

1. IN BRIEF

Typical Dry Season weather pattern, with generally cool and dry conditions were observed across the country during the month. Fiji's weather was dominated by an east to southeast wind flow and trade showers over the eastern parts and interior of the larger islands. Consequently, drier than usual condition were experienced especially in the Central, Eastern and Northern Divisions, together with parts of the Western Division. Lautoka Mill and Nadi Airport were the only two stations that received *average* and *above average* rainfall, respectively. Eastern Division, Viwa, Yasawa-i-Rara, Koronivia and Nausori Airport registered less than half the *normal* rainfall.

Overall, out of the 24 rainfall monitoring stations, 9 recorded *well below average* rainfall, 13 *below average*, 1 *average*, and 1 station recorded *above average* rainfall.

On temperatures, the highest day-time temperature was observed at Rarawai Mill (Ba) with 32.8°C on the 4th, followed by Labasa Airport and RKS Lodon both with 32.6°C on the 1st and 30th, respectively, Lautoka Mill with 32.5°C

C on the 30th, and Yaqara with 32.5°C on the 14th.

The coolest night time temperature of 11.2°C was recorded at Nadarivatu on the 7th, followed by Monasavu with 14.3°C on the 22nd, Rarawai Mill (Ba) with 14.6°C on the 8th, Labasa Mill with 14.9°C, Lomaivuna with 15.7°C and Vaturekuka (Labasa) with 15.7°C, all on the 8th, and Sigatoka with 16.2°C on the 9th.

Southeasterly winds were dominant at Nadi Airport while easterly winds were the most observed winds at Nausori Airport during June, with light to moderate wind strength recorded at both stations (Figure 8).

Warmer than normal sea surface temperature anomalies were observed across most of the Fiji Group (Figure 9).

2. WEATHER PATTERNS

June weather was dominated by an east to southeast wind flow and trade showers over the eastern parts and interior of the larger islands with isolated afternoon showers elsewhere. Cool nights were also experienced where Nadarivatu reported 11.2°C on the 7th and most stations below or in the lower 20's (°C) during this period. Over the month few weak trough of low pressure also moved over the group with minimal to minor impacts.

From the 1st till the 14th, an east to southeast wind flow prevailed over the group due to the subtropical ridge (high pressure) developing from the southwest while drifting eastwards. Also on the 14th to the 15th most of the coastal communities along the Coral Coast to Pacific Harbour, Lomaiviti and Lau group experienced coastal inundation with the coupling effect of moderate to heavy southerly swells from the south and the occurrence of the King Tide on the 14th.

On the 15th, a trough of low pressure developed over the eastern parts with some showers. Eventually, Lomaivuna from eastern interior of Viti Levu recorded 76mm of rainfall in 24 hours on the 17th. As the trough gradually weakened over the eastern division, an active trough gradually approached the group from the west on the 19th. Though it was a fast moving trough, occasional rain, thunderstorms

and gusty winds was experienced over most parts of Fiji till the 20th. The trough swiftly moved eastwards over the group with short duration of heavy falls where Nadi recorded about 55mm of rainfall in just about 4 hours.

East to southeasterly wind flow further dominated the group from the 22nd onwards to the end of the month producing isolated brief showers over the eastern parts and interior of the main island and mainly fine weather elsewhere.

Rotuma's weather was also affected by a series of troughs of low pressure systems, moist easterlies for the month of June.

3. RAINFALL

Typical Dry Season rainfall was experienced at various parts of the country during the month. Nadi and Lautoka, in the Western Division, were the only exceptions as they experienced *average* and *above average* rainfall, respectively. The rainfall monitoring stations across the Eastern Division, Viwa, Yasawa-i-Rara, Koronivia and Nausori Airport registered less than half their *normal* rainfall.

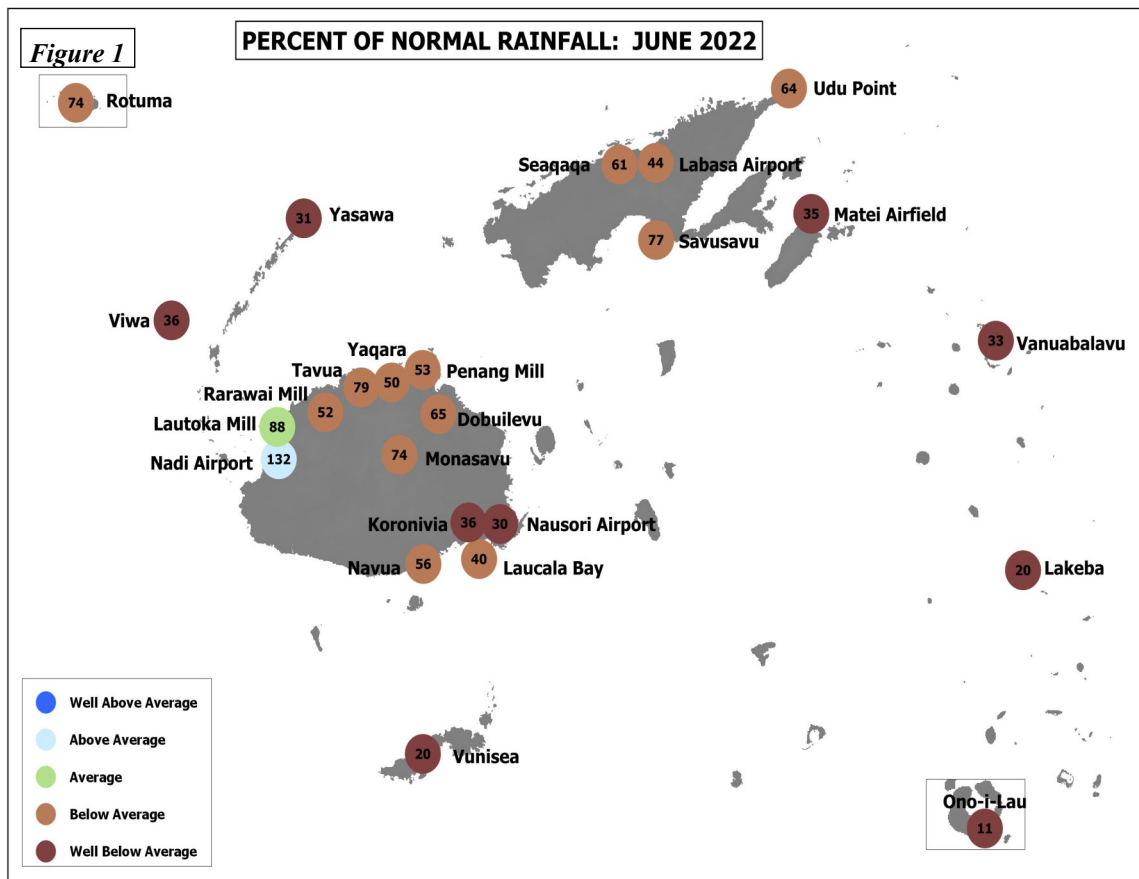
Overall, out of the 24 rainfall monitoring stations that recorded in, in time for the compilation of bulletin, 9 recorded *well below average* rainfall, 13 *below average*, 1 *average*, and 1 station recorded *above average* rainfall (Table 2, Figures 1-5).

