FIJI METEOROLOGICAL SERVICE
Private Mail Bag (NAP0351)
Nadi Airport, Fiji Islands

Ph: +679 6724888, Fax: +679 6736047
Email: climate@met.gov.fj
See online version at http://www.met.gov.fj

Fiji Islands Climate Summary April 2008

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IN BRIEF

Rainfall in April was below average in a substantial part of the country, however there was significant improvement compared to the previous months especially in the Central Division. During April, Fiji's weather was mainly influenced by ridges of high pressure extending from the south. Also contributing to the drier than normal conditions was the weaker than normal South Pacific Convergence (SPCZ) to the northeast of the country. Significant rainfall was received on two occasions, between April 9 to 15 and April 16 to 23.

Below average rainfall was received in parts of the Northern and Central Division and in the Southern Lau Group. *Above average* rainfall was experienced at Lakeba, Nadi Airport, and Ba. The rest of the country experienced average rainfall during April.

Considering the La Niña conditions in recent months, Fiji's weather was unexpectedly drier than normal during the second half of the Wet Season. Rainfall during the February to April 2008 period was predicted to be *average* or *above average* across Fiji. Rainfall was less than expected in parts of the Northern and Eastern Divisions and below average in the Central Division and at Monasavu

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

The 2007/08 *La Niña* event in the Pacific basin continued to weaken during April with majority of the indicators returning to near normal values. Computer predictions show Pacific temperatures gradually increasing over the next two seasons, but remaining near average. The models also indicate a low chance of either strong warming to El Niño levels or a re-intensification of La Nina conditions during 2008.

For the period from May to July 2008, generally above average is favoured however parts of the country (especially in the Central and Eastern Divisions) may receive average rainfall. The confidence level of the prediction is *moderate.*

WEATHER PATTERNS

Weather conditions were in April were typical of a Wet to Dry Season transition month with the gradual dominance compared to previous months of ridges of high pressure over the country. The SPCZ was split into two portions during most of April. A weak portion to the northeast of Fiji and an active portion to the southwest. On two occasions, the SPCZ became active and merged with frontal systems from the south causing significant rainfall over the country.

The month began with a ridge of high pressure dominating Fiji's weather. This weakened on April 2 and was followed by a moist easterly wind flow which, resulted in afternoon showers over the larger islands for the next two days.

A trough associated with a low pressure system to the west approached the country, dragging the SPCZ onto the Group. This caused rainfall over most places from April 5 to 7. The system then merged with a front close to the Fiji Group. Widespread rainfall was received from April 9 to 15. Significant rainfall was experienced from April 10 to 12 when the system was most active. More than 100mm of rainfall was recorded in Navua, and Lakeba on April 11. Following the passage of the trough, a ridge pushed in from the southeast resulting in a brief spell of fine weather.

Later in the month another trough developed to the northwest of Fiji. This merged with a frontal system and dragged the SPCZ over the country between the April 16 and 22. During this period rainfall was recorded across most of the country. From April 23 until the end of the month, drier, stable conditions returned under the influence of ridge of high pressure from the southwest.

Rotuma experienced rainfall on 25 days of the month. Rainfall above 10mm was recorded between April 2-5, 10-11, 13 and 20-21.

RAINFALL IN RECENT MONTHS

Rainfall in April

Rainfall in April ranged from *below average* to *above average* across the country. Less than 70% of normal rainfall was experienced at Matuku, Matei Airport, Lautoka Mill, Udu Point and Oni-I-Lau. In contrast, Lakeba Island and Nadi Airport received more than 120% of normal rainfall. Apart from these areas, the rest of the country received 71% to 119% of normal rainfall.

The country experienced widespread rainfall during the passage of an active trough of low pressure and recorded significant one day rainfall of 155.0mm at Tokotoko in Navua, 119.0mm at Lakeba Island, 85.0mm at St. Johns College in Levuka, 77.0mm at Savusavu Airport and 66.7mm at Koronivia on April 11.

Rainfall in the last three months

Rainfall during the February to April 2008 period was expected to be *average* to *above average* across Fiji except in the Central Division where equal chances of *below average, average* and *above average* rainfall was expected. The confidence level of the forecast was generally moderate.

