

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 107

Country Name: Fiji

TABLE 1: Monthly Rainfall

Station (include data period)	July 2016						
	May 2016 Total	June 2016 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Western Division							
Penang Mill (1910-2016)	52.8	56.9	13.5	26	58	38	18/107
Lautoka Mill (1900-2016)	6.6	18.9	6.4	21	60	40	20/117
Nadi Airport (1942-2016)	21.0	28.1	13.4	16	61	34	24/75
Yasawa-i-Rara (1950-2016)	7.0	80.0	8.8	20	51	34	11/63
Central Division							
Laucala Bay (Suva) (1942-2016)	171.3	50.3	78.8	87	159	118	23/75
Nausori Airport (1957-2016)	192.1	92.7	61.2	97	135	121	10/60
Tokotoko (Navua) (1945-2016)	283.3	103.6	168.5	141	214	183	32/72
Eastern Division							
Lakeba (1950-2016)	49.0	92.3	21.0	49	89	60	2/66
Vunisea (Kadavu) (1931-2016)	100.2	92.5	62.5	81	122	94	18/80
Ono-i-lau (1943-2016)	61.0	97.3	26.1	57	116	70	6/70
Northern Division							
Labasa Airport (1956-2016)	0	45.9	28.8	22	57	33	27/61
Nabouwalu (1918-2016)	43.2	M	46.5	52	104	80	28/98
Rotuma (1912-2016)	110.4	168.0	68.8	181	256	215	8/103

Period: *below normal/normal/above normal

M - Missing

**TABLE 2: Three-monthly Rainfall
May to July 2016**

Predictors and Period used: NINO3.4 SST Anomalies: January to March 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)
<i>Western Division</i>							
Penang Mill (1910-2016)	123.2	179	298	252	18/107	74:21:5 (8.9)	Consistent
Lautoka Mill (1900-2016)	31.9	153	235	202	3/117	90:7:3 (17.8)	Consistent
Nadi Airport (1942-2016)	62.5	142	247	185	8/74	74:21:5 (10.5)	Consistent
Yasawa-i-rara (1950-2016)	95.8	172	270	227	9/63	92:5:3 (14.2)	Consistent
<i>Central Division</i>							
Laucala Bay (Suva) (1942-2016)	300.4	440	613	508	8/75	76:20:4 (12.7)	Consistent
Nausori Airport (1957-2016)	346.0	431	584	517	13/60	87:11:2 (19.3)	Consistent
Tokotoko (Navua) (1945-2016)	555.4	564	756	652	24/72	75:24:1 (18.5)	Consistent
<i>Eastern Division</i>							
Lakeba, Lau (1950-2016)	162.3	255	365	320	11/66	94:4:2 (20.0)	Consistent
Vunisea (Kadavu) (1931-2016)	255.2	326	436	380	13/79	53:38:9 (3.5)	Consistent
Ono-i-lau (1943-2016)	184.4	228	375	311	12/66	89:7:4 (15.5)	Consistent
<i>Northern Division</i>							
Labasa Airport (1956-2016)	74.7	160	266	208	7/60	81:17:2 (18.3)	Consistent
Nabouwalu (1918-2016)	M	320	444	366	-	94:4:2 (21.0)	-
Rotuma (1912-2016)	347.2	690	872	786	4/102	22:39:39 (-1.0)	Near-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).

M - Missing

**TABLE 3: Seasonal Climate Outlooks using SCOPIC for
September to November 2016 – Tercile Method**

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

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS (%)	Hit-rate (%)
<i>Western Division</i>							
Penang Mill (1910-2016)	43	240	37	360	20	17.6	56.2
Lautoka Mill (1900-2016)	43	183	39	325	18	20.2	45.5
Nadi Airport (1942-2016)	48	237	39	343	13	31.0	45.5
Yasawa-i-rara (1950-2016)	42	192	38	352	20	13.4	43.5
<i>Central Division</i>							
Laucala Bay (Suva) (1942-2016)	43	459	32	754	25	11.7	48.5
Nausori Airport (1957-2016)	41	435	35	713	24	11.6	49.2
Tokotoko (Navua) (1945-2016)	46	648	40	936	14	21.9	61.5
<i>Eastern Division</i>							
Lakeba (1950-2016)	43	274	34	394	23	12.5	51.5
Vunisea (Kadavu) (1931-2016)	44	310	33	440	23	14.8	46.9
Ono-i-lau (1943-2016)	43	207	33	355	24	14.4	45.2
<i>Northern Division</i>							
Labasa Airport (1956-2016)	42	261	39	383	19	19.2	48.2
Nabouwalu (1918-2016)	49	352	32	541	19	22.2	48.4
Rotuma (1912 -2016)	36	722	27	927	37	-1.3	20.0