The highest monthly rainfall of 196.4mm was observed at Monasavu, followed by RKS Lodoni with 193.0mm, Rotuma with 190.8mm, Lomaivuna with 171.0mm, Navua with 113.5mm, Savusavu Airfield with 102.2mm, Nadarivatu with 102.0mm, Levuka with 98.5mm, Korolevu with 93.5mm and Udu Point with 88.2mm. On the other hand, Ono-i-Lau recorded the month's lowest total monthly rainfall of 10.0mm, followed by Yasawa-i-Rara with 21.5mm, Lakeba with 23.6mm, Viwa with 26.3mm, Vunisea with 27.0mm, Yaqara with 31.0mm, Labasa Airport with 33.5mm, Wainikoro with 35.0mm and Ellington (Ra) with

36.0mm (Table 2).

Rotuma recorded its highest number of rain days (rainfall $\geq 0.1\text{mm}$) with 23 days, followed by Koronivia, Nausori and Udu Point all with 17 days, Nadarivatu, Levuka and Matei Airfield all with 15 days, and RKS Lodoni and Savusavu Airfield both with 14 days. Consequently, Yasawa-i-Rara and Rarawai Mill (Ba) recorded the least number of rain days with 2 days, followed by Nadi, Lautoka and Tavua all with 3 days, Yaqara, Momi and Vunisea all with 4 days, Viwa with 6 days, Penang Mill and Korolevu both with 7 days and Sigatoka, Ellington (Ra), Seaqqa and Labasa Airport all with 8 days.

There were no new rainfall record established during the month.



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 $\geq 0.1\text{mm}$

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

Above normal day-time air temperatures were observed at most parts of Fiji during the month. Out of the 19 climate stations that reported in time for the analysis of data, 17 recorded anomalies at $\geq +0.5^{\circ}\text{C}$ and 2 recorded within $\pm 0.5^{\circ}\text{C}$.

The warmest days on average were recorded at Ellington (Ra) with 30.9°C , followed by Rarawai Mill (Ba) with 30.8°C , Rotuma and Labasa Airport with 30.6°C , RKS Lodonu with 30.5°C , Lautoka Mill with 30.4°C , and Yaqara with 30.2°C . Consequently, Monasavu recorded the coolest days on average with 23.4°C , followed by Nadarivatu with 24.3°C , Lomaivuna with 27.8°C , Ono-i-Lau with 27.9°C , Yasawa-i-Rara and Vunisea both with 28.3°C , and Sasavavu airfield and Laucala Bay (Suva) both with 28.5°C .

The highest day-time temperature was observed at Rarawai Mill (Ba) with 32.8°C on the 4th, followed by Labasa Airport and RKS Lodonu both with 32.6°C on the 1st and 30th, respectively, Lautoka Mill with 32.5°C on the 30th, and Yaqara with 32.5°C on the 14th. In contrast, the coolest day-time temperature of 19.7°C was at Monasavu on the 23rd, Nadarivatu with 21.1°C on the 20th, Sigatoka and Nausori Airport both with 24.0°C on the 20th and 23rd respectively, Lomaivuna with 24.6°C on the 16th, Ono-i-Lau with 25.8°C on the 24th.

Vunisea and Lakeba recorded their highest monthly average maximum temperature of 28.3°C and 28.9°C since observations began in 1947 and 1955, respectively (Table 1).

B. Minimum Night-time Air Temperatures

Generally near normal night-time temperatures were recorded over most parts of the country during the month. Of the 19 stations, 6 recorded anomalies $\geq +0.5^{\circ}\text{C}$, 12 within $\pm 0.5^{\circ}\text{C}$, and Viwa was the lone station with anomaly $\leq -0.5^{\circ}\text{C}$.

The coolest days on average was at Monasavu with 17.1°C , followed by Nadarivatu and Sigatoka both with 18.1°C , Rarawai Mill (Ba) with 18.3°C , Labasa Airport with 19.3°C , Nadi Airport and Lomaivuna both with 19.8°C , Vaturekuka (Labasa) with 20.2°C , and Lautoka Mill and Koronivia both with 20.5°C . On the other hand, the warmest night-time temperatures on average were observed at Levuka with 24.0°C , followed by Vanuabalavu with 23.7°C , Yaqara with 23.5°C , Saqani with 23.4°C , and RKS Lodonu with 23.2°C .

