

## Pacific Islands - Online Climate Outlook Forum (OCOF) No. 73

**Country Name: TONGA**

**TABLE 1: Monthly Rainfall**

Station (include data period)			September 2013				
	July 2013 Total	August 2013 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
<b>Northern Division</b>							
Niuafoóu	204.5	205.4	227.1	81.0	155.0	130.0	37/43
Niutatoputapu	236.9	194.3	138.0	53.0	129.1	100.0	46/67
<b>Central Division</b>							
Vavaú	221.9	360.9	57.0	81.0	169.0	109.8	10/67
Haápai	110.6	104.2	22.7	57.7	148.0	92.0	6/67
<b>Southern Division</b>							
Nukuálofa	80.0	127.6	116.1	75.3	146.3	103.0	39/69
Fuaámotu	112.5	140.7	123.7	80.7	154.7	102.0	20/34

**TABLE 2: Three-monthly Rainfall**

July 2013 to September 2013

[Please note that the data used in this verification should be sourced from table 3 of OCOF #69]

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	637.0	264.3	416.9	337.1	36/43	32 31 37 (-5.1)	Consistent
Niutatoputapu	569.2	203.3	354.3	262.0	60/67	34 28 38 (-2.5)	Consistent
<b>Central Division</b>							
Vavaú	639.8	254.0	396.3	328.5	65/67	29 37 34 (-2.3)	Near Consistent
Haápai	237.5	232.0	362.3	295.0	23/67	35 31 34 (-1.3)	Near Consistent
<b>Southern Division</b>							
Nukuálofa	323.7	275.7	388.7	323.5	35/69	38 22 40 (-2.1)	Near Consistent
Fuaámotu	376.9	286.0	439.3	371.0	18/34	39, 22, 39 (-5.1)	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 November 2013 to January 2014**

**Predictors and Period used: SSTa's 1@9 – July 2013 to September 2013**

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
<b>Northern Division</b>						
Niuafoóu	22	820.0	<b>78</b>		11.5	71.4
Niuaotoputapu	29	754.0	<b>71</b>		7.8	54.2
<b>Central Division</b>						
Vavaú	17	650.0	<b>83</b>		28.3	71.4
Haápai	6	457.5	<b>94</b>		40.3	76.6
<b>Southern Division</b>						
Nukuálofa	14	439.5	<b>86</b>		31.3	74.6
Fuaámotu	26	456.0	<b>74</b>		10.1	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	18	708.0	27	1001.5	<b>55</b>	4.5	42.9
Niuaotoputapu	14	613.0	22	864.0	<b>64</b>	12.2	47.5
<b>Central Division</b>							
Vavaú	6	491.7	30	813.0	<b>64</b>	29.7	57.1
Haápai	5	317.8	25	580.5	<b>70</b>	26.0	54.7
<b>Southern Division</b>							
Nukuálofa	7	346.0	23	565.0	<b>70</b>	29.1	54.0
Fuaámotu	3	383.3	19	593.9	<b>78</b>	29.4	51.5

**TABLE 4: Seasonal Climate Outlooks using POAMA2 for November 2013 to January 2014**

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)		
Nukuálofa	16.67	305.0	26.67	487.0	<b>56.66</b>		

## **Summary Statements**

### **Rainfall for September 2013:**

**Northern Division:** Above Normal.

**Central Division:** Below Normal.

**Southern Division:** Normal

### **Accumulated rainfall for July – September 2013, including outlook verification:**

**Northern Division:** Above Normal, forecast was Consistent

**Central Division:** Normal to Above normal, forecast was Near Consistent

**Southern Division:** Normal, forecast was Near Consistent

### **Outlooks for November 2013-January 2014:**

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

**Northern Division:** Niuafu'ou: Above Normal with a low skill level

Niuatoputapu: Above normal with a good skill

**Central Division:** Above Normal, very high skill.

**Southern Division:** Above Normal, very high skill.

#### **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:  $X \geq 35$