Pacific Islands - Online Climate Outlook Forum (OCOF) No. 74

Country Name: TONGA

TABLE 1: Monthly Rainfall

Station (include data period)			October 2013				
	Aug 2013 Total	Sep 2013 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Northern Division							
Niuafoóu	205.4	227.1	208	137	183	155.5	30/43
Niuatoputapu	194.3	138.0	184.1	116.7	219.5	156	37/67
Central Division							
Vavaú	360.9	51.0	148.0	101.7	172.3	139.3	38/67
Haápai	104.2	22.7	43.1	60.7	124	94.8	19/67
Southern Division							
Nukuálofa	127.6	116.1	160.5	53.7	129.3	94	57/60
Fuaámotu	140.9	123.0	130.1	46.5	109.0	71.3	28/34

TABLE 2: Three-monthly Rainfall

Aug 2013 to October 2013

[Please note that the data used in this verification should be sourced from table 3 of OCOF #70]

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	640.5	313	473	408	34/43	**37**,33,30 (-2.5)	Inconsistent
Niuatoputapu	516.4	270.7	484.3	331	45/67	24,37,**39** (-1.6)	Consistent
Central Division							
Vavaú	559.9	308.7	467.9	381.5	57/67	30,**41**,29 (-3.6)	Near Consistent
Haápai	170.0	241.3	365.7	309.5	13/67	30,28,**42** (-0.8)	Inonsistent
Southern Division							
Nukuálofa	404.2	263.8	395.3	342.5	48/69	24,**41**,35 (-0.8)	Near Consistent
Fuaámotu	394.5	278	411.3	347	22/34	27,**37**,36 (-2.0)	Consistent

Period:*below normal/normal/above normal

Preditors – SSTa's I & 9 Period; Apr 2013 – June 2013 with 1 month lead.

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*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 2013 to February 2014

Predictors and Period used: SSTa's 1@9 –August 2013 to October 2013

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
Northern Division						
Niuafoóu	24	844.5	76			66.7
Niuatoputapu	26	728	74			64.2
Central Division						
Vavaú	36	718	64			74.6
Haápai	12	573.2	88		41.1	81.3
Southern Division						
Nukuálofa	20	558	80		25.9	70.3
Fuaámotu	9	561	91		30.7	75.8

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
Northern Division							
Niuafoóu	11	732.7	30	950.3	**59**	6.8	41.7
Niuatoputapu	8	647	41	887	**51**	15.9	44.1
Central Division							
Vavaú	9	607.3	44	899	**47**	27	57.1
Haápai	4	433	45	678.3	**51**	24.7	48.4
Southern Division							
Nukuálofa	10	439.3	21	729.7	**69**	29.7	56.3
Fuaámotu	15	424	29	788.3	**56**	10.1	45.5

TABLE 4: Seasonal Climate Outlooks using POAMA2 for December 2013 to February 2014

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)		
Nukuálofa	26.7	384	16.7	642	**56.6**		

Summary Statements

Rainfall for October 2013:

Northern Division: Normal to above normal

Central Division: Vavaú: Normal.

Haápai: Below Normal

Southern Division: Above Normal.

Accumulated rainfall for August–October 2013, including outlook verification:

Northern Division: Above normal, forecast was inconsistent for Niuafoóu and consistent for Niuatoputapu

Central Division: Vava'u: Above Normal. Forecast was near consistent

Haápai: Below Normal. Forecast was Inconsistent.

Southern Division: Fuaámotu: Above normal. Forecast was near consistent.

Nukuálofa: Normal. Forecast was consistent.

Outlooks for December 2013–January 2014:

1. SCOPIC:

The rainfall outlook for all of Tonga is above normal and the skill of the forecast is moderate to very high.

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 ≤ X < 5 Moderate 5 ≤ X < 10 Good: 10 ≤ X < 15 High: 15≤ X < 25

Very High: 25 ≤X < 35 Exceptional: X ≥ 35