

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 83

Country Name: TONGA

TABLE 1: Monthly Rainfall

Station (include data period)	July 2014						
	May 2014 Total	June 2014 Total	July 2014 Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Northern Division							
Niuafoóu	143.8	33.4	11.7	66.5	152.3	121.0	3/44
Niuaotoputapu		28.3	125.2	59.0	131.0	88.0	6/68
Vavaú	144.1	41.9	54.9	66.0	120.4	80.6	16/68
Haápai	149.6	30.1	47.2	56.0	108.0	77.0	16/68
Nukuálofa	228	144.3	157.7	55.3	106.3	76.0	54/70
Fuaámotu	174.2	134.7	121.3	64.0	114.3	84.0	23/35

TABLE 2: Three-monthly Rainfall

May to July 2014

[Please note that the data used in this verification should be sourced from table 3 of OCOF #79]

Predictors and Period used: SSTa 1 & 9 – January to March 2014

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							
Niuafoóu	188.9	374.3	474.0	432.0	19/44	28,28,44 (-3.0)	Inconsistent
Niuaotoputapu	Have some missing values	322.0	407.0	360.6	16/68	21,42,37 (2.8)	
Central Division							
Vavaú	240.9	301.0	401.0	358.0	21/68	19,27,53 (12.5)	Inconsistent
Haápai	226.9	209.7	303.3	240.5	30/68	23,31,46 (5.0)	Near consistent
Southern Division							
Nukuálofa	530.0	234.7	343.0	294.6	56/70	14,42,44 (14.1)	Consistent
Fuaámotu	430.2	271.3	441.0	366.0	22/35	15,36,49 (8.9)	Near consistent

Period: *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 September to November 2014

Predictors and Period used: NINO 3.4 SST Anomalies– June to July 2014

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
Northern Division						
Niuafo'ou	53	561	47		4.2	55
Niuaatoputapu	57	486	43		15.1	65.6
Central Division						
Vava'u	59	416	41		19.7	68.8
Ha'apai	55	304	45		5.4	54.7
Southern Division						
Nuku'alofoa	59	354	41		19.6	71.9
Fua'afmotu	51	315	49		3.4	58.8

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
Northern Division							
Niuafo'ou	35	451	34	639	30	3.6	35.0
Niuaatoputapu	38	389	37	596	26	10.6	41.0
Central Division							
Vava'u	38	364	38	546	24	14.5	48.4
Ha'apai	37	236	36	405	27	7.1	43.8
Southern Division							
Nuku'alofoa	38	251.7	38	430.7	24	20.8	50.0
Fua'afmotu	34	257	37	411	29	11.0	38.2

TABLE 4: Seasonal Climate Outlooks using POAMA2 for September 2014 to November 2014

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)		
Nuku'alofoa	9.09	249	85.91	395	5.00		

Summary Statements

Rainfall for July 2014:

Northern Division: Niuafóú: Below normal

Niuatoputapu: Above normal

Central Division: Below normal.

Southern Division: Above normal.

Accumulated rainfall for May - July 2014, including outlook verification:

Northern Division: Niuafóú: Below normal, forecast was inconsistent.

Niuatoputapu (missing daily rainfall)

Central Division: Vava'u: Below Normal, forecast was inconsistent.

Ha'apai: Normal, forecast was near consistent

Southern Division: Nuku'alofa: Above normal, forecast was consistent.

Fua'amotu: Normal, forecast was near consistent

Outlooks for September- November 2014:

1. SCOPIC:

The SCOPIC seasonal rainfall outlook for August to October 2014 shows:

- The most likely outcomes for the Nuku'alofa, Niuatoputapu, Ha'apai and Vava'u are "normal" and below normal" with "above normal" the next most likely.
- There is little indication of bias towards either "**above-normal**", "**normal**" or "**below-normal**" rainfall conditions for Fuaámotu and Niuafóú.

2. POAMA: POAMA seasonal Outlook for Nuku'alofa for September to November shows the most likely outcome is Normal

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: $X \geq 35$