The coolest night-time temperatures were recorded during the second and the last week of the month. The lowest night time temperature of 11.2°C was recorded at Nadarivatu on the 7th, followed by Monasavu with 14.3°C on the 22nd, Rarawai Mill (Ba) with 14.6°C on the 8th, Labasa Mill with 14.9°C , Lomaivuna with 15.7°C and Vaturekuka (Labasa) with 15.7°C , all on the 8th, and Sigatoka with 16.2°C on the 9th. On the other hand, the warmest night-time temperature of 26.1°C was recorded at Ono-i-Lau on the 2nd, followed by RKS Lodonu with 25.4°C on the 19th, Saqani with 25.1°C on the 18th, Laucala Bay (Suva), Viwa and Yaqara with 25.4°C , all on the 5th, Wainikoro with 24.7°C on the 29th and Penang Mill with 24.6°C on the 18th.

There were no new night time temperature records established during the month.

TABLE 1. CLIMATE RECORDS ESTABLISHED IN JUNE 2022

<u>Element</u>	<u>Station</u>	<u>Observed (record)</u>	<u>On</u>	<u>Rank</u>	<u>Previous (record)</u>	<u>Year</u>	<u>Records Began</u>
Monthly Average Maximum Temperature	Lakeba	28.9°C	-	New High	28.7°C	2011 2020	1955
Monthly Average Maximum Temperature	Vunisea	28.3°C	-	New High	28.2°C	2010	1947

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 2022

	RAINFALL				AIR TEMPERATURES								SUNSHINE	
	TOTAL	RAIN		MAX. FALL	AVERAGE DAILY				EXTREME				TOTAL	*
	MM	%	DAYS +	MM ON	MAX. C	# C	MIN. C	# C	MAX. C	MIN. C	ON C	ON C	HRS	%
NADI AIRPORT	75.0	132	3	55 20	29.6	0.6	19.8	0.2	31.2	4	16.9	9	219	109
LAUCALA BAY	65.4	40	12	30 16	28.5	0.7	22.7	1.0	30.0	11	19.6	10	209	152
NACOCOLEVU RESEARCH	MISSING OBSERVATION													
ROTUMA ISLAND	190.8	74	23	24 13	30.6	0.8	U/S		31.4	16	U/S		164	92
VIWA ISLAND	26.3	36	6	12 19	29.9	1.2	22.3	-1.1	31.7	4	20.5	28		
YASAWA-I-RARA (AWS)	21.5	31	2	18 19	28.3	-0.5	22.8	-0.1	30.7	30	19.1	9		
UDU POINT WEATHER	88.2	64	17	22 14	28.9	0.0	23.0	-0.1	30.1	13	20.3	23		
NABOUWALU	MISSING OBSERVATION													
LABASA AIRFIELD	33.5	44	8	12 21	30.6	0.9	19.3	0.1	32.6	1	14.9	8		
SAVUSAVU AIRFIELD	102.2	77	14	26 20	28.5	0.5	21.5	-0.3	31.5	20	18.0	9		
KORONIVIA RESEARCH	58.2	36	17	13 20	U/S		20.5	-0.2	U/S		16.8	8		
NAUSORI AIRPORT	48.9	30	17	14 20	28.7	1.4	20.7	0.1	30.3	14	16.9	8		
NAVUA (AWS)	113.5	56	12	55 16	29.3	1.7	22.3	2.7	31.6	11	17.2	10		
MONASAVU HYDRO DAM	196.4	74	11	64 19	23.4	1.4	17.1	0.6	25.7	1	14.3	22		
FSC LAUTOKA MILL	57.6	88	3	46 20	30.4	1.3	20.5	-0.3	32.5	30	17.5	8		
FSC RARAWAI MILL	39.0	52	2	29 20	30.8	0.8	18.3	0.1	32.8	4	14.6	8		
FSC PENANG MILL	49.6	53	7	28 19	29.0	1.0	22.1	0.8	30.2	21	16.9	8		
MATEI AIRFIELD	51.3	35	15	17 18	29.3	1.3	22.4	-0.1	30.2	10	20.6	8		
VANUABALAVU (AWS)	47.5	33	12	11 20	28.9	1.2	23.7	0.8	30.5	11	23.4	5		
LAKEBA	23.6	20	9	13 19	28.9	1.7	22.2	0.2	30.3	20	19.5	10		
VUNISEA	27.0	20	4	17 19	28.3	1.7	21.0	0.3	30.5	12	16.5	8		
MATUKU	MISSING OBSERVATION													
ONO-I-LAU	10.0	11	13	4 19	27.9	2.0	22.8	1.7	31.0	30	21.0	22		
YAQARA AWS	31.0	50	4	18 20	30.2		23.5		32.2	14	18.2	8		
LEVUKA AWS	98.5		15	26 19	28.9		24.0		30.7	10	22.0	22		
KEIYASI AWS	MISSING OBSERVATIONS													
LOMAIVUNA AWS	171.0		12	76 16	27.8		19.8		29.8	11	15.7	8		
NADARIVATU AWS	102.0		15	38 19	24.3		18.1		26.3	1	11.2	7		
RKS LODONI AWS	193.0		14	76 16	30.5		23.2		32.6	30	17.9	10		
MOMI AWS	58.0		4	29 20	29.6		20.6		32.1	14	17.8	8		
SIGATOKA AWS	82.0		8	34 19	28.8		18.1		30.2	15	16.2	9		
ELLINGTON (RA) AWS	36.0		8	11 19	30.9		U/S		32.1	30	U/S			
VATUREKUKA AWS	60.0		9	31 19	28.8		20.2		30.3	13	15.9	8		
KOROLEVU AWS	93.5		7	54 16	29.4		23.0		31.4	29	17.6	9		
WAINIKORO AWS	35.0		9	12 20	29.5		21.4		30.8	21	16.3	9		
SAQANI AWS	69.0		13	12 21	30.1		23.4		32.0	13	21.6	8		
SEAQAQA TB3	47.5	61	8	24 20										
DOBUILEVU TB3	69.5	65	9	27 19										
NASINU TB3	38.5		13	11 16										
TAVUA TB3	50.5	79	3	28 19										

