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Fiji Climate Summary **April 2024**

certified Climate Services

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Since: August 1980*

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IN BRIEF

Rainfall was quite suppressed during April as average to well below average rainfall was observed across the country. Most stations across the country recorded well below average, with less than twice their normal monthly rainfall. Exception was for Rotuma which received above average rainfall, with Monasavu, Udu Point and Savusavu Airfield, recording average rainfall.

Overall, out of the 27 rainfall monitoring stations that reported in, in time for the compilation of bulletin, 15 recorded well below average rainfall, 8 below average, 3 stations with average rainfall, while Rotuma was the lone station that recorded above average rainfall (Table 2, Figures 1-5).

Monasavu recorded the highest monthly rainfall of 400.2mm, followed by Rotuma with 391.0mm, Lomaivuna with 231.0mm, Savusavu Airfield with 205.3mm, Matei Airfield with 202.6mm, Koronivia with 196.6mm, Navua with 175.0mm, Saqani with 172.5mm, Laucala Bay with 169.0mm, and Nasinu with 166.5mm. (Table 2).

On temperatures, the month's warmest day-time temperature of 35.9°C was observed at RKS Lodoni on the 26th,

followed by Rarawai Mill (Ba) with 35.5°C on the 13th. Lomaivuna and Ono-i-Lau both with 35.4°C on the 25th and 27th, respectively. The month's coolest night-time temperature of 18.3°C was recorded at Monasavu on the 7th, followed by Rarawai Mill (Ba) with 19.5°C on the 6th, Lomaivuna with 19.7°C on the 6th, and Udu Point with 20.2°C on the 2nd.

Nadi Airport, Udu Point and Lautoka recorded their monthly highest average maximum temperature of 32.6° C, 31.9°C and 32.3°C. Nadi Airport recorded its daily highest maximum temperature of 35.1°C on the 13th Laucala Bay (Suva), Viwa, Savusavu Airfield, Nabouwalu, Koronivia, Nausori Airport and Monasavu recorded their monthly highest average minimum temperature of 25.4°C, 26.1°C, 26.6°C, 25.3°C, 24.7°C, 24.3°C and 20.4°C (Table 1).

Southeasterly winds were dominant at Nadi Airport, Savusavu Airfield and Matei Airfield, while easterly winds were dominant at Nausori Airport (Figure 7).

Warmer than normal sea surface temperature anomalies were observed at most parts of the country (Figure 8).

WEATHER PATTERNS

The weather in April was dominated by moist easterly flow had continued from the beginning of the month to and northerly wind flow with series of trough of low pressure sweeping through the group.

At first, a trough lay to the southwest of Fiji on the 1st and affected parts of the country till the 3rd with another trough developing to the north, affecting mainly Vanua Levu and Northern Lau group from the 4th to the 5th. This trough triggered significant 24-hour rainfall amount being recorded for Savusavu airport with 86.4mm on the 4th.

On the 8th to the 9th, a trough affected the group, where the highest 24-hour rainfall of the month was recorded in Lomaivuna with 94.5mm on the 9th. Occasional showers with thunderstorms and isolated heavy falls were observed in few centres in the interior of the central divisions. Additionally, strong east to southeast winds were also observed in the period from the 6th to the 9th which ultimately enhanced isolated heavy falls especially on the 9th. Meanwhile, the dominant easterly wind

the 21st.

Furthermore, a weak trough developed to the north and briefly drifted eastwards on the 22nd. Similarly, another trough approached the group from the west on the 23rd and swiftly moved eastwards away from the group with trail of moist northerly wind flow prevailing over the group till the 25th. Finally, from the 26th to the end of the month, a weak trough of low pressure lay slow moving to the southwest of the group with dominant moist easterlies.

Rotuma's weather was dominated by the moist easterly with a series of troughs of low pressure systems for the month of April.

