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Fiji Islands Climate Summary March 2008

Since: August 1980*

IN BRIEF

March was drier than expected due to the dominant effect of a ridge of high pressure over the Group. This resulted in a predominant northeasterly wind flow over Fiji for most of the month. Consequently rainfall was below average especially in southeastern Viti Levu and the eastern parts of the Northern Division. Only Sigatoka, Ba, parts of the Mamanuca Group, central Vanua Levu, Levuka and Vunisea recorded normal rainfall.

Total monthly rainfall at Udu Point, Navua, Nausori Airport and Monasavu was the lowest on record for the month of March (Table 2). At Koronivia and Laucala Bay, rainfall was the second and third lowest on record respectively. As of March 2008, a meteorological drought exists in Suva. The drought is however not expected to last much longer as above average rainfall activity is expected to take place during the April to June period.

Over the last three months, most observation sites have reported average to above average rainfall. Only at Suva, Koronivia and Rotuma was rainfall below average. The success/hit rate of the three-month prediction for January to March was close to a 100%.

Maximum air temperatures were *average* to *above average* in most parts of the country while the minimum temperatures were generally average to *below average*. Sunshine hours were *near average* across the country.

The *La Niña* event in the Pacific Basin is showing signs of weakening. Ocean temperatures are the main manifestation of this observation, as the surface of the equatorial Pacific has warmed by about 0.2 to 0.4˚C over the past fortnight. The present ENSO status is likely to continue in the coming months and gradually become *Neutral* in the later half of 2008.

For the three month period from April to June 2008, ***average to above average*** rainfall is favoured across Fiji except at Rotuma where equal chances of ***below average, average or above average*** rainfall is expected. The confidence level of the prediction is *moderate.*

The chances of cyclones affecting Fiji during the rest of April are low, but it is important to note that cyclones have occurred during La Niña conditions in the past e.g. April 1974, 1975 and 2000.

WEATHER PATTERNS

March was drier than expected due to the dominant effect of a ridge of high pressure over the Group. This resulted in a predominant northeasterly wind flow over Fiji for most of the month. The South Pacific Convergence Zone (SPCZ) was split into two portions with a weak and inactive portion to the north-northeast of Fiji near Tuvalu and Samoa and an active portion displaced southwest of its normal position near New Caledonia.

The first six days of the month were fairly dry with the western and northern parts of the larger islands experiencing afternoon showers caused mainly by the moist easterly wind flow. From March 7 to 13, a trough of low pressure brought showers to the eastern and northern parts of the country. In addition to this, the SPCZ moved over the country from the west and brought rainfall over the western and southern parts of the country from March 16 to 19.

A tropical depression to the northeast of New Caledonia dragged the SPCZ westward, breaking it away from the trough which remained over the Lomaiviti and the Lau Group and caused rainfall. A ridge of high pressure pushed onto the Group, resulting in warm and fine weather conditions over the most parts of the country from March 20 to 26. The western and northern parts of the larger islands experienced afternoon showers during this period.

From March 27 to 30, the SPCZ moved back onto the country from the west bringing rainfall, heavy at times, to most parts of the country with significant rainfall of 95mm and 82mm being recorded at Lakeba and Vunisea respectively.

Rotuma weather was dry than normal for most of the month except on a few occasions when the SPCZ brought rainfall to the island.

RAINFALL IN RECENT MONTHS

Rainfall in March

Rainfall in March ranged from *well below average* to *average*. Rainfall was less than 40% of normal across most of southeastern Viti Levu and eastern parts of the Northern Division. Apart from parts of western Viti Levu, central Vanua Levu, Levuka and Vunisea the rest of the country recorded *below average* rainfall (40-79% of normal).

Total monthly rainfall at Nausori Airport, Navua, Monasavu and Udu Point was the lowest on record. Total monthly rainfall at Koronivia was the second lowest on record and lowest since 1992. At Laucala Bay, rainfall in March was the third lowest on record and lowest since 1961. As of March 2008, a mild drought exists in Suva.

Rainfall in the last three months

Rainfall for the January to March 2008 period was expected to be generally *average* to *above average* across Fiji except in the Central Division and southern Lau Group where equal chances of *below*, *average* and *above average* rainfall. The confidence level of the forecast was generally moderate to high.

Of the 23 climate monitoring sites that reported in time for this summary, most reported average to above average rainfall for the three month period. Only at Suva, Koronivia and Rotuma was rainfall below average.

The success/hit rate of the three-month prediction was close to a 100%.

