

## Pacific Islands - Online Climate Outlook Forum (OCOF) No. 86

**Country Name: TONGA**

### TABLE 1: Monthly Rainfall

Station (include data period)	October 2014						
	August 2014 Total	September 2014 Total	October 2014 Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
<b>Northern Division</b>							
Niuafoóu	37.1	102.4	268.4	137.0	187.4	157.0	33/42
Niuaotoputapu	148.0	16.0	84.0	114.3	216.5	156.0	16/68
<b>Central Division</b>							
Vavaú	42.4	33.9	62.0	103.0	172.0	143.0	16/68
Haápai	34.6	1.1	95.8	60.0	123.0	94.5	36/68
<b>Southern Division</b>							
Nukuálofa	15.3	32.9	73.3	54.0	130.0	96.5	31/71
Fuaámotu	13.9	19.0	83.2	48.3	111.0	72.7	19/35

### TABLE 2: Three-monthly Rainfall

July to August 2014

**[Please note that the data used in this verification should be sourced from table 3 of OCOF #82]**

**Predictors and Period used: SSTa's 1 & 9 – Aug- Oct 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	407.9	321.7	477.0	426.0	21/42	34,29,37 (-2.6)	Near-consistent
Niuaotoputapu	248.0	270.3	490.7	331.0	19/68	42,32,26 (6.3)	Consistent
<b>Central Division</b>							
Vavaú	138.3	311.0	473.8	386.0	6/68	37,32,31 (-3.9)	Consistent
Haápai	131.5	236.0	364.0	309.0	8/68	40,34,26 (-0.8)	Consistent
<b>Southern Division</b>							
Nukuálofa	121.5	265.6	398.0	344.0	5/70	37,37,27 (-3.6)	Consistent
Fuaámotu	116.1	280.0	410.0	353.0	3/35	25,30,45 (-0.4)	Inconsistent

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 December to February 2015**

**Predictors and Period used: NINO 3.4 SST Anomalies– September to October 2014**

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
<b>Northern Division</b>						
Niuafo'ou	51	845	49		0.4	51.4
Niuaatapu	51	730.5	49		8.9	69.5
<b>Central Division</b>						
Vava'u	53	722.5	47		21.4	73.0
Haapai	56	575	44		34.5	71.9
<b>Southern Division</b>						
Nuku'alofoa	54	568	46		29.2	70.3
Fua'amotu	48	582.5	52		28.9	73.5

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	33	738	33	951	<b>34</b>	1.1	37.8
Niuaatapu	32	649.7	<b>35</b>	889	33	13.4	40.7
<b>Central Division</b>							
Vava'u	34	608.7	<b>40</b>	891	26	24.5	58.7
Haapai	32	435	<b>38</b>	678	30	21.4	53.1
<b>Southern Division</b>							
Nuku'alofoa	33	441	<b>40</b>	739	27	24.3	56.3
Fua'amotu	34	426	35	809	31	14.7	52.9

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

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)		
Nuku'alofoa	<b>42</b>	384	22	642	36		

**Summary Statements**

### **Rainfall for October 2014:**

**Northern Division:** Niuafóú: Above normal

Nuatoputapu: Below normal

**Central Division:** Vavaú: Below normal

Haápai: Normal

**Southern Division:** Nuku'alofa: Normal

Fua'amotu: Normal

### **Accumulated rainfall for August - October 2014, including outlook verification:**

**Northern Division:** Niuafó'u: Normal, forecast was consistent

Nuatoputapu: Below normal, forecast was consistent

**Central Division:** Below normal, forecast was consistent

**Southern Division:** Nuku'alofa: Below normal, forecast was near consistent

Fua'amotu: Below normal, forecast was inconsistent

### **Outlooks for December - February 2015:**

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

##### **The SCOPIC seasonal rainfall outlook for December to February 2015 shows:**

- The outlook offers little guidance for the Northern Division, Haapai and Fua'amotu as the chances of above-normal, normal and below-normal rainfall are similar. The most likely outcome for Vava'u in the Central division is normal, the next most likely is below normal.
- The most likely outcome for Nuku'alofa in the Southern division is normal, the next most likely is below normal.

#### **2. POAMA:**

- POAMA seasonal Outlook for Nuku'alofa for December to February 2015 shows the most likely outcome is below 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:  $X \geq 35$