Rainfall was less than expected (below average) in parts of the Northern and Eastern Divisions. Rainfall was also below average in the Central Division and at Monasavu. The success/hit rate of the three-month prediction was 50%.

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

TABLE 1 : THREE MONTH RAINFALL : FEBRUARY TO APRIL 2008

Station	Actual Rainfall (mm)	Rainfall in the last three months (Below average, average or above average)	No. of Rain days in February 08 (% of total rain)	No. of Rain days in March 08 (% of total rain)	No. of Rain days in April 08 (% of total rain)
Penang Mill, Rakiraki	994.2	Average	19 (57)	17 (21)	25(22)
Monasavu Dam	1077.2	Below Average	24 (39)	18 (22)	22(39)
Rarawai Mill, Ba	1233.6	Above Average	25 (49)	19 (30)	14(21)
*Nacocolevu	727.9	Average	20 (39)	19 (42)	13(19)
Viwa Island	785.1	Average	16(39)	14 (35)	15(26)
Lautoka (FSC Res.)	904.7	Average	22 (61)	22 (26)	14(13)
Nadi Airport	979.1	Above Average	24 (54)	24 (26)	14(20)
*Tokotoko, Navua	797.2	Below Average	14 (25)	19 (24)	15(51)
Laucala Bay, Suva	602.9	Below Average	18 (24)	20 (18)	21(58)
Koronivia	614.3	Below Average	15 (33)	20 (19)	18(48)
Nausori Airport	579.9	Below Average	17 (32)	17 (23)	18(45)
Nabouwalu	756.5	Below Average	18 (41)	22 (27)	22(32)
Labasa Airport	1013.8	Average	23 (46)	17 (31)	19(23)
Savusavu Airport	691.0	Average	15 (23)	16 (33)	18(44)
Udu Point	424.6	Below Average	21 (45)	20 (19)	15(36)
Matei Airport	495.1	Below Average	27 (37)	30 (24)	30(39)
Vanua Balavu, Lau	443.5	Below Average	19(37)	16 (27)	14(36)
Lakeba, Lau	693.8	Below Average	13 (17)	16 (32)	15(51)
Matuku, Lau	506.8	Average	11 (45)	17 (32)	8(23)
Ono-I-Lau, Lau	540.1	Average	13 (61)	14 (27)	9(12)
Levuka, Ovalau	847.3	Average	19(30)	19 (40)	15(30)
*Vunisea, Kadavu	827.1	Average	18 (32)	22 (37)	22(31)
Rotuma	615.8	Below Average	23 (27)	16 (28)	25(45)

AIR TEMPERATURES, RELATIVE HUMIDITY AND SUNSHINE IN APRIL

Maximum Air Temperatures were *average* to *above average* across the country. The greatest positive departures form normal were recorded at Ono-I-Lau (1.8˚C), Nacocolevu (1.7˚C) and Nabouwalu (1.6ºC).

Minimum Air Temperatures were near *average* except at Nadi Airport, Vunisea and Matuku which experienced *above average* night-time temperatures. The greatest negative departures were recorded at Lakeba & Savusavu Airport (-0.8ºC) and St. Johns College (-0.7ºC). The greatest positive departures were recorded at Matuku (1.1˚C), Vunisea (1.0˚C) and Nadi Airport (0.7ºC).

Relative Humidity at 0900hrs was generally *average* to *below average*. The greatest positive anomalies were recorded at Nadi Airport (3.9%), Matuku (3.4%) and Monasavu (3.1%). The greatest negative anomalies were recorded at Penang Mill (-6.3), St. Johns College, (-3.8%) and Nabouwalu (-3.6%).

Sunshine & Winds

Sunshine hours were *average* to *above average* at all sites in April. Wind recoding sites around the country recorded *below average* surface winds except at Nadi Airport where the surface winds were *above average*.

