

1. IN BRIEF

A typical dry season rainfall pattern was observed across the country, with 75% of the stations recording *below average* and *well below average* rainfall.

Overall, 17 stations recorded *below average* rainfall, 3 *average*, 2 *above average*, while Labasa and Viwa were the only stations with *well below average* and *well above average* rainfall respectively.

Period of widespread rainfall were observed during the first and last week of the month, with most of the stations recording their highest 24-hour rainfall during these periods. The highest 24-hour rainfall of 113mm was recorded at Viwa on the 29th.

On temperatures, the highest day-time temperature of 33.5°C was recorded at Keiyasi on the 19th, followed by Lautoka Mill with 33.0°C on the 23rd and Levuka with 32.9°C on the 7th.

The coolest night-time temperatures were recorded during the last week of the month, with temperatures of below 15.0°C recorded at some stations. The coolest night time temperature of 11.5°C was recorded at Nadarivatu, followed by Monasavu with 13.4°C, both on the 22nd, Keiyasi with 14.4°C on the 11th and Lomaivuna with 14.5°C, Rarawai Mill with 14.6°C and Lautoka Mill with 15.0°C, all on the 25th respectively.

Winds in the easterly to southerly wind quadrant were dominant in Nadi during the month, at light to moderate strength (Figure 8).

Cooler than *normal* sea surface temperature anomalies were recorded around the Lomaiviti Group, Taveuni and the northern Lau Group, while the rest observed warmer than normal anomalies (Figure 9).

2. WEATHER PATTERNS

The weather in June was dominated by a series of troughs of low pressure systems, the cool and dry southerlies, the moist easterlies and the southeast trades winds that affected the Fiji group.

On the first two days of June, a trough of low pressure with the associated cloud and showers affected the Fiji Group with occasional rain over most parts of the country. During this time, a deep low pressure to the far south of Fiji had generated and directed moderate to heavy southerly swells over the Fiji Group resulting in reported coastal inundation over southern coastal areas of Viti Levu.

A southeast wind flow followed through with brief showers over the interior and eastern parts of the larger islands and fine weather apart from isolated showers elsewhere from 3rd until the 6th. On the 7th, a weak trough of low pressure affected the country with brief showers from the west and gradually departed to the east of Fiji on the same day. A southerly wind flow prevailed thereafter bringing a cool and dry air mass with mostly fine weather over the group till the 9th.

On the 10th, the winds changed to southeast with mostly fine weather apart from isolated showers over the interior and eastern parts of the larger islands. This continued till the 15th.

On the 16th and 17th, a trough of low pressure affected the eastern parts of the group from the north with cloudy periods and some showers. A southeast wind flow followed through on the 18th till the 22nd with mostly fine weather apart from brief showers over the interior and eastern parts of the larger islands.

A trough of low pressure affected the country on the 23rd with occasional showers over most places and isolated heavy falls.

A southerly wind flow prevailed thereafter on the 24th bringing another episode of cool and dry air mass over the group with fine weather apart from brief showers over the interior and eastern parts of the group. With the dominating high pressure system to the far south of Fiji, a strong south-east wind flow prevailed over Fiji from the 25th. Coinciding with the full moon, this brought coastal inundation over the southern coastal areas of Viti Levu, Kadavu and nearby smaller islands and southern Lau group. Fine weather apart from some showers were experienced over the interior and eastern parts of the larger islands till the 28th.

On the 29th and 30th, a trough of low pressure affected the Fiji group with occasional showers over most places. Significant 24-hour rainfall was recorded at Viwa with 113mm.

3. RAINFALL

It was unusually dry in many parts of the country during the month, with more than half of the rainfall monitoring stations recording less than half of its *normal* monthly rainfall. In contrast, it was a wetter than usual month at Viwa, Nacocolevu and Ono-i-Lau.

20 days, with Nasinu and Rotuma both recording 19 days. On the other hand, Tavua recorded the least number of rain days with 2 days, followed by Rarawai Mill (Ba) and Yaqara both with 3 days, Lautoka Mill and Momi both with 4, and Nadi Airport and Viwa both with 5.

