Pacific Islands - Online Climate Outlook Forum (OCOF) No. 85

Country Name: TONGA

TABLE 1: Monthly Rainfall

Station (include data period)			September 2014				
	July 2014 Total	August 2014 Total	September 2014 Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Northern Division							
Niuafoóu	11.7	37.1	102.4	82.3	155.7	131.0	19/44
Niuatoputapu	125.2	148	16.0	53.0	131.4	100.5	5/68
Central Division							
Vavaú	54.9	42.4	33.9	81.0	167.0	109.0	6/68
Haápai	47.2	34.6	1.1	51.0	144.0	91.0	1/68
Southern Division							
Nukuálofa	157.7	15.3	32.9	75.7	144.7	103.0	6/70
Fuaámotu	121.3	13.9	19.0	52.0	153.0	105.0	1/35

TABLE 2: Three-monthly Rainfall

July to September 2014

[Please note that the data used in this verification should be sourced from table 3 of OCOF #81]

Predictors and Period used: NINO3.4 SST – Mar to May 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?
Northern Division							
Niuafoóu	151.2	269.0	422.6	338.5	3/44	29 ,32, 39 (-4.7)	In consistent
Niuatoputapu	289.2	206.0	365.0	262.5	35/68	Missing data in Niuatoputapu was due on the month of May	
Central Division							
Vavaú	131.2	254.0	399.0	340	4/68	24,35,41 (-1.1)	Near consistent
Haápai	82.9	237.5	365.0	294.6	1/68	34,22,44 (-0.6)	Near consistent
Southern Division							
Nukuálofa	205.9	276.3	383.3	323.7	16/70	38,18,44 (-2.7)	Near consistent
Fuaámotu	154.2	298.0	423.0	374.0	3/35	41,18,41 (-5.3)	In 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 2014 to January 2015

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

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
Northern Division						
Niuafoóu	**52**	825.6	48		1.6	58.3
Niuatoputapu	**55**	755	45		14	71.2
Central Division						
Vavaú	**58**	655	42		27.2	76.2
Haápai	**57**	459	43		22.1	73.4
Southern Division						
Nukuálofa	**57**	439.5	43		20.8	76.6
Fuaámotu	**51**	467.5	49		13.3	70.6

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
Northern Division							
Niuafo'ou	**34**	710	33	1005.9	33	-0.4	47.2
Niuataputapu	**37**	622	**37**	867	26	14.4	47.5
Central Division							
Vavaú	37	492	**39**	818	24	21.3	50.8
Haápai	36	324	**38**	571	26	23.8	59.4
Southern Division							
Nukuálofa	35	342	**40**	568	25	28.6	54.7
Fua'amotu	33	392	**38**	616	29	14.2	50

TABLE 4: Seasonal Climate Outlooks using POAMA2 for November 2014 to January 2015

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)		
Nukuálofa	24.	229	**55**	380	21		

Summary Statements

Rainfall for September 2014:

Northern Division: Niuafo'ou - Below normal

Niutoputapu - Normal

Central Division: Below normal

Southern Division: Below normal

Accumulated rainfall for July-September 2014, including outlook verification:

Northern Division: Niuafo'ou - Below normal, outlook was inconsistent

Niuatoputapu - Normal

Central Division: Below normal, outlook was near consistent

Southern Division: Nuku'alofa - Below normal, outlook was near consistent.

Fua'amotu - Below normal, outlook was inconsistent

Outlooks for November 2014 - January 2015:

1. SCOPIC:

The SCOPIC seasonal rainfall outlook for November 2014 to January 2015 shows:

- At Niuafo'ou in the Northern Division the chances of above-normal, normal and below-normal rainfall are similar. At Niuatoputapu there is an equal likelihood of below normal and normal rainfall.
- In the Central Division there is an equal likelihood of below normal and normal rainfall.
- At Nuku'alofa in the Southern Division, the most likely outcome is normal rainfall, with below normal the next most likely. At Fua'amotu the chances of above-normal, normal and below-normal rainfall are similar.

2. POAMA:

- POAMA seasonal Outlook for Nuku'alofa for November to January 2015 shows the most likely outcome is Normal

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