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

3. RAINFALL

Rainfall was quite suppressed during April as *average* to well below average rainfall was observed across the country. Most stations across the country recorded well below average, with less than twice their normal monthly rainfall. Exception was for Rotuma which received above average rainfall, with Monasavu, Udu Point and Savusavu Airfield, recording average rainfall.

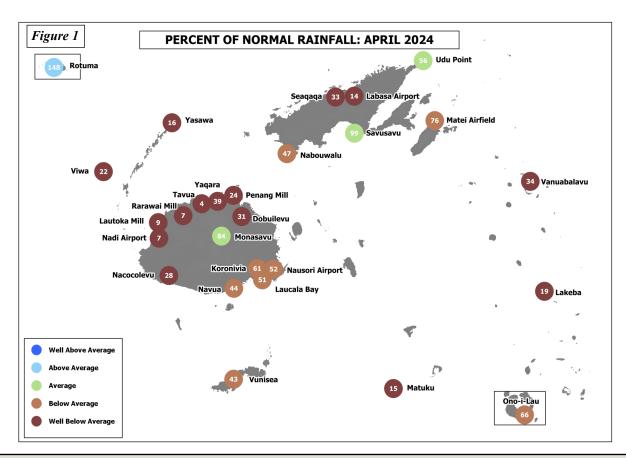
Overall, out of the 27 rainfall monitoring stations that reported in, in time for the compilation of bulletin, 15 recorded *well below average* rainfall, 8 *below average*, 3 stations with *average* rainfall, while Rotuma was the lone station that recorded *above average* rainfall (Table 2, Figures 1-5).

The highest monthly rainfall of 400.2mm was observed at Monasavu, followed by Rotuma with 391.0mm, Lomaivuna with 231.0mm, Savusavu Airfield with 205.3mm, Matei Airfield with 202.6mm, Koronivia with 196.6mm, Navua with 175.0mm, Saqani with 172.5mm, Laucala Bay with 169.0mm, and Nasinu with 166.5mm. On the other hand, Tavua recorded the month's lowest total monthly rainfall of 7.0mm, followed by Momi with 10.0mm and Nadi Airport with 13.7mm. (Table 2).

The highest 24-hour rainfall of 162mm was recorded at Rotuma on the 5th, followed by Lomaivuna with 95mm on 9th, Savusavu Airfield with 86mm on the 4th, Laucala Bay (Suva) with 80mm on the 9th, Monasavu with 76mm on the 18th, Vunisea with 67mm on the 1st, Yaqara with 62mm on the 30th, Koronivia with 61mm on the 9th and Ono-i-Lau with 59mm on the 1st.

Monasavu recorded the highest number of rain days (rainfall ≥0.1mm) with 28 days, followed by Koronivia with 24 days, Rotuma and Lomaivuna both with 23 days, Savusavu Airfield with 21 days and Nadarivatu with 20 days. Consequently, Tavua and Lautoka both recorded the least number of rain days with 1 day, followed by Rarawai Mill (Ba) with 2 days, Yaqara with 3 days, Momi with 4 days, Nadi Airport with 6 days and Yasawa-I-Rara with 7 days.

There were no new rainfall records observed during the month.



4. **AIR TEMPERATURES**

A. **Maximum Day-time Air Temperatures**

Generally *normal to above normal* day-time air temperatures were observed across the country during the month. Out of the 23 climate stations that reported in time for the analysis of data, 21 recorded anomalies ≥+0.5°C and 2 within ± 0.5 °C.

The warmest days on average were recorded at RKS Lodoni with 34.2°C, followed by Rarawai Mill (Ba) and Seagaga both with 33.4°C and Labasa Airfield with 33.3°C. Consequently, Monasavu recorded the coolest days on average with 26.4°C, followed by Matuku with 30.0°C and Yasawa-I-Rara with 30.6°C.

