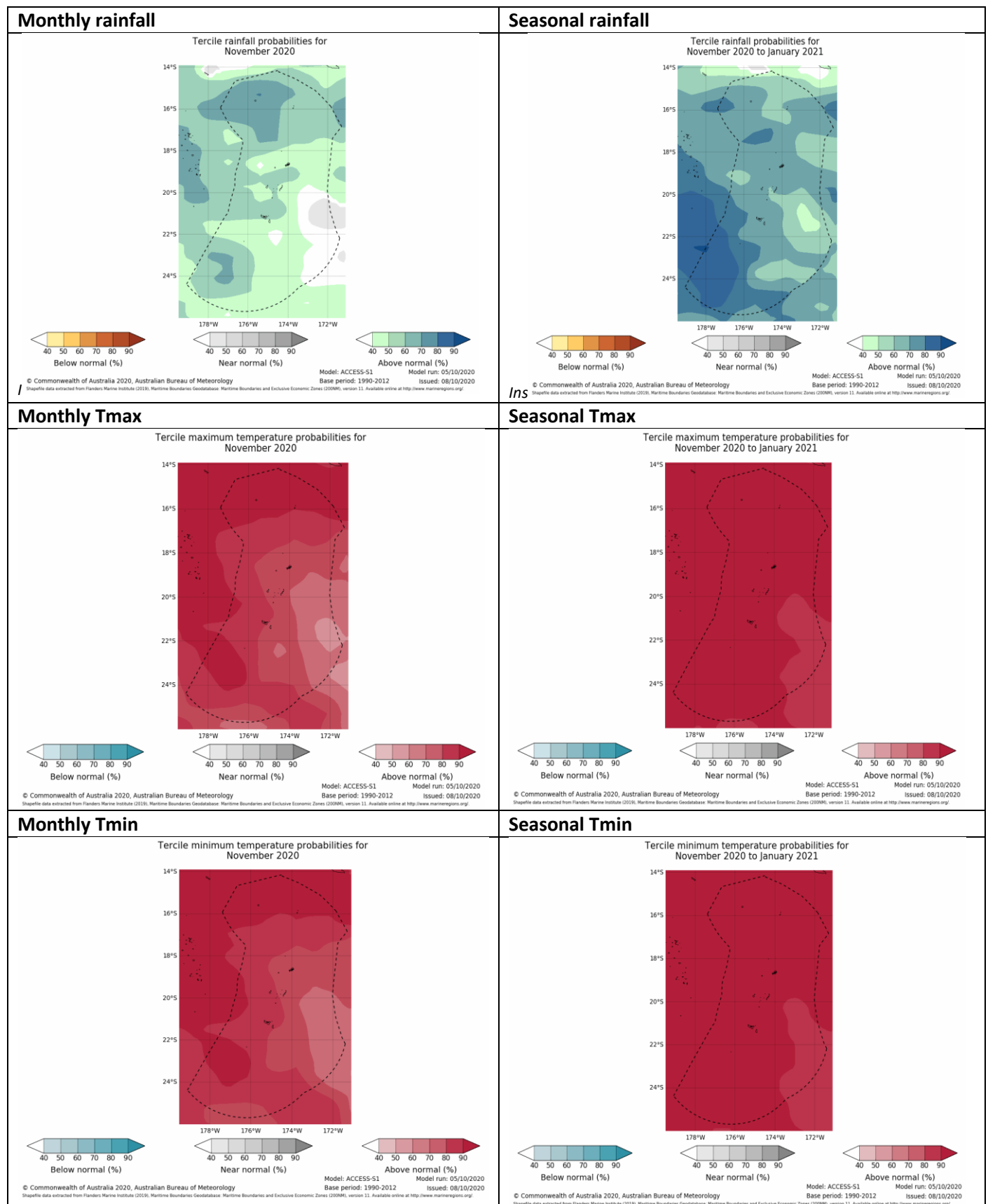
Station	Three-month Total		33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities based on NINO3.4 April-May 2020				Verification: Consistent, Near- consistent, Inconsistent?
	Rainfall (mm)						B-N	N	A-N	LEPS	
Northern Division											
Niuafo'ou (1971-2020)	395.0	Normal	258.3	434.0	338.5	28/47	36	29	35	-1	Near-consistent
Niuaatoputapu (1947-2020)	671.6	Above normal	214.0	365.0	286.0	69/71	34	35	31	-1	Near-consistent
Central Division											
Vava'u (1947-2020)	317.5	Normal	257.0	399.0	346.0	36/74	35	36	29	0	Consistent
Ha'apai (1947-2020)	555.8	Above normal	237.5	346.0	291.6	70/74	36	34	30	1	Inconsistent
Southern Division											
Fua'amotu (1979-2020)	509.3	Above normal	298.0	417.0	366.5	31/41	33	34	33	-2	Near-consistent
Nuku'alofa (1944-2020)	539.5	Above normal	277.0	378.0	326.5	67/76	35	35	30	-1	Near-consistent