Seasonal Climate Outlook:

September to November 2016 - Median Table:

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

Station	Below Median (prob)	Median rainfall (mm)	Above Median (prob)	LEPS	Hit-rate
<i>Western Division</i>					
Penang Mill (1910-2016)	64	293	36	18.7	71.9
Lautoka Mill (1900-2016)	63	264	37	17.4	66.7
Nadi Airport (1942-2016)	66	296	34	24.3	71.2
Yasawa-i-rara (1950-2016)	60	263	40	9.0	62.9
<i>Central Division</i>					
Laucala Bay (Suva) (163.6942-2016)	58	614	42	6.3	65.2
Nausori Airport (1957-2016)	57	594	43	5.7	62.7
Tokotoko (Navua) (1945-2016)	67	773	33	24.2	76.9
<i>Eastern Division</i>					
Lakeba (1950-2016)	61	329	39	12.1	74.2
Vunisea (Kadavu) (1931-2016)	62	388	38	13.0	67.2
Ono-i-lau (1943-2016)	64	293	36	18.8	75.8
<i>Northern Division</i>					
Labasa Airport (1956-2016)	60	308	40	14.0	69.6
Nabouwalu (1918-2016)	69	424	31	24.3	78.1
Rotuma (1912 -2016)	50	842	50	-1.5	44.6

**TABLE 4: Seasonal Climate Outlooks using POAMA2 for
September to November 2016**

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)
Lakeba	27	225	24	313	49
Nadi	27	178	36	305	37
Nabouwalu	9	284	18	439	73
Udu Point	12	325	33	501	55
Vunisea	27	291	36	431	37
Suva	27	369	36	713	37
Rotuma	27	723	12	970	61

Summary Statements

Rainfall for July 2016:

Apart from Navua in the Central Division and Labasa Airport in the Northern Division, which had *normal* rainfall, the rest of the stations recorded *below normal* rainfall during July 2016.

It was a second driest July on record at Lakeba.

Accumulated rainfall for May to July 2016 & outlook verification:

Below normal rainfall was recorded across the country through the May to July 2016 period. It was a third driest May to July period in 117 years of record at Lautoka Mill, while it was 4th driest at Rotuma in 102 years of record.

Verification of the 3-month rainfall

The SCOPIC outlooks for May to July 2016 period were consistent at 11 stations, while it was near consistent at Rotuma. The outlook for Nabouwalu could not be verified due to missing observations.

Outlooks for September to November 2016:

1. SCOPIC:

The SCOPIC outlooks for September to November 2016 period shows:

- *Below normal* rainfall is most likely outcome at majority of the stations, with *normal* the next most likely;
- The outlook for Rotuma is mixed, with similar chances for *below normal* and *above normal* totals; *near normal* is the least likely outcome; and
- The confidences in the predictions generally range from *good* to *very high*; the exception to this is Rotuma where the confidence is *very low*.

2. POAMA:

POAMA favours *above normal* rainfall at Lakeba, Udu Point, Nabouwalu and Rotuma as the most likely outcome, with *normal* the next most likely. The outlook for Nadi Airport, Suva and Vunisea shows near equal likelihood of *normal* and *above normal* rainfall. *Below normal* rainfall is the least likely at all the stations.

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

Very Low: $X < 0.0$ Low: $0 \leq X < 5$ Moderate $5 \leq X < 10$ Good: $10 \leq X < 15$ High: $15 \leq X < 25$
Very High : $25 \leq X < 35$ Exceptional: $X \geq 35$