*** Previously known as the Fiji Islands Weather Summary and Monthly Weather Summary**

TABLE 1 : THREE MONTH RAINFALL : JANUARY TO MARCH 2008

Station	Actual Rainfall (mm)	Rainfall in the last three months (Below average, average or above average)	No. of Rain days in January 08 (% of total rain)	No. of Rain days in February 08 (% of total rain)	No. of Rain days in March 08 (% of total rain)
Penang Mill, Rakiraki	1974.6	Above Average	26 (61)	19 (29)	17 (10)
Monasavu Dam	2074.6	Above Average	29 (68)	24 (21)	18 (11)
Rarawai Mill, Ba	1806.8	Above Average	22 (46)	25 (33)	19 (21)
*Nacocolevu	1185.5	Above Average	23 (50)	20 (24)	19 (26)
Viwa Island	1177.2	Above Average	13(51)	16(26)	14 (23)
Lautoka (FSC Res.)	1458.1	Above Average	24 (46)	22 (38)	22 (16)
Nadi Airport	1336.1	Above Average	18 (41)	24 (40)	24 (19)
*Tokotoko, Navua	926.2	Average	25 (58)	14 (22)	19 (20)
Laucala Bay, Suva	683.0	Below Average	25 (63)	18 (21)	20 (16)
Koronivia	888.0	Below Average	23 (64)	15 (23)	20 (13)
Nausori Airport	925.3	Average	24 (65)	17 (21)	17 (14)
Nabouwalu	1142.8	Above Average	28 (55)	18 (27)	22 (18)
Labasa Airport	1721.2	Above Average	25 (55)	23 (27)	17 (18)
Savusavu Airport	1140.5	Above Average	26 (66)	15 (14)	16 (20)
Udu Point	1025.7	Above Average	25 (73)	21 (19)	20 (8)
Matei Airport	1162.5	Above Average	31 (74)	27 (16)	30 (10)
Vanua Balavu, Lau	726.2	Average	23 (61)	19(22)	16 (17)
Lakeba, Lau	792.3	Average	19 (60)	13 (14)	16 (26)
Matuku, Lau	729.5	Average	18 (47)	11 (31)	17 (22)
Ono-I-Lau, Lau	747.7	Above Average	18 (37)	13 (44)	14 (19)
Levuka, Ovalau	1398.8	Above Average	26 (58)	19(18)	19 (24)
*Vunisea, Kadavu	893.8	Above Average	25 (36)	18 (30)	22 (34)
Rotuma	785.8	Below Average	26 (57)	23 (21)	16 (22)

TEMPERATURES RELATIVE HUMIDITY AND SUNSHINE IN MARCH

Maximum Air Temperatures were generally *average* to *above average*. The greatest negative departures from normal were recorded at Nadi Airport (-0.9ºC) and Rarawai Mill, Ba (-0.7ºC). The greatest positive departures were recorded at Viwa (2.4˚C) and Ono-I-Lau (1.0ºC).

Minimum Air Temperatures were generally *average* or *below average*. The greatest negative departures were recorded at Viwa Island (-1.7ºC), Penang Mill, Savusavu Airport & Laucala Bay (-1.0ºC). The greatest positive departures were recorded at Laucala Bay and Udu point ((0.4ºC).

Relative Humidity at 0900hrs was generally *average* to *below average*h. The greatest positive anomalies were recorded at Nadi Airport (6.1%) and Rarawai Mill (2.9%). The greatest negative anomalies were recorded at Penang Mill (-5.4) and St. Johns College, (-5.0%).

Sunshine & Winds

Sunshine hours were *near average* at all sites. *Below average* surface winds were recorded at Vunisea, Nausori Airport and Rotuma. Surface winds were *near average* at Nadi Airport.

TABLE 2— NEW CLIMATE RECORDS ESTABLISHED IN MARCH 2008

Element	Station	Observed (record)	On	Rank	Previous (record)	Year	Records Began
Monthly Total Rainfall	Udu Point	82.7mm	-	New low	83.8mm	2005	1946
Monthly Total Rainfall	Tokotoko, Navua	192.3mm	-	New low	218.1mm	1998	1992
Monthly Total Rainfall	Nausori Airport	134.1mm	-	New low	145.3mm	1961	1956
Monthly Total Rainfall	Monasavu	231.6mm	-	New low	238.8mm	2006	1980
Monthly Max Temp	Viwa Island	33.4°C	-	New High	32.6°C	1998	1978
Daily Max Temp	St. Johns, Levuka	27.5°C	19th	New Low	28.0°C	2007	1984

Figure 1

Nadi Airport - Temperature & Rainfall Records for the last 13 Months (March 2007 - March 2008)

