

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 69

Country Name: TONGA

TABLE 1: Monthly Rainfall

Station (include data period)	May 2013						
	March 2013 Total	April 2013 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Northern Division							
Niuafoóu	450.4	315.1	151.4	136.0	207.3	160.0	21/43
Niutatoputapu	116.8	167.4	149.5	119.0	181.0	152.0	31/67
Central Division							
Vavaú	311.3	138.1	125.5	91.0	180.3	133.0	32/67
Haápai	335.4	87.2	79.9	64.0	112.7	88.0	30/67
Southern Division							
Nukuálofa	531.2	88.3	56.6	65.3	134.3	88.2	20/69
Fuaámotu	445.0	92.2	58.7	63.3	165.3	123.5	12/34

TABLE 2: Three-monthly Rainfall

March 2013 to May 2013

[Please note that the data used in this verification should be sourced from table 3 of OCOF #65]

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	916.9	648.3	808.0	768.0	33/43	30,22,48 (3.1)	Consistent
Niutatoputapu	433.7	577.7	746.3	630.0	5/67	35,28,37 (-3.3)	Inconsistent
Central Division							
Vavaú	574.9	587.7	813.3	707.0	22/67	39,34,27 (0.5)	Consistent
Haápai	502.5	442.3	607.9	556.0	29/67	39,41,20 (3.0)	Consistent
Southern Division							
Nukuálofa	676.1	439.7	542.7	479.0	62/69	45,21,34 (-0.4)	Inconsistent
Fuaámotu	595.9	423.3	561.7	501.9	24/34	23,47,30 (4.9)	Near Consistent

Period: *below normal/normal/above normal

Predictors and Period used for March 2013 to May 2013 Outlooks (refer to OCOF #65):

Predictors – SSTa's I & 9 Period; Nov 2012 – Jan 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 July to September 2013

Predictors and Period used: SSTa's 1 & 9 – March 2013 to May 2013

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
Northern Division						
Niuafoóu	45	337.1	55		-1.6	48.7
Niuaotoputapu	56	262	44		-1.9	50.8
Central Division						
Vavaú	49	328.5	51		-0.8	51.6
Haápai	54	295	46		6.8	59.4
Southern Division						
Nukuálofa	47	323.5	53		-1.9	50
Fuaámotu	44	371	56		-4.5	51.5

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
Northern Division							
Niuafoóu	32	264.3	31	416.9	37	-5.1	33.3
Niuaotoputapu	34	203.3	28	354.3	38	-2.5	23.0
Central Division							
Vavaú	29	254.0	37	396.3	34	-2.3	34.4
Haápai	35	232.0	31	362.3	34	-1.3	28.1
Southern Division							
Nukuálofa	38	275.7	22	388.7	40	-2.1	21.9
Fuaámotu	39	286.0	22	439.3	39	-5.1	36.4

TABLE 4: Seasonal Climate Outlooks using POAMA2 for July to September 2013

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)		
Nukuálofa	20.00	249.0	36.67	395.0	43.33		

Summary Statements

Rainfall for May 2013:

Northern Division: Normal.

Central Division: Normal.

Southern Division: Below normal.

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

Northern Division: Niuafu'ou: Above Normal. Forecast was consistent.

Niuaatoputapu: Below Normal. Forecast was inconsistent.

Central Division: Vava'u: Below Normal. Forecast was consistent

Haápai: Normal. Forecast was consistent.

Southern Division: Fuaámotu: Above normal. Forecast was Inconsistent.

Nukuálofa: Above normal. Forecast was near consistent.

Outlooks for July–September 2013:

1. SCOPIC:

Northern Division: Normal

Central Division: Normal.

Southern Division: Climatology.

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: $X \geq 35$