TEMPERATURE(C) HUMIDITY WIND
 DRY WET RH% VP
 MEAN (AVERAGE AT 9AM) KT

NADI AIRPORT	24.7	24.6	21.8	77	23.1	5.3
LAUCALA BAY	25.6	26.4	23.8	79	25.7	4.5
NACOCOLEVU RESEARCH	MISSING OBSERVATION					
ROTUMA ISLAND	U/S	28.5	25.7	80	29.1	
VIWA ISLAND	26.1	27.5	24.4	77	27.5	
YASAWA-I-RARA(AWS)	25.6					
UDU POINT WEATHER	25.9	27.1	24.4	80	26.8	
NABOUWALU	MISSING OBSERVATION					
LABASA AIRFIELD	24.9	26.2	23.4	80	25.4	
SAVUSAVU AIRFIELD	25.0	26.4	23.9	81	25.7	
KORONIVIA RESEARCH	U/S	25.9	23.7	83	25.0	
NAUSORI AIRPORT	24.7	25.4	23.3	83	24.3	7.1
NAVUA (AWS)	25.8					
MONASAVU HYDRO DAM	20.2	20.1	19.1	92	17.6	
FSC LAUTOKA MILL	25.4	27.4	23.3	70	27.3	
FSC RARAWAI MILL	24.6	24.6	22.4	83	23.1	
FSC PENANG MILL	25.6	25.8	23.1	80	24.8	
MATEI AIRFIELD	25.9	27.3	24.2	77	27.1	
VANUABALAVU (AWS)	26.3					
LAKEBA	25.5	27.0	24.0	78	26.7	
VUNISEA	24.7	26.0	23.2	79	25.1	
MATUKU	MISSING OBSERVATION					
ONO-I-LAU	25.3	26.1	23.3	79	25.3	

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 2021 - June 2022)

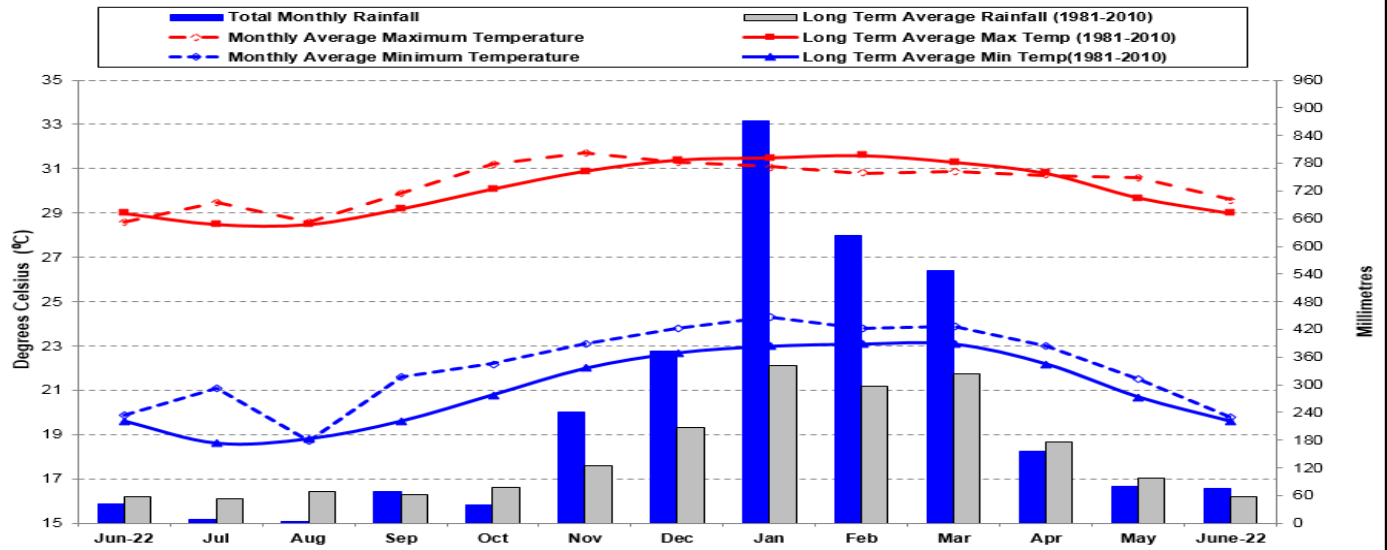


Figure 3

Laucala Bay - (Suva) (Central Division) - Temperature & Rainfall Records for the last 13 Months (June 2021 - June 2022)