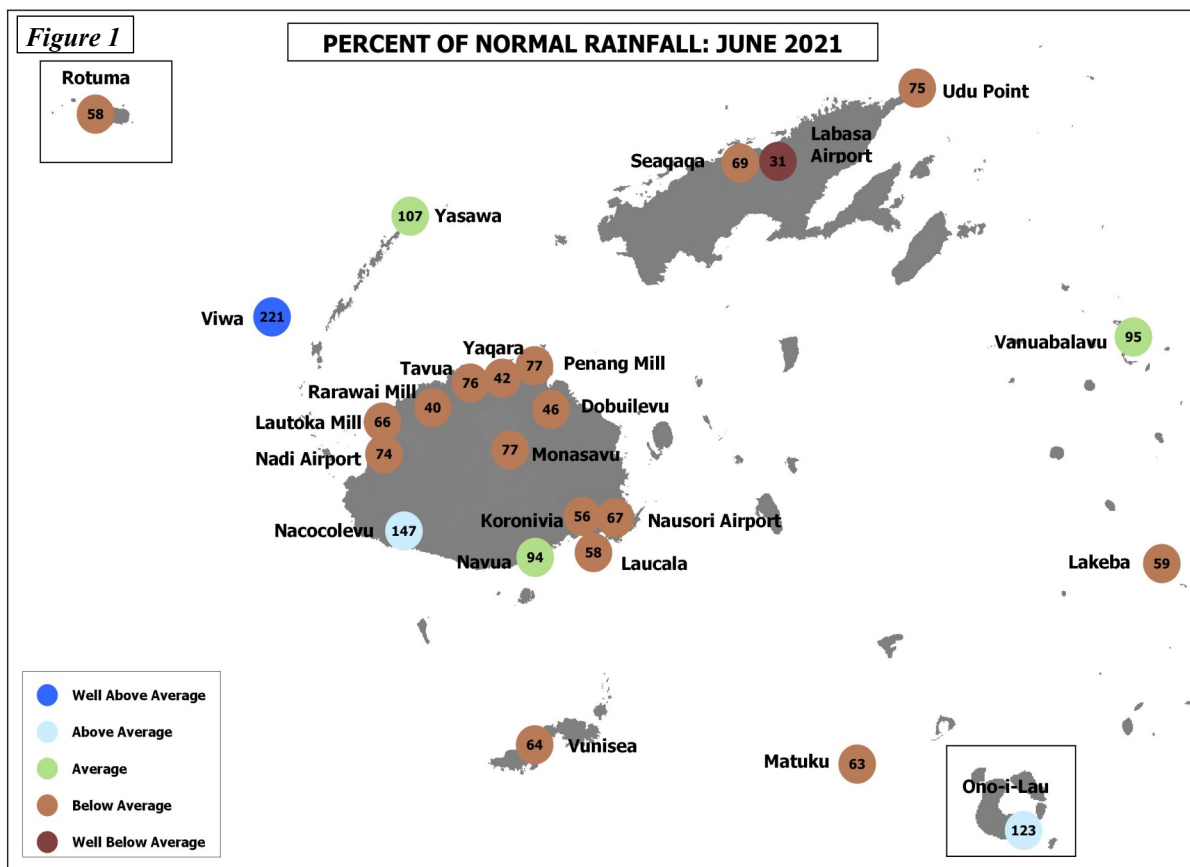
Overall, out of the 24 rainfall monitoring stations, Labasa was the lone station with *well below average* rainfall, 17 *below average*, 3 *average*, 2 *above average* and Viwa was also the only station with *well above average* rainfall (Table 2, Figures 1-5).

There was no new rainfall record established during the month.

The driest site during the month was at Ellington (Ra) with a total monthly rainfall of 5mm, followed by Labasa Airport with 24mm, Yaqara with 26mm, Ba with 30mm and Momi with 40mm. On the other hand, the highest total monthly rainfall was recorded at Korolevu with 219mm, followed by Monasavu with 204mm, Navua with 191mm, Viwa with 164mm, Rotuma with 152mm, Vanuabalavu with 137mm, Sigatoka with 124mm and Nacocolevu with 119mm.

An active trough of low pressure affected the country on the 29th and 30th, which resulted in occasional showers over most places and Viwa recording its most significant 24-hour rainfall of 113mm on the 29th.

Nadarivatu recorded the highest number of rain days (rainfall ≥0.1mm) during the month with 21 days, followed by RKS Lodonu, Lomaivuna, Navua and Monasavu with



Normal: Long term average from 1981 to 2010
Well Below Average: Rainfall less than 40% of normal
Below Average: Rainfall between 40 to 79%
Rain Day: Rainfall ≥ 0.1mm
Average: Rainfall between 80 to 119%
Above Average: Rainfall between 120 to 199%
Well Above Average: Rainfall greater than or equal to 200% of normal

4. AIR TEMPERATURES

A. Maximum Day-time Air Temperatures

Generally *near normal* or *above normal* maximum air temperatures were observed at most parts of Fiji during the month. Out of the 20 climate stations, 6 recorded anomalies $\geq +0.5^{\circ}\text{C}$, 12 within $\pm 0.5^{\circ}\text{C}$ and 2 stations recorded anomalies of $\leq -0.5^{\circ}\text{C}$.

Warmest days on average were recorded at Rotuma with 30.6°C followed by Yaqara with 30.1°C , Rarawai Mill (Ba) with 29.9°C and Lautoka Mill, Momi and Labasa Airport all with 29.7°C . On the other hand, Monasavu recorded the coolest days on average with 22.1°C , followed by Nadarivatu with 23.1°C , Ono-i-Lau with 26.3°C , Ellington (Ra) with 26.5°C and Lomaivuna with 27.0°C .

The highest day-time air temperature during the month was registered at Keiyasi with 33.5°C on the 19th, followed by Lautoka Mill with 33.0°C on the 23rd, Levuka with 32.9°C on the 7th and Labasa Airport with 32.3°C on the 17th. In contrast, the coolest daytime air temperature of 18.6°C was at Monasavu on the 26th, followed by Nadarivatu with 19.2°C , Sigatoka with 21.5°C , and Keyasi and Korolevu with 21.6°C , all on the 1st respectively.

There were no new record registered during the month.

B. Minimum Night-time Air Temperatures

Generally *near normal* or *below normal* minimum air temperatures were recorded over most parts of the country during the month. Of the 20 stations, 2 recorded anomalies $\geq +0.5^{\circ}\text{C}$, 12 within $\pm 0.5^{\circ}\text{C}$, while 6 registered anomalies $\leq -0.5^{\circ}\text{C}$.

The coolest days on average was at Nadarivatu with a mean monthly average of 15.5°C , followed by Monasavu with 16.3°C , Rarawai Mill (Ba) and Keiyasi both with 18.0°C , Nacocolevu with 18.4°C and 18.5°C at Lomaivuna. On the other hand, the warmest night time temperatures on average was observed at Rotuma with 24.9°C , followed by Viwa with 23.8°C , Levuka with 23.3°C and Vanuabalavu with 23.0°C .

The coolest night-time temperatures were recorded during the last week of the month. The lowest daily minimum air temperature of 11.5°C was recorded at Nadarivatu, followed by Monasavu with 13.4°C , both on the 22nd, Keiyasi with 14.4°C on the 11th and Lomaivuna with 14.5°C , Rarawai Mill with 14.6°C and Lautoka Mill with 15.0°C , all on the 25th. On the other hand, the warmest night time temperature of 26.6°C was recorded at Rotuma on the 15th, followed by Levuka with 26.1°C , Viwa with 25.9°C , both on the 16th, and Vanuabalavu with 25.8°C on the 17th.

