

Issued: 03rd May 2007

Fiji Islands Climate Summary

April 2007

FIJI METEOROLOGICAL SERVICE

IN BRIEF

The wet weather conditions experienced in the last two months continued into April, though rainfall was less frequent and intense than in February and March. The passage of two active weather systems and tropical cyclone *Cliff* brought significantly heavy rainfall to parts of Viti Levu and Vanua Levu, Tavueni and the Lau Group resulting in these regions recording average to well above average rainfall.

Tropical cyclone *Cliff* was named on April 4 just east of Udu Point. As it passed close to Vanua Levu, Tavueni and over northern Lau Group, maximum sustained winds of 40 knots were recorded close to its centre. Associated rainfall was heavy and widespread with notable 24-hour falls recorded at Udu Point (132mm), Matei (110mm) and Lakeba (190mm).

Parts of Viti Levu and Vanua Levu experienced significant flooding during the month. On one occasion, a person drowned while trying to cross a flooded river in Nadi. The continuing wet weather conditions had a major impact on Fiji roads which continued to deteriorate. Also

during the month, reports of typhoid and dengue fever and leptospirosis were reported in the Northern Division.

On an inter-seasonal scale, rainfall for the February to April period was average to above average across the country. Rainfall for the period was expected to be below average to average, as El Niño conditions existed in late 2006.

Daytime and night time temperatures around the country in April were generally average to above average. There were a number of notably cool nights during the month, when ridges of high pressure extended over Fiji from the south.

As of early May, the ENSO status is near *neutral*. The key indicators and climate prediction models favour continuing neutral or La Niña conditions. In next three months, Fiji rainfall is likely to vary around *average*.

WEATHER PATTERNS

Two significant troughs of low pressure and a tropical cyclone affected the country in April. In-between these systems, the country experienced intervals of fine weather as ridges of high pressure extended over Fiji. The increasing influence of the subtropical high pressure belt on Fiji's weather signals a gradual shift towards dry season conditions.

A tropical disturbance located to the northwest of Fiji moved towards the country along a slow moving trough of low pressure on April 1. The disturbance developed into a Tropical Depression on April 2. It intensified further to be named TC *Cliff* on April 4, when it was just east of Udu Point. At this point the system had winds estimated to be 40 knots close to the centre. TC *Cliff* then tracked southeast through the Lau group, moving away from Fiji late on April 5.

During the passage of TC *Cliff* damaging gale force winds affected the eastern parts of Vanua Levu, Tavueni and nearby smaller islands, as well as islands in the Lau Group. Rainfall was heavy and widespread with notable 24-hour falls of 132mm at Udu Point, 110mm at Matei and 190mm at Lakeba on April 4. As TC *Cliff* moved away from the

Group, a ridge of high pressure extended from the south maintaining generally fine weather conditions from April 5 to 11. Night time conditions were notably cool during this period.

On April 12, a trough moved onto Fiji from west and lingered around Fiji till April 21. Rainfall was recorded over most places with isolated moderate to heavy rainfall resulting in localised flooding. The trough was displaced by a ridge of high pressure extending over the Group from the south. This ridge maintained fine weather and cool night time conditions until April 26.

Late on April 26, a third trough developed and moved slowly over Fiji until the end of the month. While a slow moving area of high pressure lay to the south, moist east to southeast winds caused showers and isolated thunderstorms especially over the larger islands.

Rotuma continued to experience rain and thunderstorms during April as the South Pacific Convergence Zone remained close to the island. Substantial rainfall was recorded on April 2 - 4, 9 and 27.

RAINFALL IN LAST THREE MONTHS, TEMPERATURES AND HUMIDITY

Rainfall varied considerably across the country in April. Two significant troughs of low pressure systems and TC *Cliff* were responsible for the eastern parts of Vanua Levu, Tavueni and parts of the Lau Group recording above average rainfall. Above average rainfall was also recorded in Suva, Navua, Nadi Airport and Lautoka. Lakeba recorded a new high monthly rainfall record of 523.2mm during the month. The remaining parts of the country received average to below average rainfall.

The seasonal rainfall outlook for the February to April 2007 period in the January Fiji Islands Climate Summary issue was for rainfall to be *average to below average* across the country. The confidence level of the prediction was *moderate to low*.