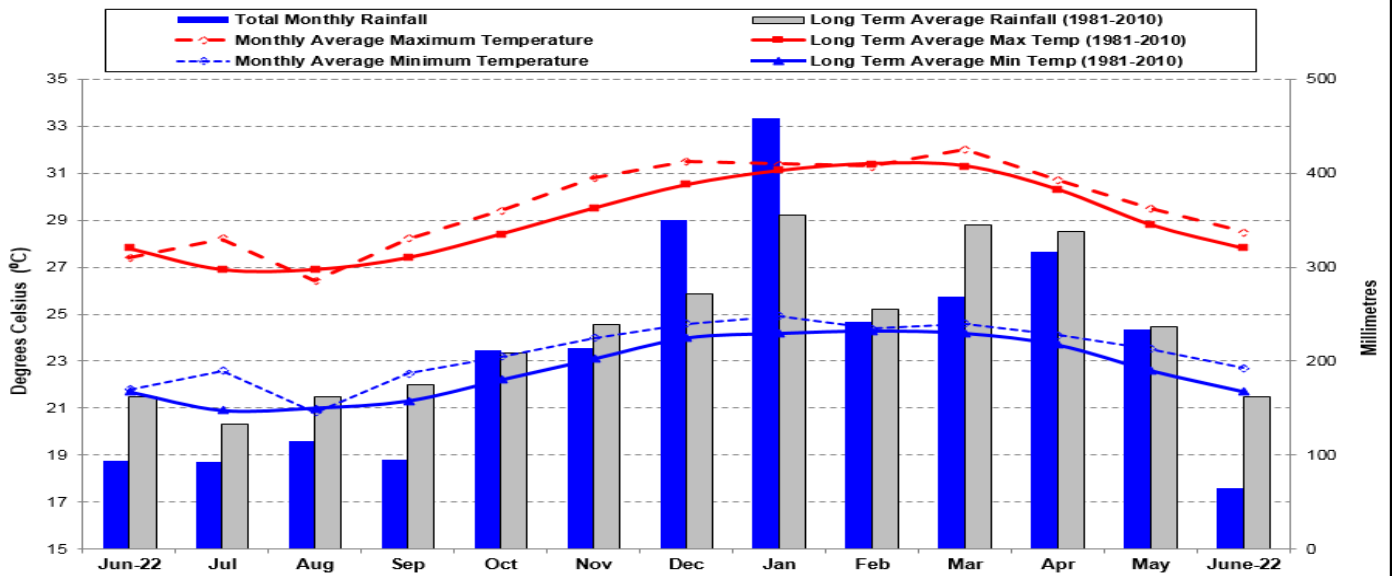


Figure 4

Udu Point (Eastern Division) - Temperature & Rainfall Records for the last 13 Months (June 2021 - June 2022)

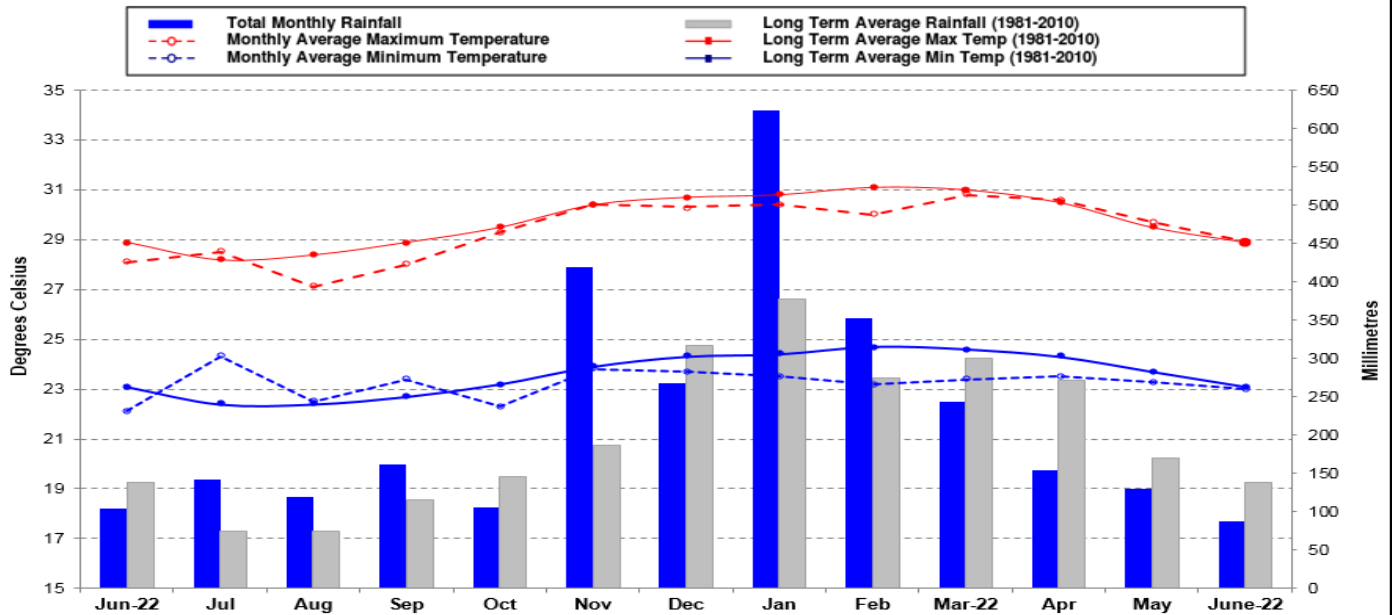
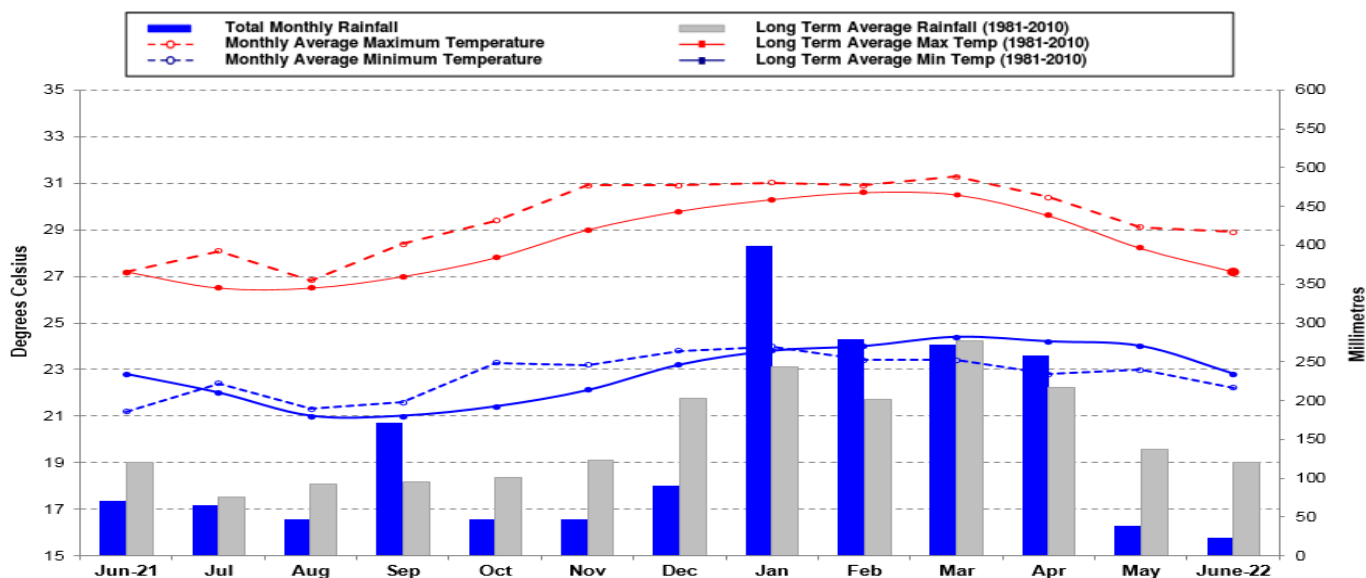