TABLE 2– CLIMATE RECORDS ESTABLISHED IN APRIL 2008

Element	Station	Observed (record)	On	Rank	Previous (record)	Year	Records Began
No records established in April 2008							

Figure 1

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

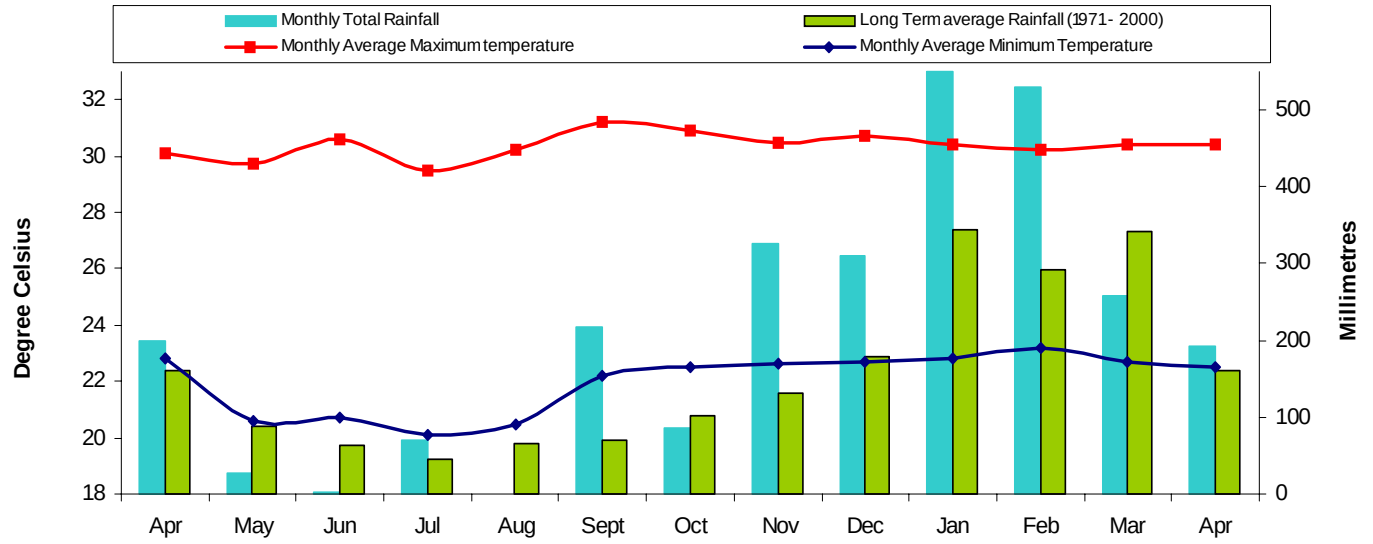


Figure 2

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

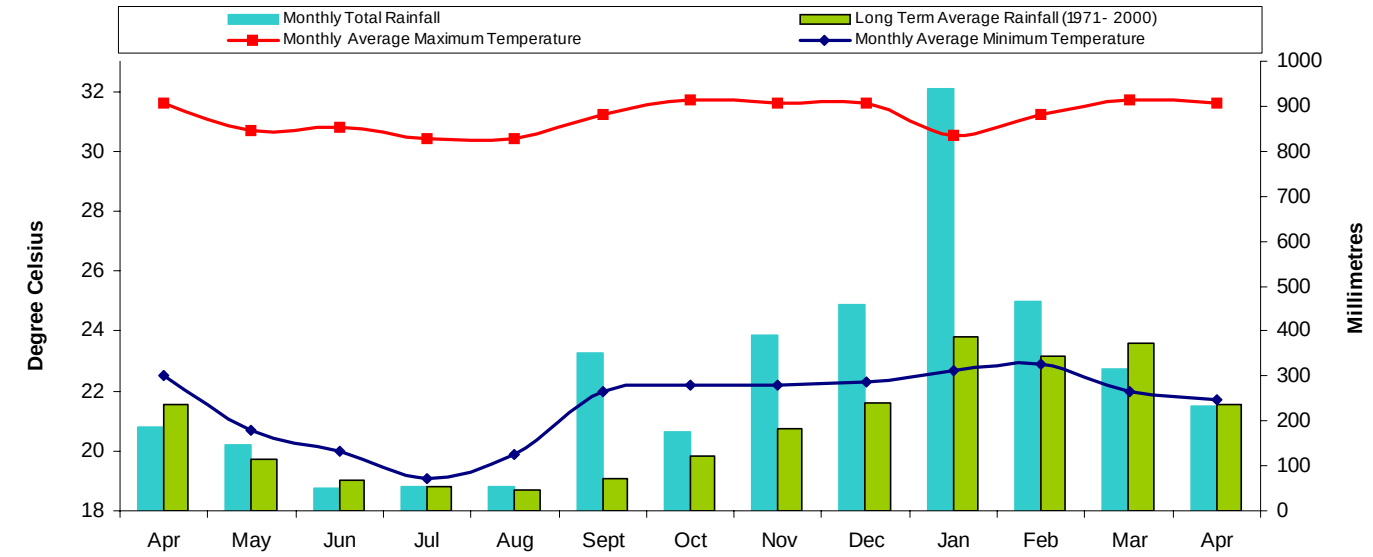
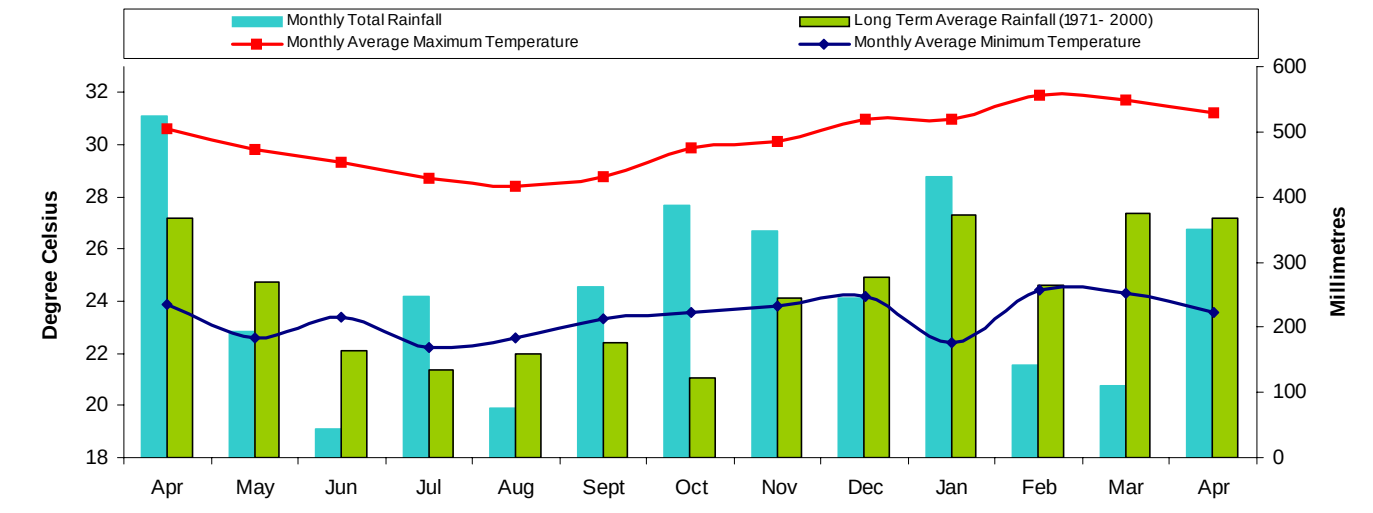