The warmest daily day-time temperatures were recorded during the last week of the month. The month's highest day-time temperature of 35.9°C was observed at RKS Lodoni on the 26th, followed by Rarawai Mill (Ba) with 35.5°C on the 13th, Lomaivuna and Ono-i-Lau both with 35.4°C on the 25th and 27th, respectively. On the other hand, the coolest day-time temperature of 20.4°C was at Matuku on the 23rd, followed by Monasavu with 22.2°C on the 6th and Savusavu Airfield with 24.0°C on the 20th.

monthly highest average maximum temperature of 32.6° 1951 and 1905, respectively. Nadi Airport recorded its 13th, since observations began in 1942 (Table 1).

Minimum Night-time Air Temperatures В.

Generally normal to above normal night-time temperatures were recorded over most parts of the country during the month. Of the 23 stations, 18 recorded anomalies $\geq +0.5$ °C, 2 within ± 0.5 °C, and 3 with anomalies ≤ -0.5 °C.

The coolest days on average was at Monasavu with 20.4° C, followed by Rarawai Mill (Ba) with 22.5°C, Lomaivuna with 22.6°C, Vaturekuka (Labasa) and Korolevu both with 22.9°C. Consequently, on average, the warmest night-time temperatures were observed at RKS Lodoni and Savusavu Airfield both with 26.6°C, followed by Rotuma with 26.5°C and Viwa with 26.1°C.

The coolest daily night-time temperatures were recorded mostly during the beginning of the month. The lowest night-time temperature of 18.3°C was recorded at Monasavu on the 7th, followed by Rarawai Mill (Ba) with 19.5°C on the 6th, Lomaivuna with 19.7°C on the 6th, and Udu Point with 20.2°C on the 2nd. On the other hand, the warmest night-time temperature of 29.2°C was recorded at RKS Lodoni on the 4th, followed by Penang Mill with 28.9°C on the 3rd and Rotuma with 28.4°C on the 4th.

Laucala Bay (Suva), Viwa, Savusavu Airfield. Nadi Airport, Udu Point and Lautoka recorded their Nabouwalu, Koronivia, Nausori Airport and Monasavu recorded their monthly highest average minimum tem-C, 31.9°C and 32.3°C, since observations began in 1942, perature of 25.4°C, 26.1°C, 26.6°C, 25.3°C, 24.7°C, 24.3°C and 20.4°C, since observations began in 1942. daily highest maximum temperature of 35.1°C on the 1978, 1956, 1956, 1950, 1956 and 1980 respectively (Table 1).

