

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 131

Country: Tonga

TABLE 1: Monthly Rainfall

Station (include data period)	May-2018	Jun-2018	Jul-2018				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
<i>Northern Division</i>							
Niuafo'ou (1971-2018)	73.6	74.2	96.4	54.7	145.4	110.0	20/46
Niuaotupulu (1947-2018)	60.1	31.1	112.6	59.7	130.7	88.0	43/72
<i>Central Division</i>							
Vava'u (1947-2018)	265.1	39.5	109.5	61.0	119.0	80.0	44/72
Ha'apai (1947-2018)	137.1	79.3	60.0	55.3	101.2	71.0	31/72
<i>Southern Division</i>							
Fua'amotu (1979-2018)	68.7	244.6	12.5	70.6	134.3	100.8	1/39
Nuku'alofa (1944-2018)	108.6	182.7	16.0	64.0	113.0	82.0	1/74

**TABLE 2: Three-month Rainfall for May to July 2018**

Station	Three-month Total	33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities* based on NINO3.4 February-March 2018				Verification: Consistent, Near- consistent, Inconsistent?	
	Rainfall (mm)					B-N	N	A-N	LEPS		
<i>Northern Division</i>											
Niuafo'ou (1971-2018)	244.2	Below normal	365.2	471.0	429.0	8/44	28	31	41	2	Inconsistent
Niuaatoputapu (1947-2018)	203.8	Below normal	322.0	421.0	364.2	11/68	26	31	43	3	Inconsistent
<i>Central Division</i>											
Vava'u (1947-2018)	414.1	Above normal	299.0	403.0	358.0	50/72	23	36	41	4	Consistent
Ha'apai (1947-2018)	276.4	Normal	211.0	312.0	240.5	42/71	24	38	38	2	Near-consistent
<b>7.3</b>											
Fua'amotu (1979-2018)	325.8	Normal	259.8	429.1	354.8	17/39	15	46	39	7	Consistent
Nuku'alofa (1944-2018)	307.3	Normal	235.0	343.0	297.0	43/74	19	41	40	7	Consistent

**TABLE 3: Seasonal Climate Outlooks using SCOPIC for September to November 2018**  
**Predictor and Period used: NINO3.4 for June to July 2018**

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
<i>Northern Division</i>						
Niuafu'ou (1971-2018)	55	561.5	45		5	50
Niuatoputapu (1947-2018)	61	458.5	39		14	69
<i>Central Division</i>						
Vava'u (1947-2018)	64	416.0	36		21	74
Ha'apai (1947-2018)	57	300.0	43		5	56
<i>Southern Division</i>						
Fua'amotu (1979-2018)	54	315.0	46		6	58
Nuku'alofa (1944-2018)	62	354.0	38		17	69

Station	Below Normal (prob)	33%ile Rainfall (mm)	Normal (prob)	67%ile Rainfall (mm)	Above Normal (prob)	LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
<i>Northern Division</i>							
Niuafu'ou (1971-2018)	38	451.0	34	638.0	28	6	41
Niuatoputapu (1947-2018)	39	390.7	39	584.0	22	9	52
<i>Central Division</i>							
Vava'u (1947-2018)	41	364.7	39	522.7	20	14	56
Ha'apai (1947-2018)	39	225.6	36	404.1	25	6	44
<i>Southern Division</i>							
Fua'amotu (1979-2018)	36	249.3	35	391.6	29	10	37
Nuku'alofa (1944-2018)	44	238.0	39	426.2	17	21	43

**TABLE 4: Seasonal Climate Outlooks using POAMA2 for September to November 2018**

Insert Table 4 (copied from Excel) on the line below, then delete this line of text.

Station	Below Normal (prob)	33%ile Rainfall (mm)	Normal (prob)	67%ile Rainfall (mm)	Above Normal (prob)
Niuafo'ou	27	360.0	21	567.0	52
Niuaotoputapu	27	320.0	21	458.0	52
Vava'u	45	276.0	25	418.0	30
Ha'apai	46	204.0	24	304.0	30
Nuku'alofa	76	189.0	15	309.0	09

## **Summary Statements**

### **Rainfall for July 2018:**

Rainfall was normal in the northern and central division and below normal in the southern division (Fua'amotu and Nuku'alofa.)

### **Accumulated rainfall for May to July 2018, including outlook verification:**

Rainfall was below normal in the northern division (Niuafo'ou and Niuaotoputapu), forecast was inconsistent. Above normal rainfall was recorded in Vava'u with forecast being consistent and rainfall was normal in the southern division (Fua'amotu and Nuku'alofa) and forecast was consistent. Ha'apai also recorded normal rainfall with near-consistent forecast.

### **Outlooks for September to November 2018:**

#### **1. SCOPIC:**

The outlook for Nuku'alofa shows below normal as the most likely outcome, with normal the next most likely while the outlook for Vava'u and Ha'apai shows a near-equal likelihood of below normal and normal rainfall.

The outlook is mixed, with similar chances for below normal and normal for Niuaotoputapu. Above normal is the least likely.

There is little guidance in the outlook as the chances of above normal, normal and below normal are similar for Niuafo'ou and Fua'amotu.

The confidence of the outlook is moderate to good.

#### **2. POAMA:**

The rainfall outlook for the season shows above normal is the most likely outcome for Niuafo'ou and Niuaotoputapu, and below normal is the most likely outcome for the rest of the country.

**Stakeholder Engagement- Evaluations of how effective we engage with stakeholders**

<b>Country</b>	<b>Date</b>	<b>Stakeholder</b>	<b>Total Number of Participants</b>	<b>Number of male</b>	<b>Number of female</b>