

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 65

Country Name: TONGA

TABLE 1: Monthly Rainfall

Station (include data period)	January 2013						
	November 2012 Total	December 2012 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Northern Division							
Niuafoóu	268.3	365.5	362.6	214.6	377.7	253.5	25/43
Niuaotoputapu	191.9	205.5	573.0	208.0	296.0	243.0	64/67
Central Division							
Vavaú	73.9	119.2	312.8	172.3	292.7	239.0	46/67
Haápai	23.8	17.3	279.6	117.3	249.7	182.5	51/67
Southern Division							
Nukuálofa	128.0	153.2	301.3	121.0	247.3	187.5	52/69
Fuaámotu	201.0	150.8	335.2	132.0	266.3	192.0	25/34

**TABLE 2: Three-monthly Rainfall
November to January 2013**

[Please note that the data used in this verification should be sourced from table 3 of OCOF #61]

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	996.4	705.3	953.3	809.0	23	22,27,51,(4.5)	Near Consistent
Niuaotoputapu	970.4	600.4	862.0	752.5	51	44,31,25(12.2)	Inconsistent
Central Division							
Vavau	505.9	482.3	810.0	655.0	24	30,41,29(29.7)	Consistent
Haápai	320.7	306.0	571.2	459.0	23	34,27,39(26.0)	Near Consistent
Southern Division							
Nukuálofa	582.5	333.7	557.0	436.0	49	64,17,19(29.1)	Inconsistent
Fuaámotu	687	366.0	529.0	439.0	24	16,33,51(29.4)	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).

Predictors and Period used for November 2012 to January 2013 Outlooks (refer to OCOF #61):

Predictor – SST 1@ 9 Period – Jul, Aug, Sep with 1 month lead.

TABLE 3: Seasonal Climate Outlooks using SCOPIC for March to May 2013

Predictors and Period used: SSTa's 1 and 9

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
Northern Division							
Niuafoóu	30	648.3	22	808.0	48	1.2	41.0
Niuaotoputapu	35	577.7	28	746.3	37	-3.4	23.2
Central Division							
Vavaú	39	587.7	34	813.3	27	0.1	28.6
Haápai	39	442.3	41	607.9	20	3.1	33.9
Southern Division							
Nukuálofa	45	439.7	21	542.7	34	-0.8	31.7
Fuaámotu	23	423.3	47	561.7	30	3.8	56.3

TABLE 4: Seasonal Climate Outlooks using POAMA2 for March to May 2013

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)		
Nukuálofa	26.67	361	36.67	503	36.67		

Summary Statements

Rainfall for January 2013:

Northern Division: Normal in Niuafóóu, Above Normal in Niuatoputapu.

Central Division: Above Normal.

Southern Division: Above Normal.

Accumulated rainfall for November 2012–January 2013, including outlook verification:

Northern Division: Niuafóóu: Normal. Near Consistent.

Niuatoputapu: Above Normal, Inconsistent.

Central Division: Vavaú: Normal, forecast was Near consistent

Haápai: Normal, forecast was Near consistent

Southern Division: Above Normal, Inconsistent

Outlooks for March–May 2013:

1. SCOPIC:

Northern Division: Above normal, skill is very low

Central Division: Vavaú: Below normal, skill is low

Haápai: Normal, skill is low

Southern Division: Nukuálofa: Below normal, skill is very low.

Fuaámotu: Normal, very low skill.

2. POAMA: Outlook is Normal for Nukuálofa.

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: $X \geq 35$