

Country Name: Tonga

TABLE 1: Monthly Rainfall

Station (include data period)	May 2017						
	Mar 2017 Total	Apr 2017 Total	May 2017 Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Northern Division							
Niuafo'ou	287.5	181.4	217.0	136.0	204.7	151.4	33/46
Niuaotoputapu	154.4	445.9	622.2	124.0	181.0	152.0	67/67
Central Division							
Vava'u	305.2	114.3	342.8	91.0	177.0	133.0	67/71
Ha'apai	285.3	41.6	356.9	64.0	120.7	88.0	68/70
Southern Division							
Fua'amotu	257.7	36.8	253.0	58.7	158.0	122.0	33/38
Nuku'alofa	268.7	n.a	232.2	66.7	138.3	88.1	71/73

TABLE 2: Three-monthly Rainfall
March 2017 to May 2017

[Please note that the data used in this verification should be sourced from table 3 of OCOF #113]
Predictors and Period used for March to May 2017 Outlooks: NINO3.4 (Dec 16-Jan17)

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?)
Northern Division							
Niuafo'ou	685.9	644.5	803.0	767.5	17/45	(34,33,33) -2.5	Near consistent
Niuaotoputapu	1222.5	577.7	733.3	635.2	63/63	(35,31,34) -1.5	Inconsistent
Central Division							
Vava'u	762.3	583.2	780.0	701.0	47/71	(30,34,36) 0.1	Near consistent
Ha'apai	683.8	442.7	612.9	556.0	53/71	(32,32,36) -0.4	Consistent
Southern Division							
Fua'amotu	547.5	418.0	574.0	497.0	25/38	(25,40,35) 3.2	Consistent
Nuku'alofa		440.8	549.2	488.5		(27,37,36) 0.8	

below normal/normal/above normal

* 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 July to September 2017-Tercile Method

Predictors and Period used: NINO 3.4 (April - May 2017)

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS (%)	Hit-rate (%)
Northern Division							
Niuafo'ou (1971-2016)	42	255.0	27	414.0	31	-0.3	34.9
Niutopotapu (1947-2016)	38	209.0	35	374.0	27	-1.4	12.5
Central Division							
Vava'u (1947-2016)	38	254.0	40	397.5	22	0.1	31.3
Ha'apai (1947-2016)	43	237.5	32	361.0	25	1.7	41.8
Southern Division							
Fuaámotu(1980-2016)	34	298.0	37	417.0	29	-1.7	29.7
Nukuálofa(1944-2016)	38	276.3	34	374.7	28	-0.7	32.8

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)	LEPS	Hit-rate
Northern Division					
Niuafo'ou (1971-2016)	61	336.0	39	0.0	55.8
Nlutopotapu (1947-216)	51	286.0	49	-1.5	29.7
Central Division					
Vava'u (1947-2016)	57	342.5	43	0.1	53.7
Ha'apai(1947-2016)	71	291.6	29	11.0	61.2
Southern Division					
Fua'amotu (1980-2016)	58	371.0	42	-1.0	48.6
Nuku'alofa(1944-2016)	55	324.4	45	-0.8	53.7

TABLE 4: Seasonal Climate Outlooks using POAMA2 for June to August 2017

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)
Northern Division					
Niuafo'ou	18	234	18	357	64
Nlutopotapu	18	185	18	368	64
Central Division					
Vava'u	24	244	28	402	48
Ha'apai	24	217	28	337	48
Southern Division					
Nuku'alofa	33	249	36	395	31

Summary Statements

Rainfall for May 2017: Above normal across all divisions.

Accumulated rainfall for March to May 2017, including outlook verification:

Northern division:

Niuafo'ou: Normal. Forecast was near-consistent.

Niutopotapu. Above Normal. Forecast was inconsistent.

Central division:

Vava'u: Normal. Forecast was near-consistent.

Ha'apai. Above Normal. Forecast was consistent

Southern division: Normal. Forecast was consistent.

Outlooks for July to September 2017:

1. SCOPIC:

Northern division:

Niuafo'ou & Niutopotapu: Below-normal the most likely outcome.

Confidence is very low.

Central division:

Vava'u: Normal is the most likely outcome, with below-normal the next most likely.

Confidence is low.

Ha'apai: Below-normal is the most likely outcome, with normal the next most likely.

Confidence is low.

Southern division:

Fua'amotu & Nuku'alofa: the outlook offers little guidance as the chances of above-normal, normal or below-normal are similar. Confidence is very low.

2. POAMA: Above normal is the most likely outcome in most areas.

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: $X \geq 35$