Figure 3

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



PRELIMINARY CLIMATOLOGICAL SUMMARY FOR APRIL 2008

PRELIMINARY CLIMATOLOGICAL DATA FOR MONTH 4 , 2008 : SUMMARY FOR DAYS 1 TO 30

	RAINFALL					AIR TEMPERATURES								SUNSHINE	
	TOTAL	*	RAIN DAYS	MAX. FALL		AVERAGE DAILY MAX.	#	AVERAGE DAILY MIN.	#	EXTREME MAX.		EXTREME MIN.		TOTAL	*
	MM	%	+	MM	ON	C		C		C	ON	C	ON	HRS	%
NADI AIRPORT	192	120	14	41	3	30.4	-0.3	22.5	0.7	32.3	18	19.0	28	220	111
SUVA/LAUCALA BAY	351	96	21	56	10	31.2	1.3	23.6	0.3	32.9	1	22.4	2	184	120
NACOCOLEVU	140	90	13	37	20	31.9	1.7	21.4	-0.1	33.5	19	19.0	14	166	98
ROTUMA	279	95	25	41	20	31.1	0.6	24.6	-0.2	32.0	19	22.7	3	218	119
VIWA	205	89	15	49	14	31.3	1.0	24.4	-0.4	33.7	2	22.5	6		
UDU POINT	151	55	15	49	1	30.9	0.7	24.4	0.2	32.0	12	21.2	21		
SAVUSAVU AIRFIELD	303	116	18	77	11	30.1	0.3	22.4	-0.8	32.0	6	21.0	5		
LABASA AIRFIELD	232	98	19	51	6	31.6	0.6	21.7	0.4	33.0	16	20.1	23		
NABOUWALU	243	81	22	33	4	30.6	1.6	24.0	0.0	32.7	5	22.4	11		
KORONIVIA	295	79	18	67	11	30.4	0.9	22.7	0.4	32.9	21	20.5	2		
NAUSORI AIRPORT	260	72	18	48	12	30.1	0.8	22.2	-0.3	32.9	21	20.0	2		
NAVUA/TOKOTOKO	405	90	15	155	11	30.0	0.0	21.6	0.6	32.5	7	19.0	2		
MONASAVU	420	77	22	86	14	25.1	1.0	18.8	0.3	27.1	5	16.2	2		
LAUTOKA AES	118	63	14	29	6	31.2	0.7	23.1	0.2	33.6	25	21.2	14		
BA/RARAWAI MILL	253	122	14	77	10	32.0	0.5	21.2	-0.0	33.5	24	18.9	3		
PENANG MILL	219	81	25	36	10	31.0	1.4	23.0	-0.2	32.4	14	20.7	3		
MATEI AIRFIELD	194	65	30	34	6	30.1	0.6	24.0	0.2	32.1	7	22.2	3		
VANUABALAVU	161	81	14	83	12	30.4	0.8	24.8	0.4	32.0	10	22.5	13		
LAKEBA	324	157	15	119	11	30.1	0.8	23.0	-0.8	31.2	8	19.5	2		
ST. JOHNS COLLEGE	260	90	15	85	11	30.2	0.5	23.5	-0.7	31.5	8	21.0	13		
VUNISEA	254	108	22	67	5	30.0	1.1	23.7	1.0	31.1	16	21.6	3		
MATUKU	118	68	8	53	12	30.1	0.9	25.0	1.1	31.8	5	23.0	6		
ONO-I-LAU	67	43	9	26	4	30.0	1.8	24.2	0.6	32.9	23	23.1	3		

RAINFALL OUTLOOK FOR FIJI ISLANDS - MAY TO JULY 2008

The 2007/08 *La Niña* event in the Pacific basin continued to weaken during April with majority of the indicators returning to near normal values. Only the western Pacific to central Pacific displayed features of La Nina event with cooler than average ocean temperatures, enhanced Trade Winds and reduced cloud amounts. Elsewhere, ocean surface and sub-surface temperatures continued to warm and extend through the far eastern Pacific, near South America. Furthermore, the Trade Winds across the eastern half of the Pacific are closer to or weaker than average. SOI has been falling since March and is now in neutral range. Computer predictions show Pacific temperatures gradually increasing over the next two seasons, but remaining near average. The models also indicate a low chance of either strong warming to El Niño levels or a re-intensification of La Nina conditions during 2008.

Based on recent ocean and atmospheric conditions, ***generally above average is favoured over the May to July period however parts of the country (especially in the Central and Eastern Divisions) may receive average rainfall.*** The confidence level of the prediction is *moderate.*

2007/2008 TROPICAL CYCLONE SEASON

The 2007/08 Southwest Pacific Tropical Cyclone season ended on April 30, 2008. Five cyclones formed in the Southwest Pacific basin during the season with four forming east of 160ºE. Two of these cyclones affected Fiji.

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* passed to the west of Fiji from January 16-19. A tropical depression developed to the north east of Vanua Levu on January 28 and followed a northeast to southwest track just north of the Lomaiviti Group. The system was declared a cyclone and named *TC Gene* near Nabouwalu. The cyclone continued over northern Viti Levu and through the Yasawa and 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 Date line reaching tropical cyclone status on January 10. Peak wind speeds were approximately 50 knots. Parts of the Cook Islands were affected by *TC Elisa*.

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%.*