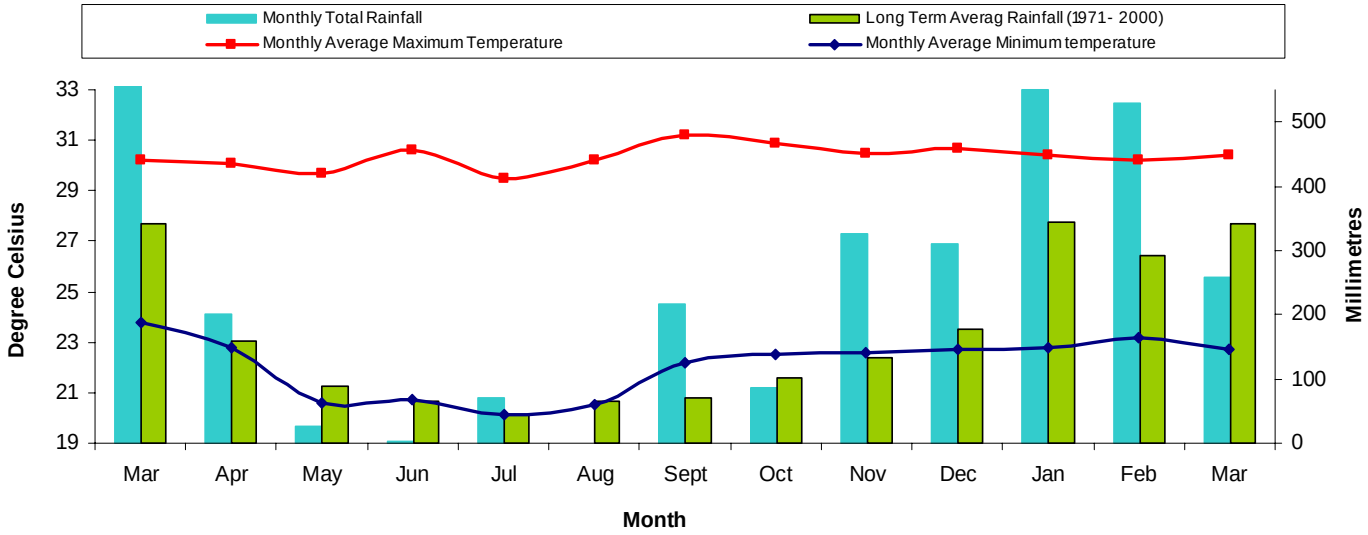


Figure 2

Labasa Airfield - Temperature & Rainfall Records for the last 13 Months (March 2007 - March 2008)