Figure 5

Lakeba (Eastern Division) - Temperature & Rainfall Records for the last 13 Months (June 2021 - June 2022)



5. DAILY RAISED PAN EVAPORATION

Daily Evaporation for June 2022

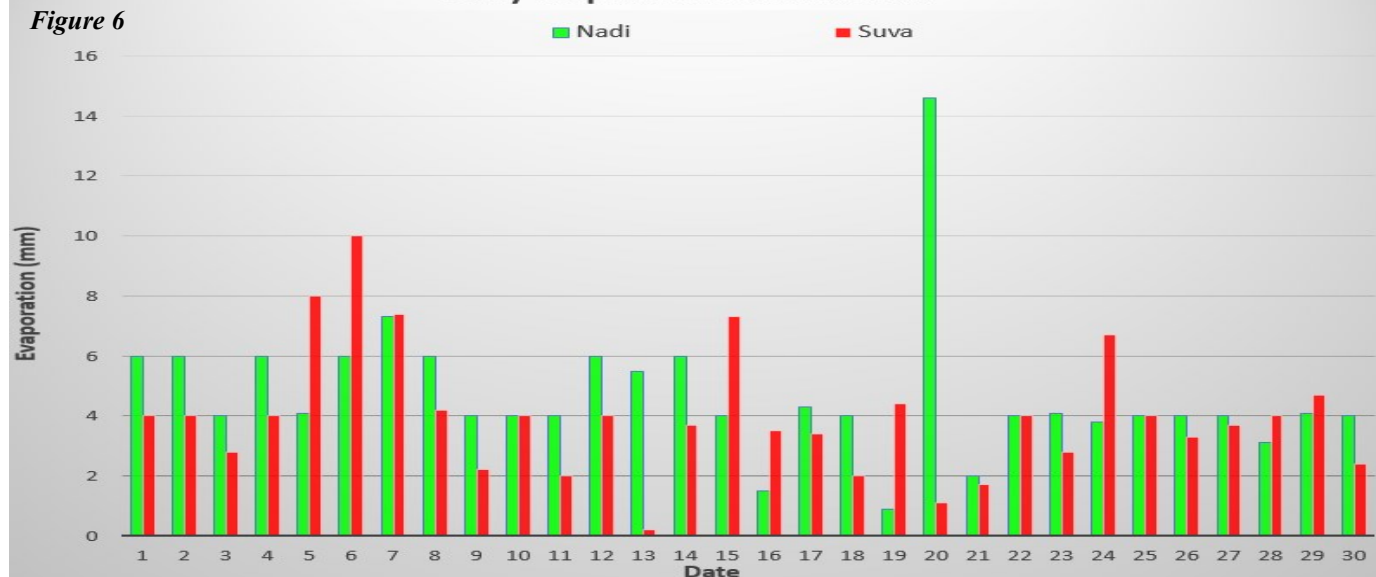


Figure 6: The total monthly evaporation at Nadi Airport and Laucala Bay (Suva) were 141.3mm and 119.5mm, respectively. Nadi’s highest daily evaporation was 14.6mm on the 20th, with Suva’s highest daily evaporation of 10.0mm on the 6th.

Note Nacocolevu’s evaporation could not be analysed due to missing observation data.

6. SOLAR RADIATION

The Nadi solar radiation instrument became unserviceable during the month of June 2022.

