Pacific Islands - Online Climate Outlook Forum (OCOF) No. 112

<u>Country Name</u>: Fiji TABLE 1: Monthly Rainfall

Station (include data period)			December 2016							
	October 2016 Total	November 2016 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking			
Western Division										
Penang Mill (1910-2016)	72.5	126.0	713.2	142.6	274.0	212.0	102/104			
Lautoka Mill (1900-2016)	153.2	110.7	217.6	109.3	210.0	150.7	80/117			
Nadi Airport (1942-2016)	164.6	123.4	269.9	119.1	229.8	181.3	56/75			
Yasawa-i-Rara (1950-2016)	176.2	71.6	670.6	99.4	185.4	145.2	<mark>64/64</mark>			
			Central Divi	ision						
Laucala Bay (Suva) (1942-2016)	291.9	118.0	761.8	209.5	319.6	253.4	<mark>75/75</mark>			
Nausori Airport (1957-2016)	300.5	73.7	924.2	214.1	315.4	249.0	<mark>61/61</mark>			
Tokotoko Navua) (1945-2016)	398.2	72.6	927.6	219.5	385.0	279.2	<mark>71/71</mark>			
		E	astern Div	vision						
Lakeba (1950-2016)	139.5	28.7	453.5	129.8	208.2	168.2	64/68			
Vunisea (Kadavu) (1931-2016)	174.9	60.8	299.4	106.0	177.1	140.5	70/80			
Ono-i-Lau (1943-2016)	175.7	105.4	273.5	81.8	172.4	114.9	64/71			
Northern Division										
Labasa Airport (1956-2016)	202.6	23.4	Missing	144.3	276.2	208.4	N/A			
Savusavu Airport (1956-2016)	268.8	73.1	Missing	138.3	237.7	169.5	N/A			
Rotuma (1912-2016)	423.6	351.2	Missing	242.9	373.8	307.8	N/A			

Period: *below normal/normal/above normal M - Missing

TABLE 2: Three-monthly Rainfall October to December 2016

Predictors and Period used: NINO3.4 SST Anomalies: July to September 2016

Station	Three- month Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking	Forecast probs.* (include LEPS)	Verification* (Consistent, Near-consistent or Inconsistent)	
			Westeri	n Division	I.			
Penang Mill (1910- 2016)	911.7	348	571	461	<mark>102/104</mark>	27/ 37 /36 (13.7)	Near-consistent	
Lautoka Mill (1900- 2016)	481.5	274	444	356	80/117	26/ 39 /35 (18.8)	Near-consistent	
Nadi Airport (1942- 2016)	557.9	326	478	379	56/75	26/ 39 /35 (18.3)	Near-consistent	
Yasawa-i-rara (1950- 2016)	918.4	262	434	344	<mark>64/64</mark>	29/ 37 /34 (16.6)	Near-consistent	
			Centra	Division				
Laucala Bay (Suva) (1942-2016)	1171.7	539	833	698	<mark>75/75</mark>	30/ 35/35 (5.2)	Near-consistent	
Nausori Airport (1957-2016)	1298.4	553	810	680	<mark>61/61</mark>	29/35 /36 (5.3)	Consistent	
Tokotoko (Navua) (1945-2016)	1398.4	767	1025	783	71/71	32/33/ 35 (5.4)	Consistent	
Eastern Division								
Lakeba, Lau (1950- 2016)	621.7	323	527	403	64/68	28 /37 /35 (10.3)	Near-consistent	
Vunisea (Kadavu) (1931-2016)	535.1	310	505	415	70/80	32/ 34/34 (8.8)	Near-consistent	
Ono-i-lau (1943-2016)	554.6	210	401	348	61/71	22/ 41 /37 (53.1)	Near-consistent	
Northern Division								
Labasa Airport (1956-2016)	Missing	361	625	484	N/A	22/ 39/39 (23.2)	unverified	
Savusavu Airport (1956 -2016)	Missing	446	720	547	N/A	29/ 37 /34 (15.9)	unverified	
Rotuma (1912-2016)	Missing	818	1054	939	N/A	32/ 34/34 (0.5)	unverified	

Period:* below normal/normal/above normal

^{*}Forecast is <u>consistent</u> when observed and predicted (tercile with the highest probability) categories coincide (are in the same tercile).

Forecast is <u>near-consistent</u> 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 <u>inconsistent</u> when observed and predicted (tercile with the highest probability) differ by two categories (i.e. terciles 1 and 3).