In the last three months, eight of the 19 sites that reported in time for this publication received *average* rainfall and 11 sites received *above average* rainfall.

Maximum Air Temperatures were mainly average to above average during the month except at Nadi Airport and Matuku which recorded below average temperatures. The highest positive anomalies were recorded at Viwa Island (2.3°C) and Nabouwalu (1.6°C). The lowest negative anomaly of 0.6°C was recorded at Nadi Airport.

Minimum Air Temperatures were also average to above average across most of the country. However there were a few notable very cool nights during the month. The highest positive anomaly of 1.2°C was recorded at Labasa Airfield while lowest negative anomaly of 0.6°C was recorded at Matuku.

Relative Humidity at 0900hrs was above average at all recording sites except Matuku, Penang and Rotuma which reported relative humidity 6.7%, 5.3% and 1.8% below average respectively. The greatest positive anomalies were recorded at Nadi Airport (9.9%), Levuka (7.5%) and Nacocolevu (8.4%).

TABLE 1 : SHOWING RAINFALL FROM FEBRUARY TO APRIL 2007

<u>Station</u>	<u>Actual Rainfall (mm)</u>	<u>Rainfall in the last three months (Below average, average or above average)</u>	<u>No. of Rain days in February 07 (% of total rain)</u>	<u>No. of Rain days in March 07 (% of total rain)</u>	<u>No. of Rain days in April 07 (% of total rain)</u>
Penang Mill	1265.2	Above Average	22 (26)	27 (58)	18(16)
Monasavu Dam	1779.8	Average	25 (42)	28 (39)	22(19)
Rarawai Mill, Ba	1647.2	Above Average	18 (35)	25 (5)	14(10)
Nacocolevu ^a	878.9	Above Average	14 (40)	25 (42)	12(18)
Viwa Island	786.2	Average	18 (35)	25 (45)	11(20)
Lautoka (FSC Res.)	1354.3	Above Average	17 (32)	25 (50)	16(18)
Nadi Airport	1384.4	Above Average	16 (37)	29 (48)	17(15)
^a Data missing from February 8 and 13					
Tokotoko, Navua	1604.8	Above Average	23 (29)	27 (38)	18(33)
Laucala Bay, Suva	1427.9	Above Average	25 (24)	27 (40)	24(36)
Nausori Airport	1195.2	Average	23 (25)	27 (48)	22(27)
^b Data missing from April 18 and 30					
Nabouwalu	817.4	Average	24 (31)	26 (34)	24(35)
Labasa Airport	1407.4	Above Average	22 (40)	26 (47)	13(13)
Savusavu Airport	790.4	Average	19 (49)	24 (31)	15(20)
Udu Point	962.3	Average	21 (34)	23 (31)	16(35)
Matei Airport	1073.6	Average	28 (39)	30 (25)	29(36)
^b Data missing from April 18 and 30					
Lakeba Is.	1119.6	Above Average	17 (20)	23 (33)	19(47)
Matuku Is ^b	801.3	Above Average	18 (27)	23 (46)	17(27)
Ono-I-Lau Is.	595.1	Average	12 (38)	20 (32)	15(30)
Vunisea, Kadavu	1193.1	Above Average	22 (32)	31 (48)	22(20)
^b Data missing from April 18 and 30					
Rotuma	1261.3	Above Average	23 (35)	26 (41)	21(24)

TABLE 2 : NEW CLIMATE RECORDS IN APRIL

<u>Element</u>	<u>Station</u>	<u>Observed (record)</u>	<u>On (date)</u>	<u>Rank</u>	<u>Previous (record)</u>	<u>Year</u>	<u>Records Began</u>
Monthly Rainfall	Lakeba	523.2mm		New High	522.0mm	1973	1924
Mean Monthly Max Temp	Viwa	32.6°C		New High	32.4°C	2006	1992

Figure A

Nadi Airport - Temperature & Rainfall Records for the last 13 Months
(April 2006 - April 2007)