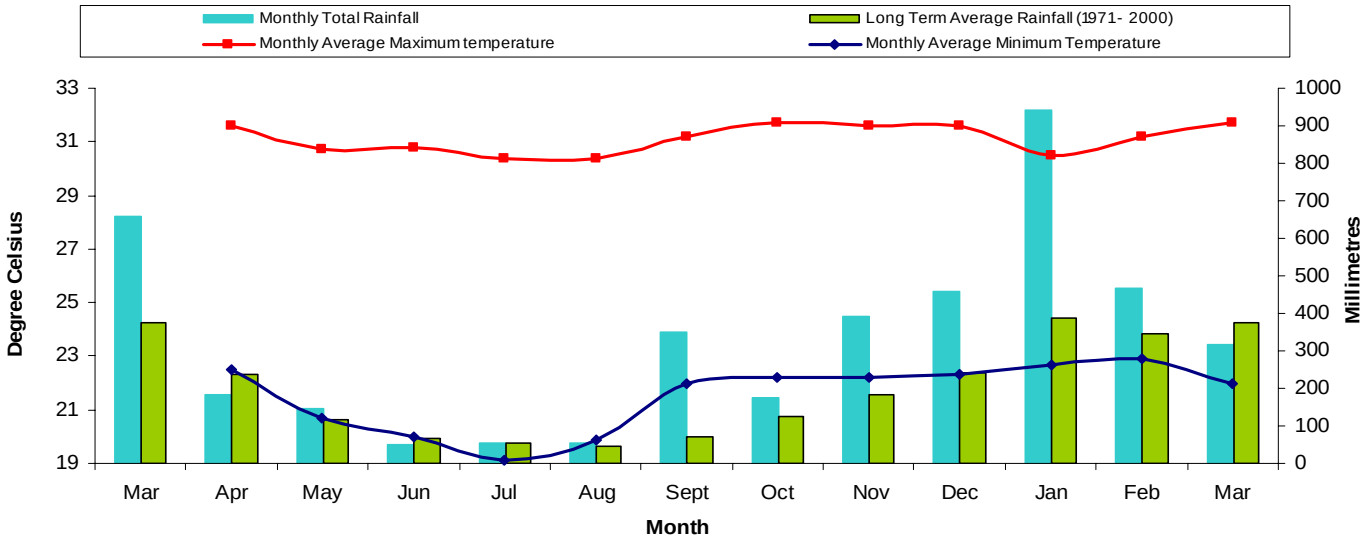
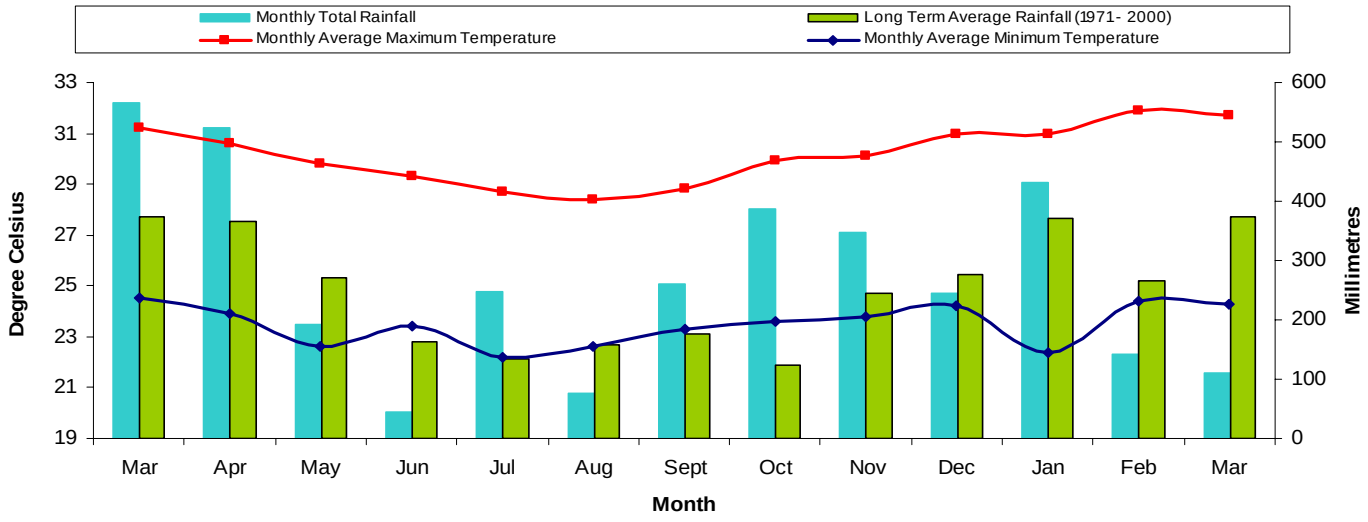


Figure 3

Laucala Bay/Suva - Temperature & Rainfall Records for the last 13 Months (March 2007 - March 2008)