There was no new night time temperature established during the month.

TABLE 1. CLIMATE RECORDS ESTABLISHED IN JUNE 2021

There was no new record established during the month.

Note: All comparisons in this summary are with respect to "Climatic Normals". This is defined to be the average climate condition over a 30-year period. Fiji uses 1981-2010 period as its "climatic normal" period.

TABLE 2. DAILY CLIMATE REPORTING SITES: SUMMARY FOR JUNE 2021

	RAINFALL				AIR TEMPERATURES								SUNSHINE			
	TOTAL	RAIN MAX.		AVERAGE DAILY				EXTREME				TOTAL	*			
	MM	%	+	MM	ON	MAX.	#	MIN.	#	MAX.	MIN.	C	ON	HRS	%	
NADI AIRPORT	42	74	5	31	1	28.6	-0.4	19.9	0.3	30.9	17	16.8	27	191	95	
SUVA/LAUCALA BAY	93	58	18	25	1	27.4	-0.4	21.8	0.1	29.3	29	19.5	6	151	110	
NACOCOLEVU	119	147	11	69	1	27.9	-0.6	18.4	-0.4	32.1	15	15.1	11	90	58	
ROTUMA	152	58	19	30	30	30.6	0.8	24.9	0.2	31.7	3	20.3	8	2	1	
VIWA	164	221	5	113	29	29.3	0.6	23.8	0.4	31.5	17	20.2	2			
UDU POINT	105	75	13	41	17	28.1	-0.8	22.1	-1.0	29.6	8	18.1	25			
SAVUSAVU AIRFIELD	STATION TEMPORARILY CLOSED															
LABASA AIRFIELD	24	31	12	6	12	29.7	0.0	19.3	0.1	32.3	17	15.5	11			
NABOUWALU	STATION TEMPORARILY CLOSED															
KORONIVIA	92	56	18	17	28	27.5	-0.1	20.6	-0.1	31.5	18	17.0	10			
NAUSORI AIRPORT	109	67	17	22	3	27.8	0.5	20.5	-0.1	30.4	30	17.1	10			
NAVUA/TOKOTOKO	191	94	20	36	1	28.0	0.4	20.6	1.0	31.0	15	18.1	12			
MONASAVU	204	77	20	31	13	22.1	0.1	16.3	-0.2	24.6	19	13.4	22			
LAUTOKA AES	43	66	4	30	1	29.7	0.6	20.0	-0.7	33.0	23	15.0	25			
BA/RARAWAI MILL	30	40	3	17	1	29.9	-0.1	18.0	-0.2	31.6	29	14.6	25			
PENANG MILL	72	77	10	24	29	28.4	0.4	20.3	-1.0	29.7	16	17.2	2			
MATEI AIRFIELD	STATION TEMPORARILY CLOSED															
VANUABALAVU	137	95	10	52	23	27.8	0.1	23.0	0.1	29.5	6	19.7	25			
LAKEBA	70	59	14	26	1	27.7	0.5	21.2	-0.8	30.6	30	18.1	23			
YASAWA	75	107	7	36	1	29.1	0.3	21.5	-1.4	31.9	29	19.1	8			
VUNISEA	88	64	11	39	1	27.1	0.5	21.0	0.3	29.5	21	18.0	10			
MATUKU	68	63	10	15	30	27.4	0.2	21.4	-0.7	31.8	16	18.0	11			
ONO-I-LAU	116	123	13	41	23	26.3	0.4	22.3	1.3	29.5	20	18.5	24			
YAQARA AWS	26		3	16	29	30.1		21.8		32.3	19	19.5	12			
LEVUKA AWS	80		18	21	4	29.4		23.3		32.9	7	21.4	12			
KEIYASI AWS	45		7	32	1	29.5		18.0		33.5	19	14.4	11			
LOMAIVUNA AWS	107		20	19	27	27.0		18.5		29.4	18	14.5	25			
NADARIVATU AWS	71		21	17	1	23.1		15.5		26.1	17	11.5	22			
RKS LODONI AWS	75		20	15	30	27.6		20.1		29.5	7	16.7	10			
MOMI AWS	40		4	32	1	29.7		21.2		32.1	17	18.2	27			
SIGATOKA AWS	124		9	82	1	27.4		18.8		31.5	15	15.1	9			
ELLINGTON (RA) AWS	5		6	2	30	26.5		21.4		28.4	7	19.5	12			
VATUREKUKA AWS	18		10	5	12	28.4		19.7		31.8	30	15.2	12			
KOROLEVU AWS	219		14	77	23	27.9		20.0		31.6	15	17.0	10			
WAINIKORO AWS	24		8	7	17	29.0		20.8		31.3	7	15.9	12			
SAQANI AWS	25		11	8	27	29.2		23.0		31.5	29	21.1	7			
SEAQAQA TB3	54	69	11	22	1											
DOBUILEVU TB3	50	46	15	17	29											
NASINU TB3	104		19	13	23											
TAVUA TB3	49	76	2	35	29											