M - Missing

TABLE 3: Seasonal Climate Outlooks using SCOPIC for Feb to Apr 2017 – Tercile Method

Predictors and Period used: NINO3.4 SST Anomalies: October to December 2016

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS (%)	Hit-rate (%)
		Wes	tern Divisio	on			
Penang Mill (1910-2016)	23	827.4	37	1102.7	40	6.5	56.9
Lautoka Mill (1900-2016)	24	677.2	36	926.3	40	5.8	45.5
Nadi Airport (1942-2016)	20	658.9	36	910.1	44	14.3	48.5
Yasawa-i-Rara (1950-2016)	20	542.9	37	818.5	43	12.6	48.4
		Cen	tral Divisio	n			
Laucala Bay (Suva) (1942-2016)	32	869.4	37	1080.7	31	-1.3	34.8
Nausori Airport (1957-2016)	36	892.5	35	1045.3	29	-0.4	41.7
Tokotoko (Navua) (1945-2016)	33	999.0	38	1210.9	29	-1.0	34.8
		East	ern Divisio	n			
Lakeba (1950-2016)	20	628.5	39	819.3	41	9.6	44.6
Vunisea (Kadavu) (1931- 2016)	21	628.2	38	825.5	41	9.2	49.2
Ono-i-Lau (1943-2016)	28	474.0	32	698.4	40	2.0	40.0
		Nort	hern Divisio	on			
Labasa Airport (1956- 2016)	27	781.0	33	1118.6	40	4.6	45.9
Savusavu Airport (1956-2016)	26	632.9	37	842.6	40	2.5	38.6
		T	<u> </u>				<u> </u>
Rotuma (1912 -2016)	30	896.2	34	1083.1	36	-0.4	31.8

Seasonal Climate Outlook:

February to April 2017 - Median Table:

Predictors and Period used: NINO3.4 SST Anomalies: October to December 2016

Station	Below Median (prob)	Median rainfall (mm)	Above Median (prob)	LEPS	Hit-rate			
Western Division								
Penang Mill (1910-2016)	41	992.8	59	6.4	61.5			
Lautoka Mill (1900-2016)	40	809.0	60	8.2	62.1			
Nadi Airport (1942-2016)	41	792.5	59	6.6	59.1			
Yasawa-i-rara (1950-2016)	37	656.4	63	14.6	67.2			
Central Division								
Laucala Bay (Suva) (163.6942- 2016)	50	944.8	50	-1.5	45.5			
Nausori Airport (1957-2016)	54	966.3	46	0.0	56.7			
Tokotoko (Navua) (1945-2016)	54	1106.5	46	-0.2	56.1			
Eastern Division								
Lakeba (1950-2016)	40	696.0	60	8.0	64.6			
Vunisea (Kadavu) (1931-2016)	42	733.6	58	5.4	60.0			
Ono-i-lau (1943-2016)	42	580.9	58	3.6	61.7			
Northern Division								
Labasa Airport (1956-2016)	41	1019.2	59	6.1	62.3			
Savusavu Airport (1659-2016)	45	694.9	55	0.3	57.9			
Rotuma (1912 -2016)	46	1001.0	54	0.3	50.0			

Summary Statements

Rainfall for December 2016:

Rainfall in December was *above normal* across the country (based on the stations in Table 1). Suva, Nausori, Navua and Yasawa-i-Rara recorded their wettest December on record while Penang Mill recorded its third wettest December on record.

Accumulated rainfall for October to December 2016 & outlook verification:

For 3-month rainfall, *above normal* rainfall was recorded across the country.

Verification of the 3-month rainfall

For the October to December period, the rainfall outlook was consistent at two sites, near consistent at eight sites and at three sites the outlook could not be verified due to missing data.

Outlooks for February to April 2017:

SCOPIC:

Western Division: The most likely outcome is above-normal, with normal the next most likely. For Penang Mill there is a near equal likelihood of *normal* and *above normal* rainfall. Outlook skill is moderate to good;

Central Division: The outlook offers little guidance as the chances of *above normal*, *normal* and *below normal* are similar. Outlook skill is *very low*;

Eastern Division: Near equal likelihood of *normal* and *above normal* rainfall for Vunisea and *above normal* rainfall for Lakeba and Ono-I-Lau. Outlook skill is low to moderate;

Northern Division: Above normal is favoured for Labasa Airport with normal rainfall the next most likely. There is a near equal likelihood of above normal and normal rainfall for Savusavu Airport. Outlook skill is *low to moderate*;

Rotuma: The outlook offers little guidance as the chances of *above normal*, *normal* and *below normal* are similar. Outlook skill is *very low*.

NB: The X LEPS % score has been categorised as follows:

Very Low: X < 0.0 Low: $0 \le X < 5$ Moderate $5 \le X < 10$ Good: $10 \le X < 15$ High: $15 \le X < 25$

Very High: $25 \le X < 35$ Exceptional: $X \ge 35$