

## Pacific Islands - Online Climate Outlook Forum (OCOF) No. 70

**Country Name: TONGA**

**TABLE 1: Monthly Rainfall**

Station (include data period)	June 2013						
	April 2013 Total	May 2013 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
<b>Northern Division</b>							
Niuafoóu	315.1	151.4	79.1	61.4	152.7	103.0	16/43
Niutatoputapu	167.4	149.5	77.3	59.3	144.0	89.6	29/67
<b>Central Division</b>							
Vavaú	138.1	125.5	30.8	57.7	136.7	93.1	10/67
Haápai	87.2	79.9	67.1	41.7	108.0	73.5	32/67
<b>Southern Division</b>							
Nukuálofa	88.3	56.6	77.3	52.7	108.7	75.5	36/69
Fuaámotu	92.2	58.7	84.5	65.3	149.0	91.3	17/34

**TABLE 2: Three-monthly Rainfall**

April 2013 to June 2013

[Please note that the data used in this verification should be sourced from table 3 of OCOF #66]

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	545.6	476.3	650.0	587.5	18/43	34,26,40 (-2.9)	Near Consistent
Niutatoputapu	394.2	423.7	596.3	534.0	16/67	35,34,31 (-3.7)	Consistent
<b>Central Division</b>							
Vavaú	294.4	404.7	535.2	484.0	11/67	25,36,39 (8.5)	Inconsistent
Haápai	234.2	293.4	424.3	354.0	13/67	29,37,34 (5.0)	Near Consistent
<b>Southern Division</b>							
Nukuálofa	222.2	283.0	430.2	329.7	12/69	26,37,37 (5.6)	Near Consistent
Fuaámotu	235.4	345.0	526.2	485.0	5/34	23,38,39 (5.3)	Inconsistent

Period: \*below normal/normal/above normal

**Predictors and Period used for April 2013 to June 2013 Outlooks (refer to OCOF #66):**

**Predictors – SSTa's I & 9 Period; Dec 2012 – Feb 2013 with 1 month lead.**

\* 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 2013**

**Predictors and Period used: SSTa's 1@9 – April 2013 to June 2013**

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
<b>Northern Division</b>						
Niuafoóu	45	408	55		-4.4	40
Niuaatoputapu	40	331	60		1.7	54.1
<b>Central Division</b>						
Vavaú	52	381.5	48		-2.4	51.6
Haápai	38	309.5	62		7	57.8
<b>Southern Division</b>						
Nukuálofa	37	342.5	63		1.7	56.3
Fuaámotu	47	347	53		0.4	60.6

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
<b>Northern Division</b>							
Niuafoóu	37	313.0	33	473.0	30	-2.5	35.0
Niuaatoputapu	24	270.7	37	484.3	39	-1.6	27.9
<b>Central Division</b>							
Vavaú	30	308.7	41	467.9	29	-3.6	17.2
Haápai	30	241.3	28	365.7	42	-0.8	32.8
<b>Southern Division</b>							
Nukuálofa	24	263.8	41	395.3	35	-0.8	34.4
Fuaámotu	27	278.0	37	411.3	36	-2.0	30.3

**TABLE 4: Seasonal Climate Outlooks using POAMA2 for August to October 2013**

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)		
Nukuálofa	30	238	33	363	37		

## **Summary Statements**

### **Rainfall for June 2013:**

**Northern Division:** Normal.

**Central Division:** Vavaú: Below Normal.

Haápai: Normal

**Southern Division:** Normal.

### **Accumulated rainfall for March–May 2013, including outlook verification:**

**Northern Division:** Niuafó'u: Normal. Forecast was Near Consistent.

Niukatoputapu: Below Normal. Forecast was Consistent.

**Central Division:** Vava'u: Below Normal. Forecast was Inconsistent

Haápai: Below Normal. Forecast was Near Consistent.

**Southern Division:** Fuaámotu: Below normal. Forecast was Inconsistent.

Nukuálofa: Below Normal. Forecast was near consistent.

### **Outlooks for August–October 2013:**

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

**Northern Division:** Below Normal to Niuafó'u and Above Normal in Niukatoputapu

**Central Division:** Normal to Above Normal.

**Southern Division:** Normal.

#### **2. POAMA: Outlook Above Normal for Nuku'alofa.**

**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:  $X \geq 35$