7. WIND SUMMARY

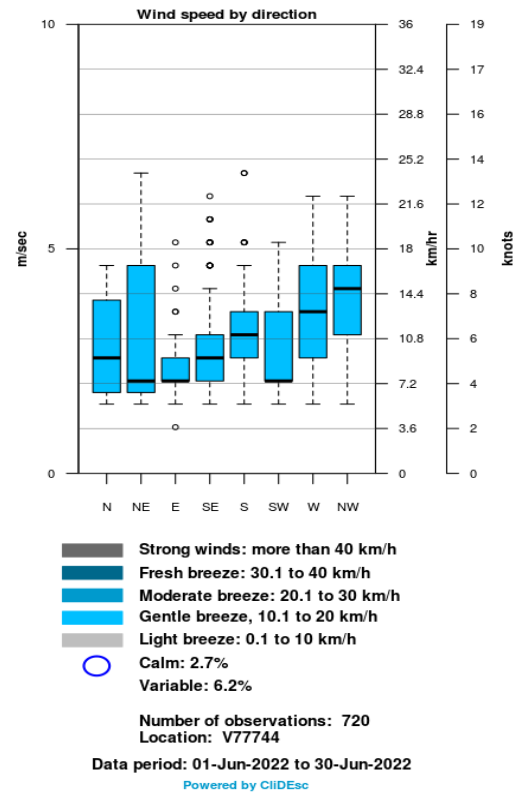
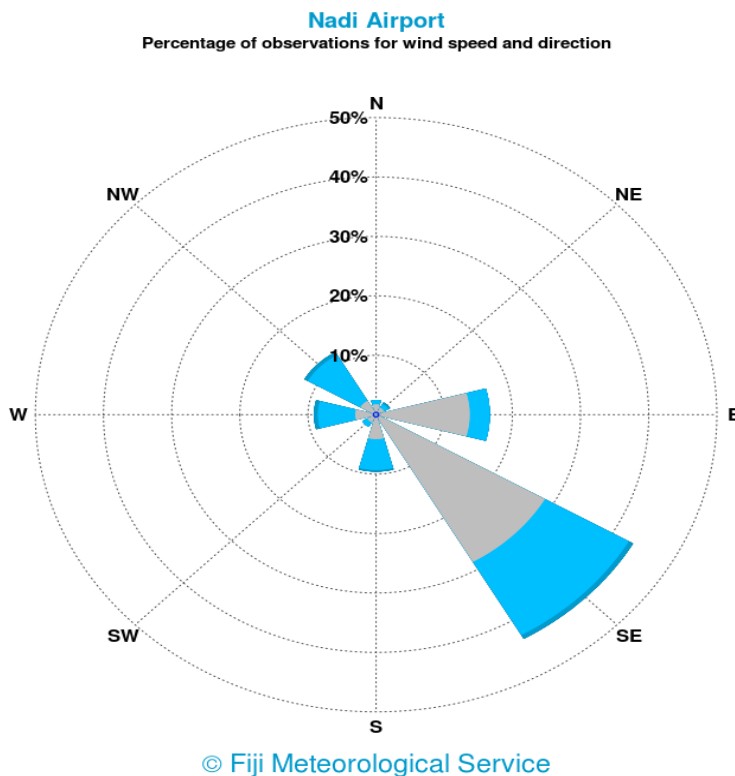


Figure 8a: Southeasterly winds were most dominant at Nadi Airport during the month, followed by easterly and northwesterly winds. Wind strength ranged from light to moderate during this period.

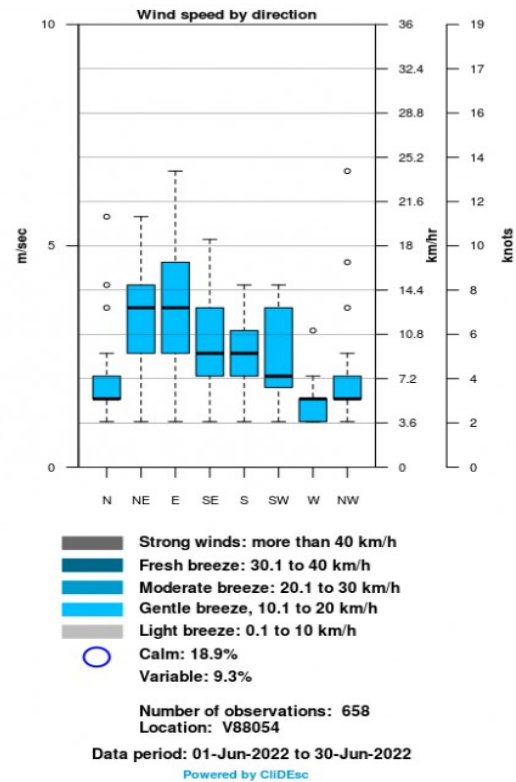
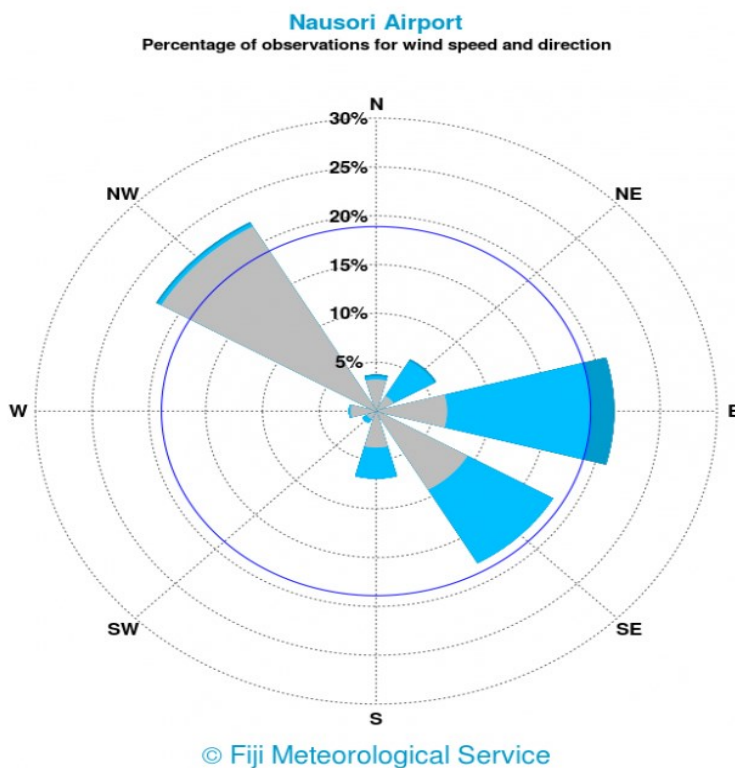


Figure 8b: Easterly winds were dominant at Nausori Airport, followed by northwesterly, then southeasterly winds. Wind strength ranged from light to moderate during this period.