	TEMPERATURE(C)		HUMIDITY		WIND	SUN RAD
	MEAN	DRY WET	RH%	VP		
	(AVERAGE AT 9AM)	KT	POS	SQ.M		
NADI AIRPORT	24.2	24.2	21.4	77	23.4	10.3
SUVA/LAUCALA BAY	24.6	25.0	22.6	81	25.6	47
NACOCOLEVU	23.2	23.4	21.4	84	24.0	50
ROTUMA	27.7	27.8	OFFICER AL(AWS)			
VIWA	26.6	26.2	OFFICER AL(AWS)			
UDU POINT	25.1	26.4	23.5	78	26.7	10.3
SAVUSAVU AIRFIELD	STATION TEMPORARILY CLOSED					
LABASA AIRFIELD	24.5	25.2	22.9	79	25.9	3.8
NABOUWALU	STATION TEMPORARILY CLOSED					
KORONIVIA	24.0	24.7	22.5	82	25.6	
NAUSORI AIRPORT	24.1	24.0	22.2	85	25.5	4.8
NAVUA/TOKOTOKO	24.3	23.9	22.6	92	26.8	3.5
MONASAVU	19.2	19.1	18.0	89	19.7	
LAUTOKA AES	24.9	26.5	22.9	73	25.1	
BA/RARAWAI MILL	24.0	24.1	22.0	83	24.8	
PENANG MILL	24.4	25.1	22.2	77	24.5	
MATEI AIRFIELD	STATION TEMPORARILY CLOSED					
VANUABALAVU	25.4	26.2	22.7	76	25.3	7.8
LAKEBA	24.5	25.8	22.7	75	25.1	7.4
YASAWA	25.3	26.0	23.5	81	27.2	12.7
VUNISEA	24.1	24.8	22.0	77	24.3	8.3
MATUKU	24.4	24.8	22.3	80	24.9	6.2
ONO-I-LAU	24.3	24.5	21.8	78	24.1	9.0

MEAN TEMPERATURE IS (MAX+MIN)/2; WIND IS MEAN SPEED AT 06,12,18,24 HOURS.
 \$:SOLAR RADIATION CALCULATED FROM SUNSHINE DURATION. # :DEPARTURE FROM LONG-TERM AVERAGES (1981-2010). + :NUMBER OF DAYS WITH 0.1 MM OR MORE RAIN. * :PERCENT OF LONG-TERM AVERAGES.
 BLUE FONT: MISSING RECORDS OF LESS THAN OR EQUAL(≤) TO 5 DAYS. U/S: UNSERVICEABLE

Figure 2

Nadi Airport (Western Division) - Temperature & Rainfall Records for the last 13 Months (June 2020 - June 2021)

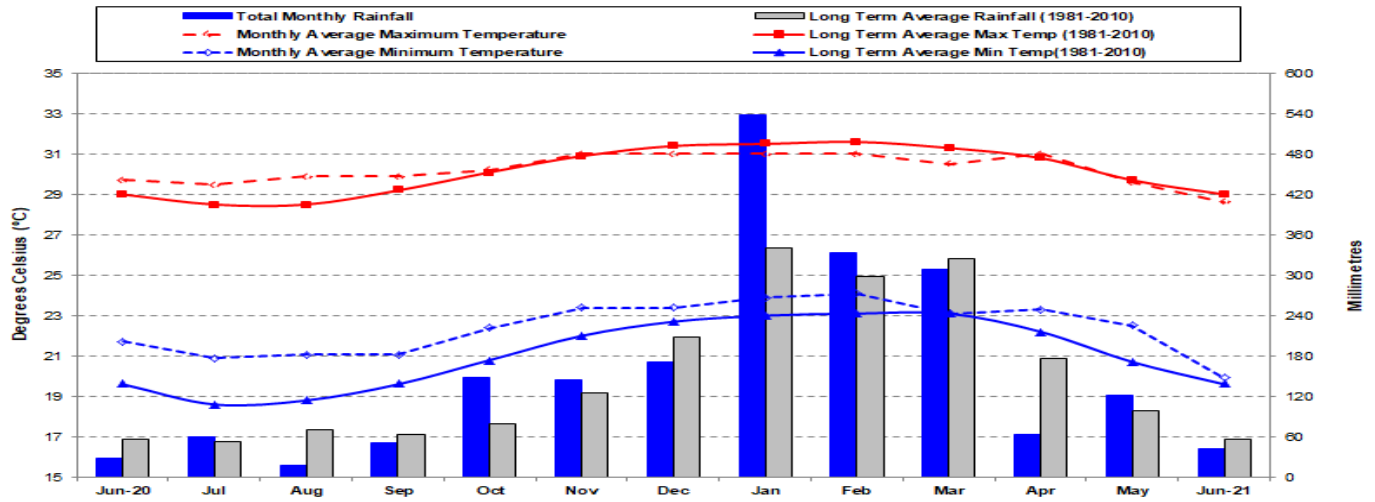


Figure 3

Laucala Bay - (Suva) (Central Division) - Temperature & Rainfall Records for the last 13 Months (June 2020 - June 2021)

