Pacific Islands - Online Climate Outlook Forum (OCOF) No. 126

Country Name: Tonga

TABLE 1: Monthly Rainfall

Station (include data period)	December 2017 Total	January 2018 Total	February 2018				
			Total	**33%tile Rainfall (mm)**	**67%tile Rainfall (mm)**	**Median Rainfall (mm)**	**Ranking**
NIUAFO'OU	419.4	196.6	273.8	205.0	300.3	241.0	27/45
NIUATOPUTAPU	407.5	446.1	268.0	190.0	267.0	223.5	48/71
VAVA'U	271.4	321.3	147.7	186.3	296.0	218.0	19/72
HA'APAI	131.6	387.1	124.4	138.2	238.0	189.0	21/72
FUA'AMOTU	170.5	313.5	322.5	145.1	236.7	190.5	28/39
NUKU'ALOFA	101.5	446.5	389.6	162.0	256.0	218.0	64/74

TABLE 2: Three-monthly Rainfall
December 2017 to February 2018
[Please note that the data used in this verification should be sourced from table 3 of OCOF #122]

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	889.8	722.0	951.0	844.2	22/41	23,**39**,38 (4.3)	Consistent
NIUATOPUTAPU	1121.6	633.0	889.0	728.0	60/66	20,**40**,40 (20.3)	Near-consistent
VAVA'U	740.4	613.2	893.5	741.0	35/70	28,35,**37** (20.6)	Near-consistent
HA'APAI	643.1	435.0	678.0	575.1	45/71	20,**41**,39 (23.3)	Consistent
FUA'AMOTU	806.5	420.0	786.3	561.0	26/38	21,35,**44** (22.0)	Consistent
NUKU'ALOFA	937.6	441.0	725.0	558.0	67/74	24,**38**,38 (24.6)	Near-Consistent

Period:*below normal/normal/above normal

Predictors and Period used for December 2017 to February 2018 Outlooks (refer to OCOF #122): NINO 3.4 for period September-October 2017.

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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 April to June 2018

Predictors and Period used: NINO 3.4 for January – February 2018

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
NIUAFO'OU	49	578.0	**51**		-2.1	37.2
NIUATOPUTAPU	**50**	542.0	**50**		-1.7	29.5
VAVA'U	41	479.0	**59**		4.1	55.9
HA'APAI	44	353.0	**56**		0.9	53.7
FUA'AMOTU	39	440.0	**61**		4.7	60.5
NUKU'ALOFA	41	329.7	**59**		3.4	56.7

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	67%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
NIUAFO'OU	33	496.5	30	638.6	**37**	-3.2	16.3
NIUATOPUTAPU	**35**	437.0	33	617.0	32	-1.7	34.4
VAVA'U	27	390.5	32	544.3	**41**	3.3	36.8
HA'APAI	27	293.0	34	427.0	**39**	2.7	37.3
FUA'AMOTU	18	282.7	**46**	511.4	36	4.3	50.0
NUKU'ALOFA	17	281.7	**47**	433.7	36	5.5	49.3

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

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	67%ile rainfall (mm)	Upper Tercile (prob)		
NIUAFO'OU	**58**	449	33	621	9		
NIUATOPUTAPU	**58**	434	33	598	9		
VAVA'U	**61**	479	30	630	9		
HA'APAI	**61**	264	30	381	9		
NUKU'ALOFA	**46**	259	24	414	30		

Summary Statements

Rainfall for February 2018:

Northern Division: Normal in Niuafo'ou and above normal in Niuatoputapu.

Central Division: Below normal.

Southern Division: Above normal

Most of the rainfall in Fua'amotu and Nuku'alofa was brought during the TC Gita which devastated the southern division of Tonga.

Accumulated rainfall for December 2017 to February 2018, including outlook verification:

Northern Division: Normal rainfall in Niuafo'ou with consistent forecast . Above normal rainfall in Niuatoputapu and forecast was near-consistent.

Central Division: Normal rainfall in Vava'u and Ha'apai with near-consistent forecast in Vava'u and consistent in Ha'apai.

Southern Division: Above normal rainfall in Fua'amotu and Nuku'alofa. Forecast was consistent for Fua'amotu and near-consistent for Nuku'alofa.

Outlooks for April to June 2018:

1. SCOPIC:
Northern division: The outlook for the season shows little guidance as the chances of above-normal, normal and below-normal are similar for Niuafo'ou and Niuatoputapu. Confidence is very low to low

Central division: The outlook for the season for Vava'u and Ha'apai, shows above normal is the most likely outcome and normal the next most likely. Confidence is low.

Southern division: The outlook for the season for Fua'amotu and Nuku'alofa, shows normal is the most likely outcome and above normal the next most likely. Confidence low to moderate.

2. POAMA:

Seasonal rainfall outlook for northern, central division and Southern division shows below normal as the most likely outcome with normal the next most likely for northern and central division while above normal for Southern division.

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