PRELIMINARY CLIMATOLOGICAL SUMMARY FOR MARCH 2008

PRELIMINARY CLIMATOLOGICAL DATA FOR MONTH 3 , 2008 : SUMMARY FOR DAYS 1 TO 31

	RAINFALL				AIR TEMPERATURES								SUNSHINE	
	TOTAL	*	RAIN DAYS	MAX. FALL	AVERAGE DAILY MAX.	#	AVERAGE DAILY MIN.	#	EXTREME MAX.	ON	EXTREME MIN.	ON	TOTAL	*
	MM	%	+	MM	C		C		C		C		HRS	%
NADI AIRPORT	258	76	24	51 29	30.4	-0.9	22.7	-0.1	32.5	11	20.0	31	178	93
SUVA/LAUCALA BAY	111	30	20	40 29	31.7	0.8	24.3	0.4	33.2	4	23.0	23	168	99
NACOCOLEVU	305	115	19	55 22	31.5	0.4	22.4	-0.2	36.0	10	21.5	20	149	98
ROTUMA	173	47	16	46 4	31.2	0.6	24.6	-0.1	32.1	3	23.0	25	176	107
VIWA	271	112	14	80 17	33.4	2.4	23.5	-1.7	34.5	10	21.0	18		
UDU POINT	83	26	20	17 29	31.1	0.4	24.6	0.2	32.5	17	23.0	19		
SAVUSAVU AIRFIELD	231	82	16	52 19	30.5	-0.1	22.6	-1.0	33.4	9	21.0	19		
LABASA AIRFIELD	316	85	17	75 30	31.7	0.2	22.0	-0.3	33.6	5	20.5	2		
NABOUWALU	231	69	22	57 18	30.8	0.7	23.8	-0.5	32.3	28	21.7	19		
KORONIVIA	119	31	20	28 29	30.8	0.3	23.2	0.3	32.5	22	21.9	26		
NAUSORI AIRPORT	134	35	17	40 29	30.6	0.1	22.6	-0.6	32.4	9	19.5	31		
NAVUA/TOKOTOKO	192	47	19	47 28	30.6	-0.4	21.6	0.0	32.5	27	20.0	4		
MONASAVU	232	37	18	40 14	25.7	0.3	18.8	-0.4	27.5	10	16.6	4		
LAUTOKA AES	233	76	22	37 18	30.6	-0.4	23.3	-0.5	32.2	11	18.9	7		
BA/RARAWAI MILL	376	103	19	80 29	31.3	-0.7	21.8	-0.5	33.0	11	20.0	7		
PENANG MILL	206	48	17	63 29	31.4	0.9	22.8	-1.0	33.4	11	21.1	14		
MATEI AIRFIELD	117	31	30	22 18	30.8	0.5	24.2	0.0	34.0	31	22.5	13		
VANUABALAVU	122	56	16	24 28	30.8	0.3	24.9	0.1	32.0	10	22.8	23		
LAKEBA	205	70	16	95 28	30.1	-0.2	22.7	-1.3	31.0	7	21.2	9		
ST. JOHNS COLLEGE	338	112	19	65 18	30.7	-0.0	23.5	-1.0	32.5	10	21.5	19		
VUNISEA	306	101	22	82 28	30.5	0.5	23.6	0.1	33.8	9	20.9	31		
MATUKU	160	63	17	37 28	30.2	-0.2	24.4	-0.2	32.6	9	22.3	18		
ONO-I-LAU	144	57	14	41 16	30.2	0.9	24.1	-0.3	34.0	29	21.0	11		

RAINFALL OUTLOOK FOR FIJI ISLANDS - APRIL TO JUNE 2008

The 2007/08 *La Niña* event in the Pacific basin is showing the first signs of weakening. Ocean temperatures are the main manifestation of this: the surface of the equatorial Pacific has warmed by about 0.2 to 0.4˚C over the past fortnight and mass of cold sub-surface water in the eastern Pacific has decreased in both intensity and volume. Other indicators of SOI (falling with 30-day on 23rd was +15.7), western to central Pacific Trade Winds and Pacific cloudiness remain typical of La Nina. These observations are consistent as most dynamical and statistical ENSO models forecast continuation of La Niña conditions, but gradual weakening of the event through the April to June 2008 period. The probability of ENSO neutral conditions in the later half of 2008 is around 50%.

Based on current and predicted ocean and atmospheric conditions, generally ***average to above average*** rainfall is favoured across the Fiji Group except at Rotuma where equal chances of *above average*, *average* and *below average* rainfall is expected for the April to June 2008 period. The confidence level of the prediction is *moderate.*

(More detailed climate predictions will follow in the 'Fiji Islands Climate Outlook' to be released in mid February).

2007/2008 TROPICAL CYCLONE SEASON

The 2007/08 Southwest Pacific Tropical Cyclone season will end on April 30, 2008. To date, five cyclones have formed in the Southwest Pacific basin of which four cyclones have formed and traversed through Fijis area of responsibility. Three of these cyclones have directly or indirectly affected some parts of Fiji this season. The first cyclone of the season was named "*TC Guba*" by Brisbane Tropical Cyclone Warning Centre on November 15. *TC Guba* reached category 1 status with maximum wind gusts of 50 knots. *Tropical Cyclone (TC) Daman*, passed over Cikobia Island and close to Vanua Levu from December 5-9. *TC Funa* affected the western and the southern parts of Fiji from January 16-19. *TC Gene*, developed to the north east of Vanua Levu on January 28 and followed a northeast to southwest track over the Lomaiviti Group then over northern Viti Levu and through the Yasawa & Mamanuca Groups on January 31. *TC Gene* passed over Fiji as a category 1 cyclone with damaging winds of 50 knots at the centre and gusts of 70 knots. *TC Elisa* formed near the dateline reaching tropical cyclone status on January 10. Peak wind speeds were about 50 knots and affected parts of the Cook Islands.

The chances of cyclones affecting Fiji during the rest of April are rather low but it is important to note that cyclones have occurred during La Niña conditions in the past e.g. April 1974, 1975 and 2000.

Normal *- Long term average from 1971 to 2000.*

Average *- Rainfall between 80 to 119%.*

Well Below Average *- Rainfall less than 39%.*

Above Average *- Rainfall between 120 to 199%.*

Below Average *- Rainfall between 40 to 79%.*

Well Above Average *- Rainfall more than 200%.*