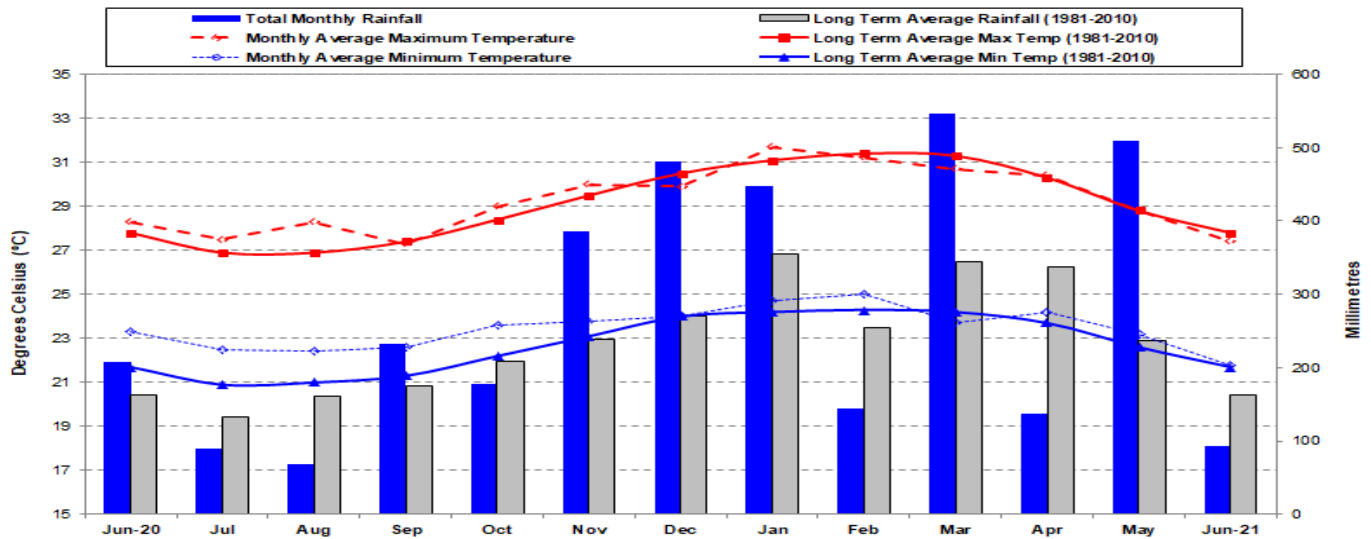


Figure 4

Udu Point (Eastern Division) - Temperature & Rainfall Records for the last 13 Months (June 2020 - June 2021)

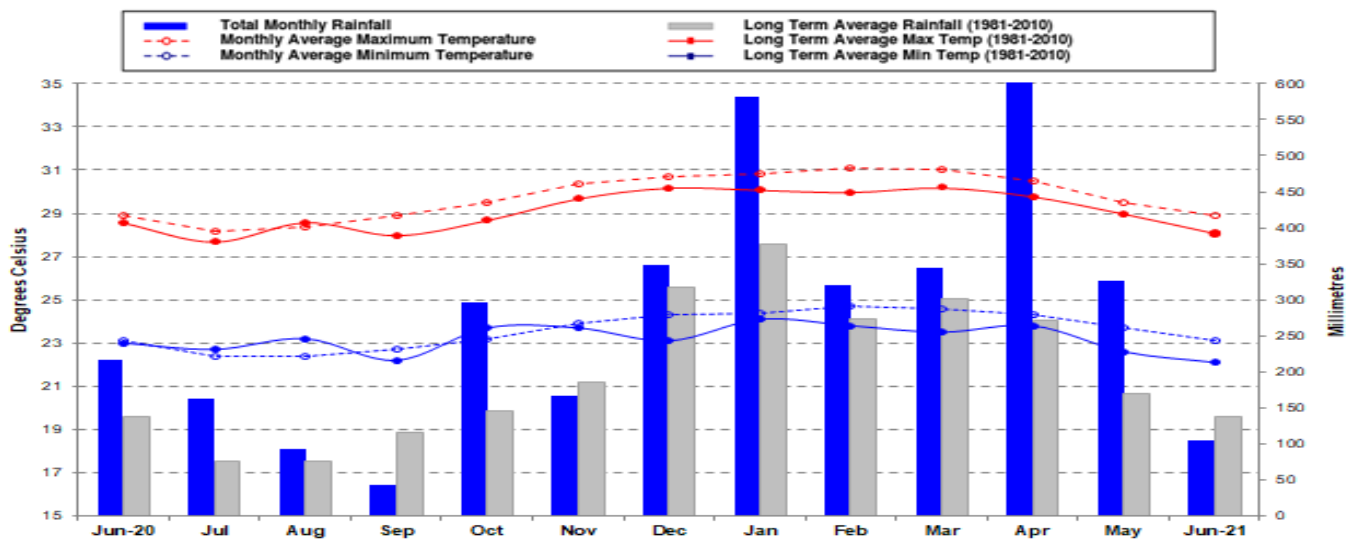
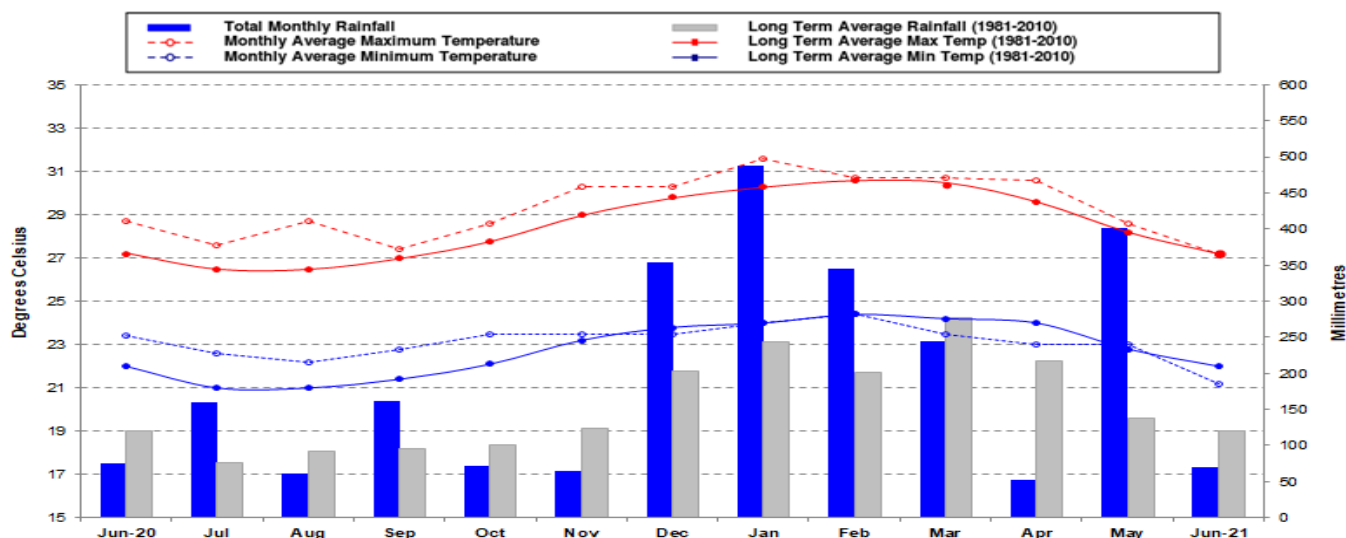