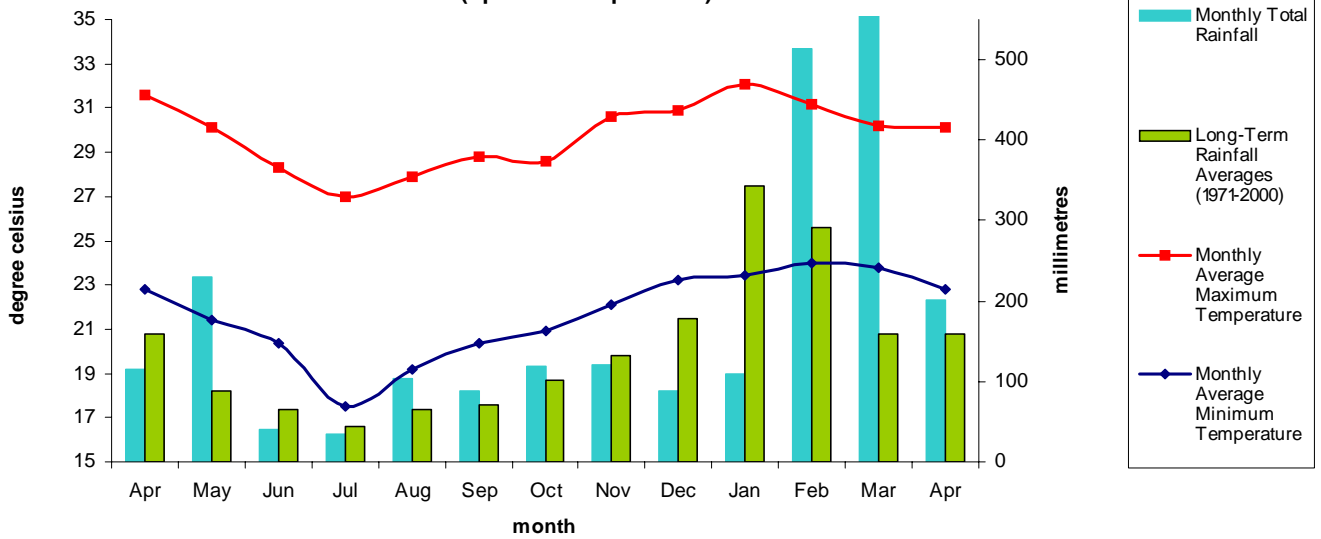


Figure B

Labasa Airfield - Temperature & Rainfall Records for the last 13 Months
(April 2006 - April 2007)