TABLE 3: Seasonal Climate Outlooks using SCOPIC for November 2020 to January 2021
Predictor and Period used: NINO3.4 for August to September 2020

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
<i>Northern Division</i>						
Niuafo'ou (1971-2020)	39	798.0	61		7	65
Niuaatoputapu (1947-2020)	38	751.0	62		10	66
<i>Central Division</i>						
Vava'u (1947-2020)	34	614.0	66		20	74
Ha'apai (1947-2020)	30	447.0	70		26	74
<i>Southern Division</i>						
Fua'amotu (1979-2020)	29	479.0	71		17	65
Nuku'alofa (1944-2020)	33	433.4	67		22	74

Station	Below Normal (prob)	33%ile Rainfall (mm)	Normal (prob)	67%ile Rainfall (mm)	Above Normal (prob)	LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
<i>Northern Division</i>							
Niuafo'ou (1971-2020)	21	699.0	37	996.0	42	4	37
Niuaatoputapu (1947-2020)	25	618.2	28	847.3	47	14	51
<i>Central Division</i>							
Vava'u (1947-2020)	16	465.0	37	807.0	47	23	56
Ha'apai (1947-2020)	14	306.0	40	570.3	46	24	61
<i>Southern Division</i>							
Fua'amotu (1979-2020)	14	392.0	34	615.8	52	20	53
Nuku'alofa (1944-2020)	12	317.0	39	568.0	49	27	60

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



Summary Statements

Rainfall for September 2020:

Normal rainfall was recorded in Fua'amotu and Nuku'alofa, while above normal rainfall occurred over the rest of the group.

Ha'apai recorded its fourth wettest September on record while Niuatoputapu recorded its eighth wettest.

Accumulated rainfall for July to September 2020, including outlook verification:

Rainfall was normal for Niuafu'ou and Vava'u, while above normal was recorded over the rest of country.

Niuatoputapu recorded its third wettest and Ha'apai recorded its fifth wettest July-September period on record.

The verification of the outlook issued in June was Inconsistent for Ha'apai, consistent for Vava'u and Near-consistent at the remaining four sites in Tonga.

Outlooks for November 2020 to January 2021:

1. SCOPIC:

The outlook for all of Tonga for season shows above normal as the most likely outcome, with normal the next most likely. Below normal is the least likely.

2. ACCESS-S:

Monthly rainfall:

Above normal rainfall is favoured in November for all the main island groups in Tonga

Monthly maximum and minimum temperatures:

Above normal temperatures are favoured across the country for November.

Seasonal rainfall:

Above normal rainfall is favoured from November 2020 to January 2021 across the country.

Seasonal maximum and minimum temperatures:

Above normal temperatures are favoured across the country from November 2020 to January 2021.

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: September 2020	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin					
EAR Watch					
Monthly Climate Briefing					
Ocean Bulletin					
Total					