TABLE 1. CLIMATE RECORDS ESTABLISHED IN APRIL 2024

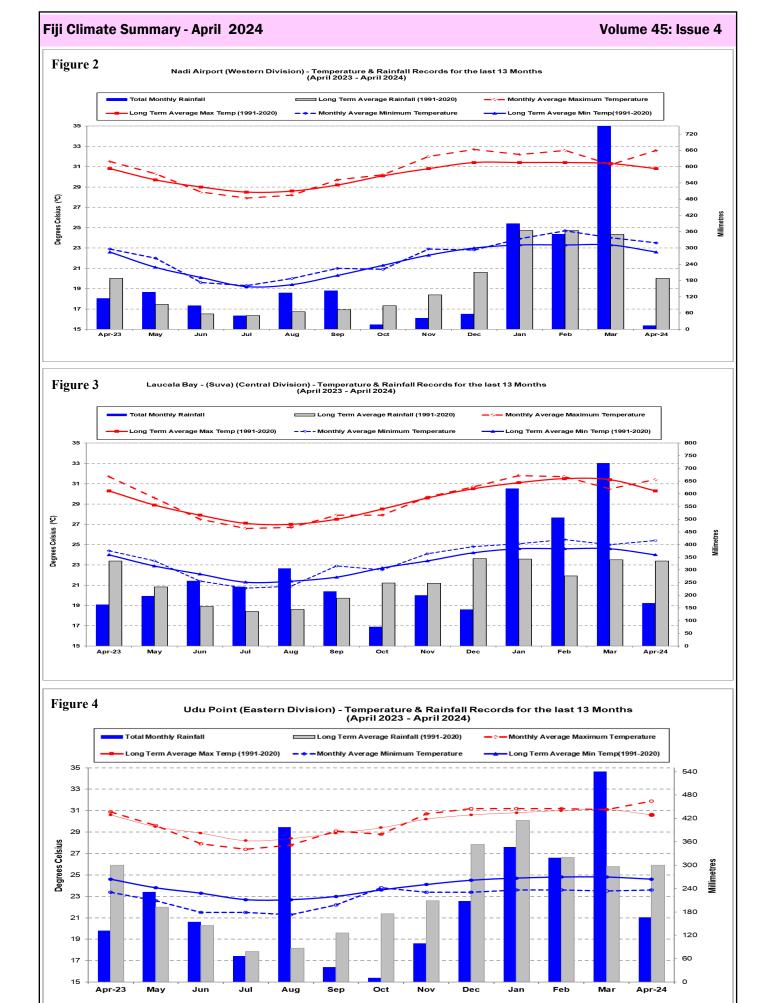
<u>Element</u>	Station	Observed (record)	<u>On</u>	Rank	Previous (record)	<u>Year</u>	Records Began
Average Maximum Temperature	Nadi Airport	32.6°C	1	New High	32.2°C	1974	1942
Average Maximum Temperature	Udu Point	31.9°C	-	New High	31.7°C	1996	1951
Average Maximum Temperature	Lautoka	32.3°C	-	New High	32.0°C	1996	1905
Daily Maximum Temperature	Nadi Airport	35.1°C	13 th	New High	34.3°C	1963	1942
Average Minimum Temperature	Laucala Bay	25.4°C	ı	New High	24.6°C	2019	1942
Average Minimum Temperature	Viwa	26.1°C	ı	New High	25.8°C	1996	1978
Average Minimum Temperature	Savusavu Airfield	26.6°C	1	New High	24.9°C	2002 2003	1956
Average Minimum Temperature	Nabouwalu	25.3°C	ı	New High	25.0°C	1991 2003	1956
Average Minimum Temperature	Koronivia	24.7°C	i	New High	23.8°C	2008	1950
Average Minimum Temperature	Nausori Airport	24.3°C	1	New High	23.6°C	2001 2002	1956
Average Minimum Temperature	Monasavu	20.4°C	-	New High	20.1°C	2001	1980

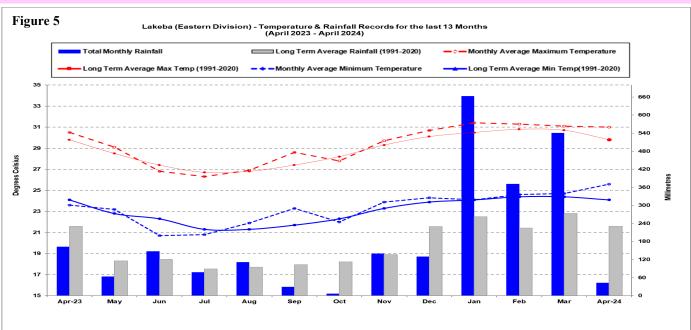
Note: All comparisons in this summary are with respect to "Climatic Normals". This is defined to be the average climate condition over a 30-year period. Fiji uses 1991-2020 period as its "climatic normal" period.