8. SEA SURFACE TEMPERATURE (SST)

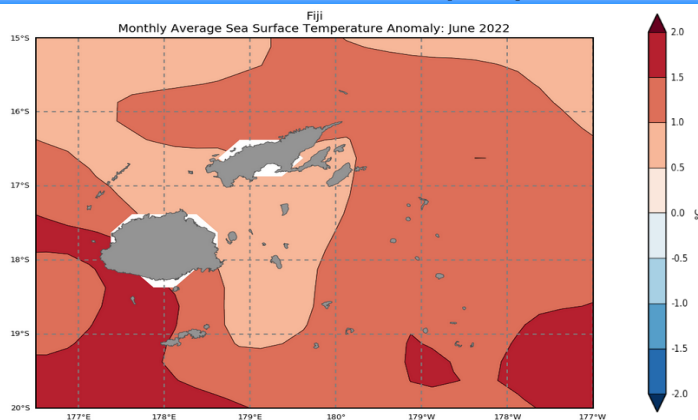


Figure 9: Warmer than normal sea surface temperature anomalies were observed across most of the Fiji Waters.

Source: <http://oceanportal.spc.int/portal/app.html#climate>

9. CLOUD COVER

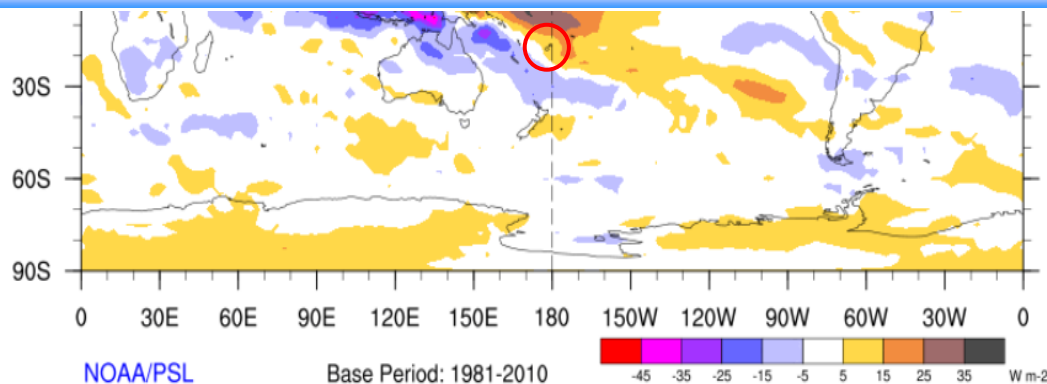


Figure 10: Slightly below normal cloud cover was present over the Fiji Group during June (Fiji in red circle).

Source: <http://www.esrl.noaa.gov/psd/map/clim/olr.shtml>

10. SEA LEVEL

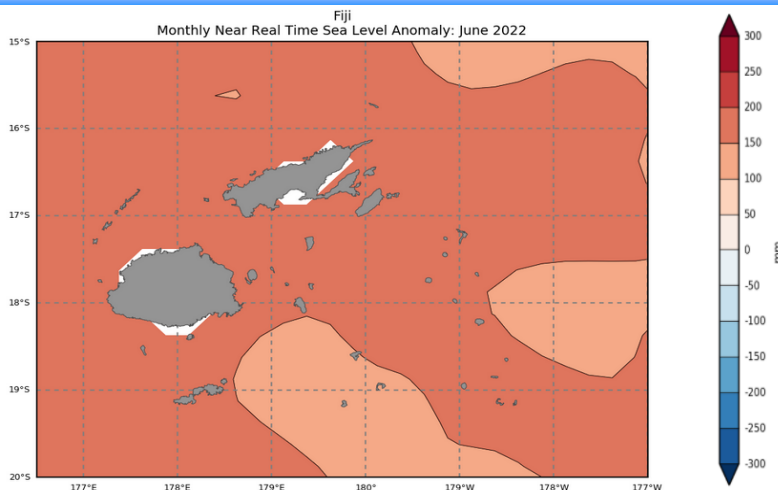


Figure 11: Above normal sea level anomalies (between 15-25cm) persisted across most of the Fiji Waters during June.

Source: <http://oceanportal.spc.int/portal/app.html#sealevel>

11. WIND ANOMALIES

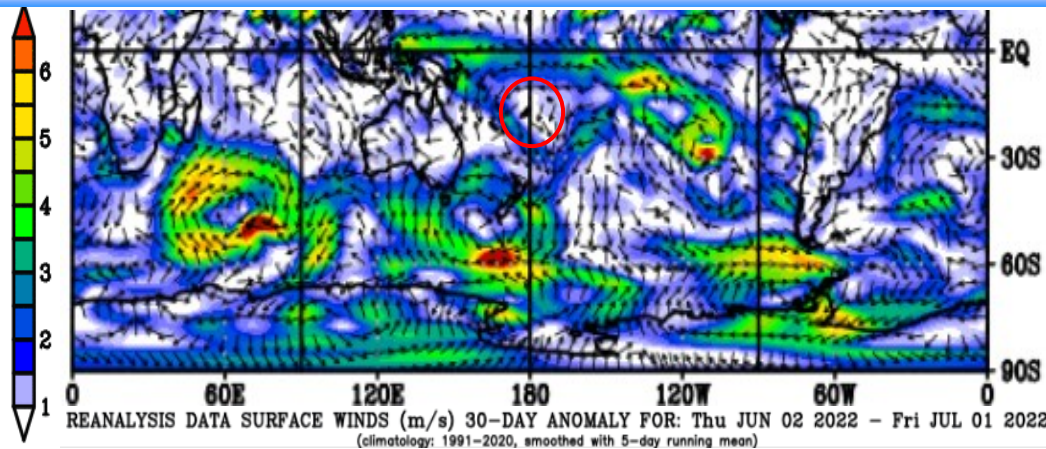


Figure 12: Northeasterly wind anomalies were generally observed over the Fiji Group during the month (base period: 1981-2010) (Fiji in red circle).

Source: https://www.esrl.noaa.gov/psd/map/images/rnl/sfcwnd_30b.rnl.html