Figure 5

Lakeba (Eastern Division) - Temperature & Rainfall Records for the last 13 Months (June 2020 - June 2021)



5. DAILY RAISED PAN EVAPORATION

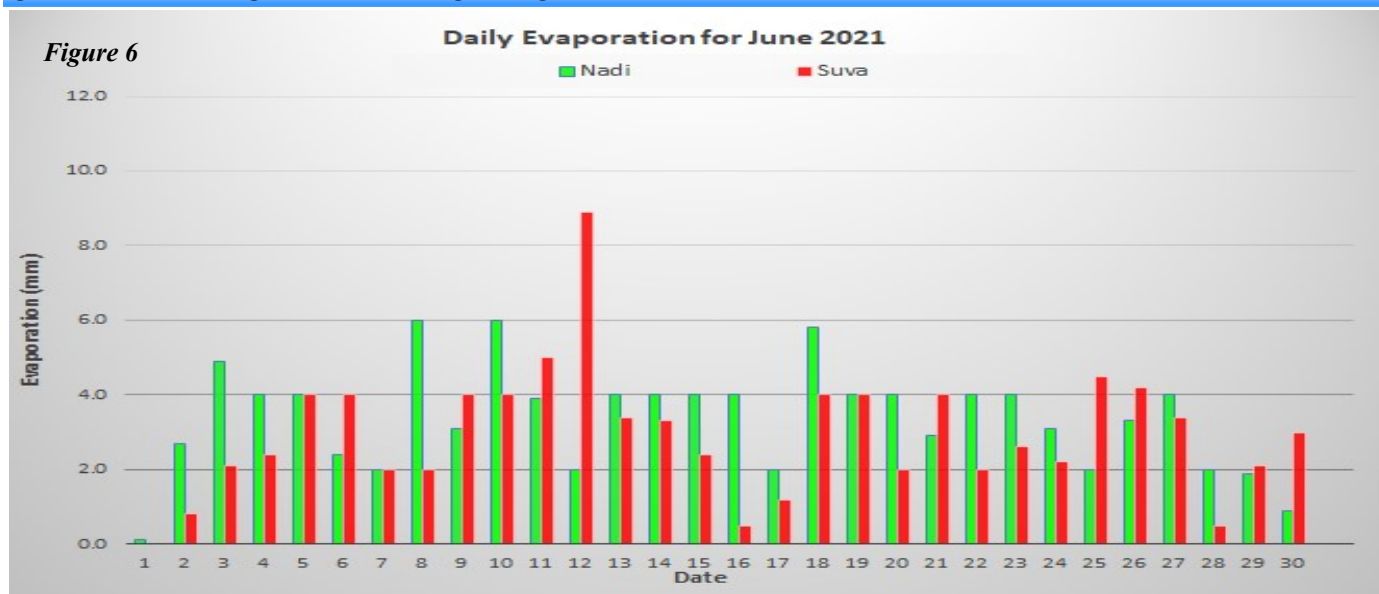


Figure 6: The total monthly evaporation at Nadi Airport and Laucala Bay (Suva) were 110mm and 88.5mm, respectively. Nadi’s highest daily evaporation was 6.0mm on the 8th, and 10th, with Suva’s highest daily evaporation of 8.9mm on the 12th. Note: Nacolevu is not included due to missing observations during COVID-19 restrictions.

6. SOLAR RADIATION

The Nadi solar radiation instrument became unserviceable during the month of June 2021.

7. WIND SUMMARY

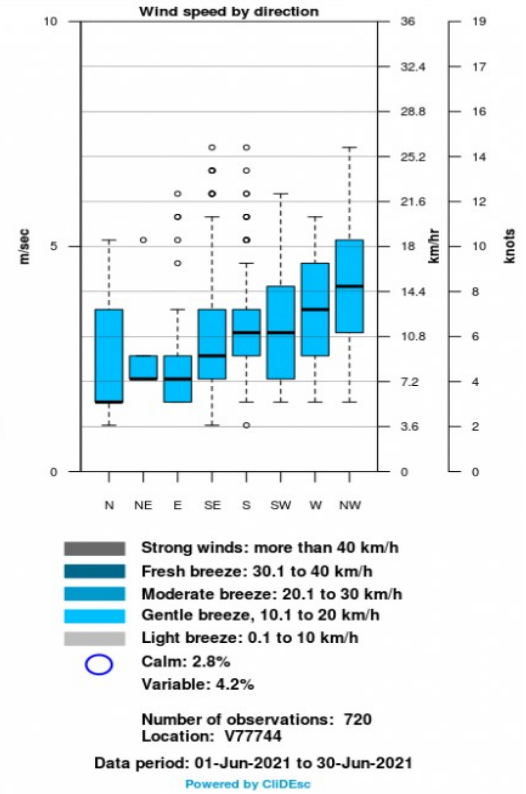
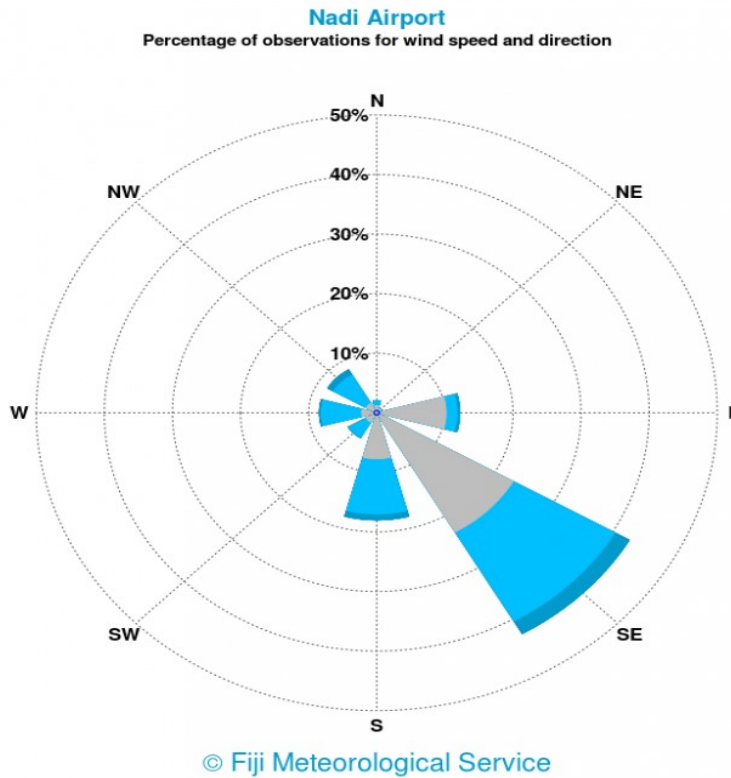


