

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 127

Country Name: Tonga

TABLE 1: Monthly Rainfall

Station (include data period)	March 2018						
	January 2018 Total	February 2018 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
NIUAFO'OU	196.6	273.8	179.7	213.0	343.0	270.6	12/47
NIUATOPUTAPU	446.1	268.0	271.9	179.0	288.0	227.0	44/68
VAVA'U	321.3	147.7	245.4	228.2	358.0	303.0	29/72
HA'APAI	387.1	124.4	118.0	199.3	313.0	234.0	9/72
FUA'AMOTU	313.5	322.5	392.7	149.3	228.9	185.2	36/39
NUKU'ALOFA	446.5	389.6	356.3	169.0	261.0	211.5	67/74

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TABLE 2: Three-monthly Rainfall January to March 2018

[Please note that the data used in this verification should be sourced from table 3 of OCOF #123]

Station	Three-month Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking	Forecast probs.* (include LEPS)	Verification* (Consistent, Near-consistent Inconsistent)?
NIUAFO'OU	650.1	749.0	959.3	904.0	10/42	16,43,41 (12.7)	Near-consistent
NIUATOPUTAPU	986.0	645.0	925.0	803.8	53/68	21,35,44 (20.0)	Consistent
VAVA'U	714.4	722.0	928.0	856.4	24/71	26,34,40 (6.4)	Inconsistent
HA'APAI	629.5	566.1	784.0	661.0	34/72	21,37,42 (17.1)	Near-consistent
FUA'AMOTU	1028.7	463.0	785.7	603.5	35/39	16,32,52 (24.6)	Consistent
NUKU'ALOFA	1192.4	510.0	804.0	636.0	73/74	23,34,43 (14.2)	Consistent

Period: *below normal/normal/above normal

Predictors and Period used: NINO3.4 SST Anomalies for October - November 2017

* Forecast is consistent when observed and predicted (tercile with the highest probability) categories coincide (are in the same tercile).

Forecast is near-consistent when observed and predicted (tercile with the highest probability) differ by only one category (i.e. terciles 1 and 2 or terciles 2 and 3).

Forecast is inconsistent when observed and predicted (tercile with the highest probability) differ by two categories (i.e. terciles 1 and 3).

**TABLE 3: Seasonal Climate Outlooks using SCOPIC for
May to July 2018**

Predictors and Period used: NINO3.4 SST Anomalies for February – March 2018

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
NIUAFO'OU	39	429.0	61		4.8	65
NIUATOPUTAPU	44	364.2	56		0.8	58
VAVA'U	38	358.0	62		5.2	56
HA'APAI	38	240.5	62		6.5	55
FUA'AMOTU	35	354.8	65		7.6	53
NUKU'ALOFA	40	297.0	60		4.4	54

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	67%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
NIUAFO'OU	28	365.2	31	471.0	41	1.9	51
NIUATOPUTAPU	26	322.0	31	421.0	43	3.1	33
VAVA'U	23	299.0	36	403.0	41	3.6	37
HA'APAI	24	211.0	38	312.0	38	1.5	46
FUA'AMOTU	15	259.8	46	429.1	39	7.3	53
NUKU'ALOFA	19	235.0	41	343.0	40	6.9	40

**TABLE 4: Seasonal Climate Outlooks using POAMA2 for
May to July 2018**

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	67%ile rainfall (mm)	Upper Tercile (prob)		
NIUAFO'OU	55	354	18	477	27		
NIUATOPUTAPU	55	320	18	410	27		
VAVA'U	52	343	30	473	18		
HA'APAI	52	210	30	329	18		
NUKU'ALOFA	30	220	46	359	24		

Summary Statement

Rainfall for March 2018:

Rainfall was below normal for Niuafóú and Ha'apai, normal for Niuatoputapu and Vavaú and above normal for Fua'amotu and Nuku'alofa

Accumulated rainfall for January to March 2018, including outlook verification:

Rainfall was below normal for Niuafóú and Vavaú. Normal rainfall was recorded in Haápai and above normal in Niuatoputapu, Fua amotu and Nuku'alofa. Forecast was Near-consistent for Niuafó'ou and Ha'apai, consistent in Niuatoputapu and Fua'amotu and Nuku'alofa

Outlooks for May to July 2018:

1. SCOPIC:

Niuafó'ou, Niuatoputapu and Vava'u: The outlook for the season shows above normal is the most likely outcome, with normal the next most likely. Confidence is low.

Ha'apai and Nuku'alofa: The outlook for the season shows a near-equal likelihood of normal and above-normal rainfall. Confident is low.

Fua'amotu: The outlook for the season shows normal is the most likely outcome and above normal the next most likely. Confidence is moderate.

2. POAMA:

Seasonal rainfall outlook favours below normal for all stations, with above normal or normal the next most likely except for Nuku'alofa which shows normal rainfall as the most likely outcome.

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: $X \geq 35$