

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 82

Country Name: TONGA

TABLE 1: Monthly Rainfall

Station (include data period)			June 2014				
	April 2014 Total	May 2014 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
<b>Northern Division</b>							
Niuafoóu	372.0	143.8	33.4	63.6	152.0	97.7	3/44
Niuaatoputapu	318.4	47.5	28.3	61.0	139.0	88.1	6/68
<b>Central Division</b>							
Vavaú	190.4	144.1	41.9	57.0	135.0	91.0	16/68
Haápai	157.1	149.6	30.1	42.0	108.0	73.0	16/68
<b>Southern Division</b>							
Nukuálofa	133.1	228	144.3	55.3	106.3	76.0	54/70
Fuaámotu	204.7	174.2	134.7	68.0	146.0	87.9	23/35

TABLE 2: Three-monthly Rainfall

April 2014 to June 2014

[Please note that the data used in this verification should be sourced from table 3 of OCOF #78]

Predictors and Period used: NINO 3.4 SST – January to February 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?)
<b>Northern Division</b>							
Niuafoóu	549.2	482.1	648.0	586.0	19/44	31,24,45 (-2.9)	Near consistent
Niuaatoputapu	394.2	421.0	592.0	533.0	16/68	36,34,30 (-3.7)	Consistent
<b>Central Division</b>							
Vavaú	376.4	392.0	526.0	479.0	21/68	14,37,49 (8.5)	Consistent
Haápai	336.8	289.0	421.7	353.0	30/68	24,33,43 (5.0)	Consistent
<b>Southern Division</b>							
Nukuálofa	505.4	281.7	427.3	325.0	56/70	14,56,30 (5.6)	Near consistent
Fuaámotu	513.6	322.7	526.1	474.0	22/35	18,45,37 (5.3)	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 August to October 2014**

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

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
<b>Northern Division</b>						
Niuafo'ou	48	426	52		-3.3	51.6
Niuaatapu	62	334.8	38		5.8	61.3
<b>Central Division</b>						
Vava'u	55	386	45		-1.7	56.3
Haapai	63	309	37		3.5	46.9
<b>Southern Division</b>						
Nuku'alofa	54	344	46		-2.3	43.8
Fuaamotu	49	353	51		-3.3	46.9

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
<b>Northern Division</b>							
Niuafo'ou	34	321.7	29	477	37	-2.6	41.9
Niuaatapu	42	271	32	497	26	6.3	51.6
<b>Central Division</b>							
Vava'u	37	311	32	473.8	31	-3.5	28.1
Haapai	40	236	34	364	26	-0.8	31.3
<b>Southern Division</b>							
Nuku'alofa	37	265.6	37	398	27	-3.6	9.4

**TABLE 4: Seasonal Climate Outlooks using POAMA2 for August 2014 to October 2014**

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

## **Summary Statements**

### **Rainfall for June 2014:**

**Northern Division:** Below normal

**Central Division:** Below normal.

**Southern Division:** Normal in Fu'amotu and above normal in Nuku'alofa.

### **Accumulated rainfall for April - June 2014, including outlook verification:**

**Northern Division:** Below in Niuafou'ou, Normal in Niuatoputapu, forecast was near consistent to consistent

**Central Division:** Below Normal in Vava'u, Normal in Ha'apai, forecast was consistent  
Ha'apai: Above normal, forecast was consistent.

**Southern Division:** Above Normal in Nuku'alofa and Normal in Fua'amotu, forecast was near consistent

### **Outlooks for August- October 2014:**

#### **1. SCOPIC:**

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

- the most likely outcome for the Ha'apai in Central division, Niuatoputapu in Northern division and Nuku'alofa in Southern division is below normal the next most likely.
- the most likely outcome for Niuafou'ou in the Northern division and Vava'u in the Central division is Climatology the next most likely.

Nuku'alofa bias toward below normal to normal

**2. POAMA:** POAMA seasonal Outlook for Nuku'alofa for August to October 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:  $X \geq 35$