Figure 8a: Southeasterly winds were dominant at Nadi Airport during the month, followed by southerly and easterly winds the least. Wind strength ranged from light to moderate during this period.

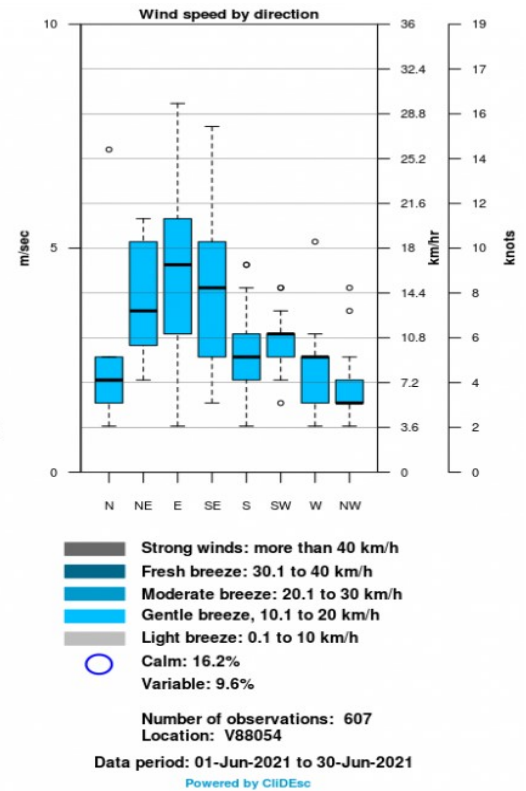
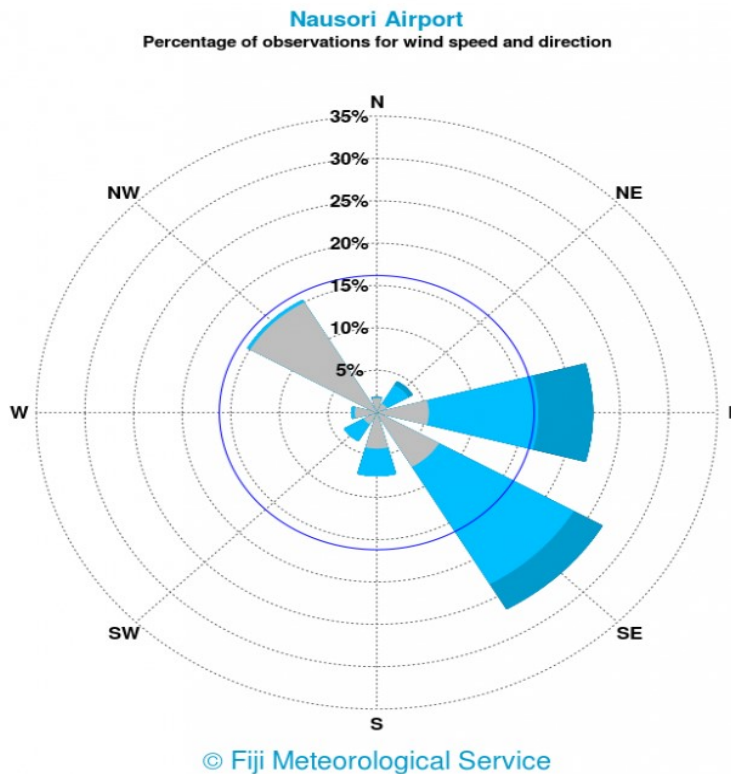


Figure 8b: Southeasterly winds were dominant at Nausori Airport, followed by easterly and then northwesterly. Wind strength ranged from light to moderate breeze during this period. Note: There are about 113 hourly missing observations for Nausori due to COVID-19 lockdown restrictions.

