Pacific Islands - Online Climate Outlook Forum (OCOF) No. 128

Country Name: Tonga

TABLE 1: Monthly Rainfall

Station (include data period)			April 2018				
	February 2018 Total	March 2018 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
NIUAFO'OU	273.8	179.7	222.7	178.0	315.0	214.0	25/47
NIUATOPUTAPU	268.0	271.9	275.1	167.4	295.0	225.0	44/68
VAVA'U	147.7	245.4	331.3	153.1	256.3	208.3	59/72
HA'APAI	124.4	118.0	432.1	112.3	228.3	165.0	69/72
FUA'AMOTU	322.5	392.7	519.5	93.7	227.0	167.3	38/39
NUKU'ALOFA	389.6	356.3	443.8	109.3	205.3	136.5	70/73

TABLE 2: Three-monthly Rainfall
February to April 2018

[Please note that the data used in this verification should be sourced from table 3 of OCOF #124]

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)?
NIUAFO'OU	676.2	733.0	937.7	888.3	11/43	(30,32,**38**)0.2	Inconsistent
NIUATOPUTAPU	815.0	687.9	843.3	756.0	41/66	(27,**41**,32)0.6	Consistent
VAVA'U	724.4	699.0	906.7	826.2	26/72	(26,35,**39**)2.5	Near-consistent
HA'APAI	674.5	544.0	711.0	652.0	43/72	(25,30,**45**)8.6	Near-consistent
FUA'AMOTU	1234.7	460.6	679.0	511.0	39/39	(20,33,**47**)10.2	Consistent
NUKU'ALOFA	1189.7	543.3	681.0	609.5	73/73	(31,32,**37**)-0.4	Consistent

Period:*below normal/normal/above normal

Predictors and Period used for February to April 2018 Outlooks: NINO 3.4 SST Anomalies (November-December 2017).

*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 June to August 2018

Predictors and Period used: NINO3.4 SST Anomalies (March – April 2018).

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
NIUAFO'OU	44	348.5	56		-1.3	54.8
NIUATOPUTAPU	51	312.5	49		-1.5	37.3
VAVA'U	48	308.0	52		-1.1	48.5
HA'APAI	43	278.0	57		1.9	57.4
FUA'AMOTU	50	351.0	50		-2.7	13.2
NUKU'ALOFA	50	298.0	50		-1.5	5.9

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	67%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
NIUAFO'OU	29	272.4	**42**	415.0	29	-2.3	28.6
NIUATOPUTAPU	28	239.0	**38**	356.0	34	-0.6	43.3
VAVA'U	29	252.0	**37**	353.7	34	-1.1	32.4
HA'APAI	32	192.3	30	311.4	**38**	-0.8	36.8
FUA'AMOTU	**34**	270.3	33	400.0	33	-3.3	5.3
NUKU'ALOFA	**34**	242.0	**34**	367.0	32	-1.6	7.4

TABLE 4: Seasonal Climate Outlooks using POAMA2 for June to August 2018

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	67%ile rainfall (mm)	Upper Tercile (prob)		
NIUAFO'OU	**55**	249	18	417	27		
NIUATOPUTAPU	**55**	248	18	363	27		
VAVA'U	**61**	272	12	344	27		
HA'APAI	**61**	207	12	324	27		
NUKU'ALOFA	**52**	261	27	402	21		

Summary Statements

Rainfall for April 2018:

April rainfall was **Normal** in the Northern Division, and **Above normal** in the Central and Southern Divisions.

Accumulated rainfall for February to April 2018, including outlook verification:

Niuafo'ou: Below normal, forecast was inconsistent.
Niuatoputapu: Normal, forecast was consistent.

Vava'u and Ha'apai: **N**ormal, forecast was near-consistent.

Fua'amotu and Nuku'alofa: Above normal, (both recorded their highest rainfall for the period). Forecast was consistent.

Outlooks for June to August 2018:

1. **SCOPIC:**

   At **Niuafo'ou**, the outlook shows normal is the most likely outcome, with below-normal and above-normal the next most equally likely outcomes.

   At all other sites, outlook offers little guidance as the chances of above-normal, normal and below-normal are similar. The Confidence is very low throughout.

2. **POAMA:**

   The seasonal rainfall outlook favours below-normal for all stations.

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