TABLE 2. DAILY CLIMATE REPORTING SITES: SUMMARY FOR APRIL 2024

```
AIR TEMPERATURES
                             RAINFALL
                                                                                          SUNSHINE
                       TOTAL
                                 RAIN MAX.
                                                     AVERAGE DAILY
                                                                           EXTREME
                                                                                           TOTAL
                               * DAYS FALL
                                                 MAX. #
                                                           MIN. #
                                                                                 MIN.
                                                                        MAX.
                                %
7
                                                       ...
1.9
                                        MM ON
                                                            23.5
                                                                   C C ON C 0.9 35.1 13 21.1
                                                                                    C ON
                        MM
                                                                                            HRS
                        13.7
                                                 32.6
                                         8 12
                                                                                            254 132
NADI AIRPORT
                                                       1.1 25.4
LAUCALA BAY
                       169.0
                               51 18
                                         80 9
                                                 31.4
                                                                   1.3 32.9 29 24.0 21
                                                                                            170 112
                               28
                                         32 26
                                                       0.4 23.4
NACOCOLEVU RESEARCH
NACOCOLEVU RESEARCH 44.2 28 8 ROTUMA ISLAND (AWS) 391.0 148 23
                                                 31.5
                                                                   1.5 33.7 25 21.0
                                                                                            195 135
                                       162
                                             5
                                                 32.6
                                                                   1.4
                                                        1.5
                                                            26.5
                                                                        35.0
                                                                   1.4 33.6 10 23.6
0.7 34.0 29 23.0
VIWA ISLAND
                                        23
                                             5
                                                 32.9
                                                            26.1
                        40.5
                               22
                                                       1.7
                                                                             10 23.6
                                                                                        6
                        26.5
                                                 30.6 -0.4 24.8
                                   7
                                        14 24
YASAWA-I-RARA (AWS)
                               16
                               56 17
47 18
                                                            23.6
25.3
                                                                       33.1
33.7
                                                                             26
27
UDU POINT WEATHER
                       165.9
                                         37
                                                 31.9
                                                       1.3
                                                                  -1.0
                                                                                 20.2
                                            26
                                                 31.1
                                                       \bar{1}.\bar{1}
NABOUWALU
                       128.3
                                                                   0.9
                                                       1.8 23.0
                        30.9
                               14 15
                                         12 12
                                                 33.3
                                                                   1.2 35.1 27 21.2
LABASA AIRFIELD
                                                            25.0
24.7
                               99 21
                                                                   1.3 32.8 22 23.5
1.8 34.1 24 23.2
SAVUSAVU AIRFIELD
                       205.3
                                        86
                                             4
                                                 30.7
                                                       0.7
                                                       1.4
                       196.6
                                                31.5
KORONIVIA RESEARCH
                               61
                                        61
                                             9
NAUSORI AIRPORT
                       165.2
                               52 16
                                         38
                                                 31.2
                                                       1.3
                                                            24.3
                                                                   1.4 33.0 24 21.4
                                        28
76
                                                            23.7
                                                                   1.2 33.2
1.4 29.6
                       175.0
                                             9
                                                 31.3
NAVUA (AWS)
                               44 19
                                                        1.8
                                                                              29 21.7
                               84 28
                                            18
                                                        1.7
                                                            20.4
                                                                              26
MONASAVU HYDRO DAM
                       400.2
                                                 26.4
                                                                                 18.3
FSC LAUTOKA MILL
                        16.9
                                         17 23
                                                 32.3
                                                        1.3
                                                            23.8
                                                                   0.7
                                                                        33.6
                                                                              16
                                                                   0.9 35.5
2.0 32.7
                                             2
                                                       1.9 22.5
FSC RARAWAI MILL
                        14.6
                                        10
                                                 33.4
                                                                             13 19.5
                               24 17
FSC PENANG MILL
                        60.0
                                        15
                                           18
                                                 31.6
                                                       1.0
                                                            25.2
                                                                             13
                                                                                 22.8
                       202.6
                                                 31.0
MATEI AIRFIELD
                               76 18
                                         46
                                                       1.1 23.3 -0.8 32.0 25
                                                                                21.9
VANUABALAVU
                        68.2
                               34 12
                                        46
                                             6