8. SEA SURFACE TEMPERATURE (SST)

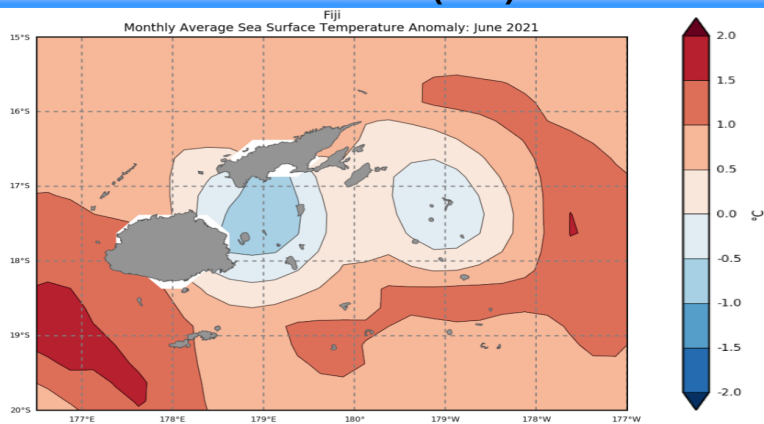


Figure 9:
Cooler than normal sea surface temperatures anomalies were recorded around the Lomaiviti Group, Taveuni and the northern Lau Group, while warmer than normal anomalies were observed at the rest of the group.
Source: <http://oceanportal.spc.int/portal/app.html#climate>

9. CLOUD COVER

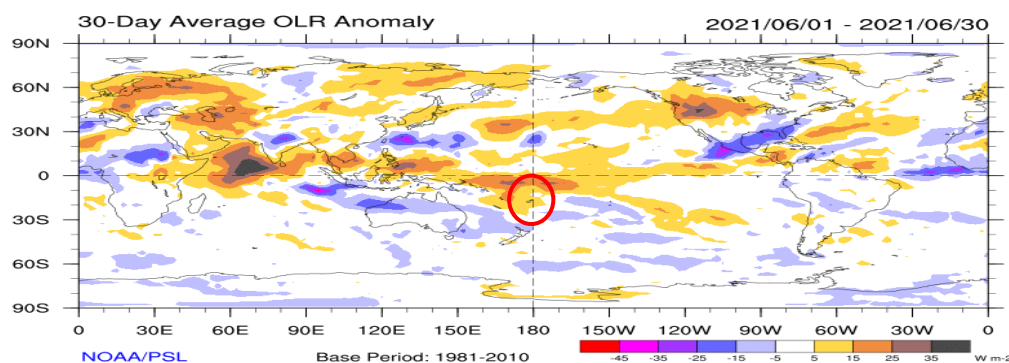


Figure 10:
Below normal cloud cover was present over the Fiji Group during the month (Fiji in red circle).
Source: <http://www.esrl.noaa.gov/psd/map/clim/olr.shtml>

10. SEA LEVEL

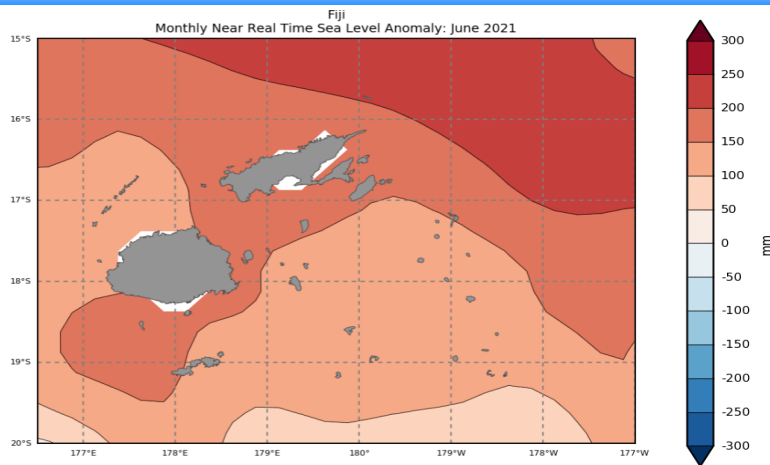


Figure 11:
Above normal sea level anomalies were present across most of the Fiji Waters during the month (anomalies of more than 20cm), and anomalies of more than 25cm was recorded around Rotuma.
Source: <http://oceanportal.spc.int/portal/app.html#sealevel>

11. WIND ANOMALIES

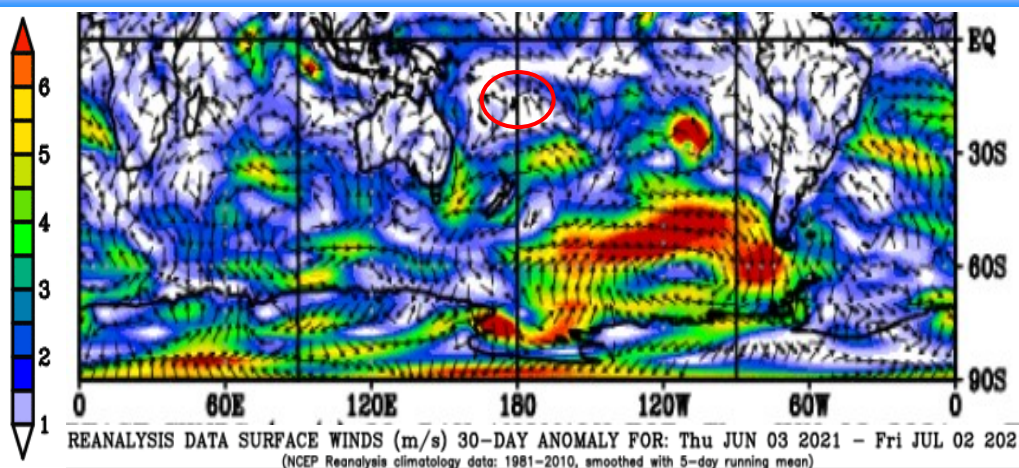


Figure 12:
Variable wind anomalies were recorded over the Fiji Group during the month (base period: 1981-2010) (Fiji in red circle).
Source: https://www.esrl.noaa.gov/psd/map/images/rnl/sfcwnd_30b.rnl.html