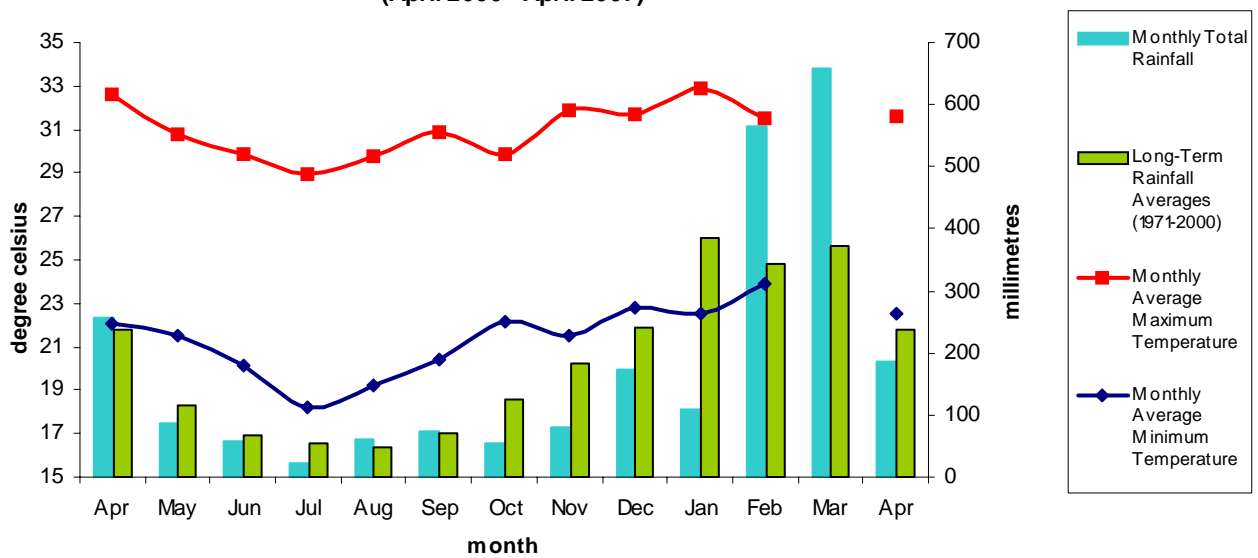
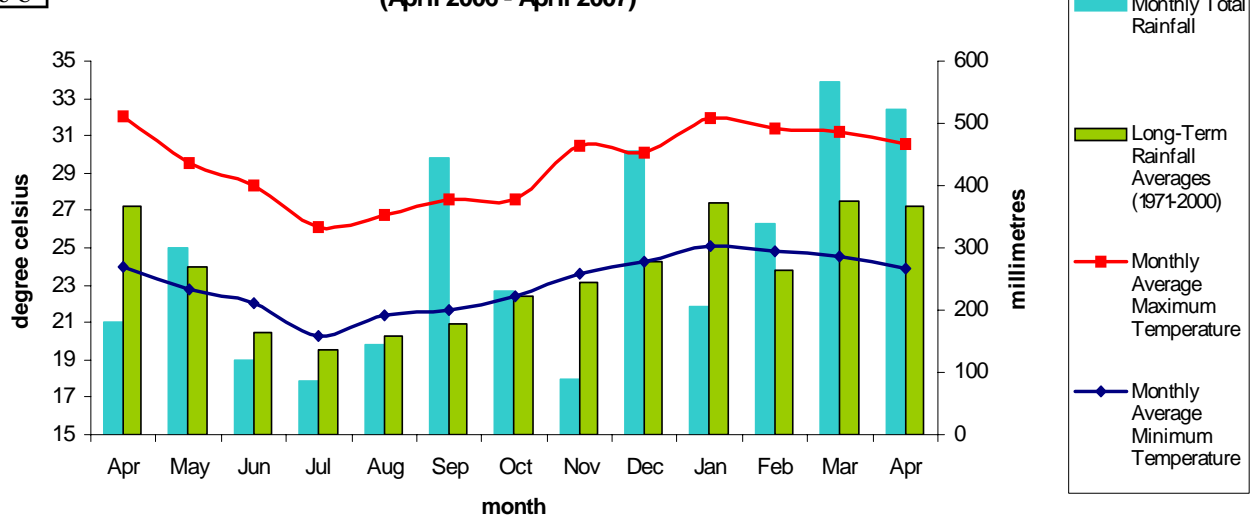


Figure C

Laucala Bay/Suva - Temperature & Rainfall Records for the last 13 Months
(April 2006 - April 2007)



PRELIMINARY CLIMATOLOGICAL SUMMARY FOR APRIL 2007

PRELIMINARY CLIMATOLOGICAL DATA FOR MONTH 4 , 2007 : SUMMARY FOR DAYS 1 TO 30

	RAINFALL				AIR TEMPERATURES								SUNSHINE		
	TOTAL	RAINFALL		MAX.	AVERAGE DAILY				EXTREME		TOTAL				
	MM	* %	DAYS +	FALL MM ON	MAX. C	# C	MIN. C	# C	MAX. C	MIN. C	ON	ON	HRS	%	
NADI AIRPORT	200	125	17	56	17	30.1	-0.6	22.8	1.0	32.6	2	20.7	22	158	80
SUVA/LAUCALA BAY	523	143	24	100	20	30.6	0.7	23.9	0.6	33.4	11	20.6	27	135	88
NACOCOLEVU	158	102	12	28	17	30.8	0.6	22.6	1.1	33.5	9	20.3	22	132	78
ROTUMA	300	102	21	65	4	30.9	0.4	25.0	0.2	32.4	7	23.4	5	163	89
VIWA	155	67	11	38	17	32.6	2.3	24.4	-0.4	33.6	24	22.5	13		
UDU POINT	341	123	16	132	4	30.5	0.3	24.4	0.2	32.5	18	22.0	5		
LABASA AIRFIELD	185	78	13	62	2	31.6	0.6	22.5	1.2	33.8	8	20.8	9		
NABOUWALU	161	54	24	35	2	30.6	1.6	24.3	0.3	32.8	6	22.5	12		
SAVUSAVU AIRFIELD	160	61	15	39	1	30.4	0.6	23.6	0.4	32.5	11	22.0	12		
MATEI AIRFIELD	387	129	29	110	4	30.1	0.5	Mis si ng		31.5	24	Mis si ng			
YASAWA-I -RARA	NO REPORT														
VATUKOULA	NO REPORT														
MONASAVU	346	66	22	91	1	25.6	1.5	19.0	0.4	27.8	6	16.6	24		
NAUSORI AIRPORT	327	92	22	72	14	30.0	0.7	23.1	0.6	32.1	6	21.5	23		
NAVUA/TOKOTOKO	542	145	18	97	14	29.6	0.6	22.2	-0.3	31.5	6	20.5	11		
LEVUKA	167	70	21	38	20	30.3	0.9	23.9	-0.0	32.5	8	21.0	9		
LAKEBA	523	254	19	190	4	29.6	0.3	23.8	0.0	31.4	6	22.2	15		
MATUKU	217	125	17	48	19	28.9	-0.3	23.3	-0.6	31.7	6	19.6	20		
VUNI SEA	241	103	22	36	21	29.7	0.9	23.8	1.1	32.5	5	20.4	22		
ONO-I -LAU	178	117	15	41	18	29.1	0.9	24.2	0.6	31.4	4	21.3	15		
BA/RARAWAI MI LL	161	78	14	43	18	31.8	0.3	22.2	1.0	34.9	9	19.8	23		
LAUTOKA AES	242	129	16	60	12	30.5	-0.0	23.4	0.5	32.2	5	21.2	22		
PENANG MI LL	196	73	18	50	17	30.7	1.1	23.1	-0.1	32.3	3	19.7	24		

RAINFALL OUTLOOK FOR FIJI ISLANDS - MAY TO JULY 2007

The El Niño Southern Oscillation (ENSO) conditions in the equatorial Pacific region are currently near neutral. There appears to be little chance of return to El Niño conditions in 2007, with a continuation of neutral, or a switch to La Niña conditions more likely outcomes.

With the change from wet to dry season, the weather in the Fiji region is expected to become drier and cooler in the coming months. Based on results of various rainfall predictions models including SCOPIC, rainfall in Fiji is expected to *vary around average* from May to July 2007. The confidence level of the prediction is *low - moderate* (More detailed climate predictions will follow in the 'Fiji Islands Climate Outlook' to be released in mid May).

SUMMARY OF TROPICAL CYCLONE SEASON 2006/07

The Southwest Pacific tropical cyclone season ended on April 30. Fourteen significant disturbances formed in Fiji's area of responsibility in the 2006/07 season. Six of these systems developed into tropical cyclones. Two of the disturbances were notably intense but dissipated before reaching tropical cyclone status.

More than the average number of tropical cyclones (9) were expected in the South Pacific during the season as El Niño conditions existed in the region. The chance of at least one cyclone affecting Fiji during the season was high. Eight tropical cyclones were named in the Southwest Pacific during the 2006/07 season of which six were in the Fiji region of responsibility and two in the Brisbane region of responsibility.

The first tropical cyclone of 2006/07 was *TC Xavier* (max. int. - hurricane) which formed on October 26. The second was *TC Yani* (gale) which reached tropical cyclone status on November 22. Two tropical cyclones occurred in January 2007. The first was *TC Zita* (storm) which formed near the Northern Cook Islands on January 23. The second was *TC Arthur* (storm) which developed to the east of Samoa on January 25. *TC Zita* and *Arthur* both affected parts of the Northern and Southern Cook Islands. On March 26, *TC Becky* (storm), formed south of the Solomon Islands. The last tropical cyclone of the season was *TC Cliff* (gale) which formed to the northwest of Fiji on April 3 and passed over the eastern islands of Fiji.

Normal - Represents average form 1971 to 2000 period.

Well Below Average - Rainfall less than 39%.

Below Average - Rainfall between 40 to 79%.

Average - Rainfall between 80 to 119%.

Above Average - Rainfall between 120 to 199%.

Well Above Average - Rainfall more than 200%.

For all correspondences please contact: The Director, Fiji Meteorological Service, Private Mail Bag, NAP0351, Nadi Airport, Fiji Islands.
Email: fms@met.gov.fj.

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