                                                       0.9 23.5 -0.9 32.7 27 21.6
                                                 30.8
                               19 12
                                         19 25
                                                                   1.5
LAKEBA (AWS)
                        43.0
                                                 31.0
                                                        1.2
                                                            25.6
                                                                        32.4
                                                                                 22.2
                                                       1.3 23.9
0.5 24.1
                                                            23.9
                                                                   0.4
0.1
                                                 30.7
VUNISEA
                       132.0
                               43
                                         67
                                             1
                                                                        32.5
                                                                             13
                                                                                 22.6
                       26.8
122.0
                                                \frac{30.0}{32.2}
                                                                       31.6 22 23.1 20
35.4 27 23.2 3
                               15 10
                                         12
                                             6
MATUKU
ONO-I-LAU (AWS)
                                        59
                                                       3.3 25.4
                                                                   1.8
                               66
                                        62 30
                                                 32.9
                                                            25.4
YAQARA AWS
                        68.0
                               39
                                    3
                                                                        34.3 11 23.6
                                                                                       14
                                            9
LEVUKA AWS
                        15.0
                                    8
                                         4
                                                 U/S
                                                            U/S
                                                                        U/S
                                                                                 U/S
                                                            U/S
22.6
                                                U/S
31.4
                                                                        U/S U/S
35.4 25 19.7
KEIYASI AWS
                                    9
                                          8
                                           27
                        37.0
                                  23
                                        95
                                                                                        6
LOMAIVUNA AWS
                       231.0
                                        36 30
                                                            U/S
NADARIVATU AWS
                       117.0
                                   20
                                                 U/S
                                                                        U/S
                                                                                 U/S
                                                                        35.9 26
                       128.5
                                                34.2
                                                                                 24.2
RKS LODONI AWS
                                        17
7
                                            24
                                  19
                                                            26.6
                                            10
                                                                                 21.7
                        10.0
                                                 31.8
MOMI AWS
                                                            24.1
                                                                        33.3
                                                                             10
                                                                                        6
                                        12 26
SIGATOKA AWS
                        30.5
                                                 31.4
                                                            23.0
                                                                        33.7
                                                                                 20.5
                                  14
VATUREKUKA AWS
                        45.5
                                        14
                                            4
                                                 31.7
                                                            22.9
                                                                        33.8 26 21.5
                                                                                       14
                                                                        34.2
                        67.0
                                   9
                                        18 26
                                                            22.9
                                                                                 20.8
                                                                                       22
KOROLEVU AWS
                                                 31.0
                                                                              26
                                                 32.0
WAINIKORO AWS
                        76.0
                                                            23.7
                                                                        34.2 30 21.9 14
                                            8
                       172.5
                                   19
                                         36
                                                 32.1
                                                            25.2
                                                                        33.5
                                                                               2
SAQANI AWS
                                                                                 21.5 30
SEAQAQA AWS
                        79.5
                               33 13
                                         20 12
                                                 33.4
                                                            23.7
                                                                        34.9 10 21.3
                                        21
57
DOBUILEVU TB3
                        84.5
                               31 17
                                             8
NASINU TB3
                                  17
                       166.5
                                          7 22
TAVUA TB3
                         7.0
                                4
                      TEMPERATURE( C) HUMIDITY WIND
                             DRY WET RH% VP
                                (AVERAGE AT 9AM) KT
                       28.0 28.3 25.0
28.4 29.2 26.3
                                         76 28.8
80 30.3
NADI AIRPORT
                                                    5.4
                                                    8.0
LAUCALA BAY
NACOCOLEVU RESEARCH 27.5 28.6 25.8
                                         80 29.3
                       29.6
ROTUMA ISLAND (AWS)
                             30.2 27.3
VIWA ISLAND
                       29.5
                                         80 32.1
YASAWA-I-RARA (AWS) 27.7
                       27.7 28.9 26.4
28.2 29.2 26.5
28.1 29.3 26.4
                                          82 29.8
UDU POINT WEATHER
NABOUWALU
                                          80
                                             30.3
                                          80 30.5 10.7
LABASA AIRFIELD
SAVUSAVU AIRFIELD
                       28.7 28.6 26.2
                                          82 29.3
                       28.1 28.8 27.2
                                          88 29.6
KORONIVIA RESEARCH
                       27.7 28.5 26.1
NAUSORI AIRPORT
                                         82 29.1
                                                    5.4
NAVUA (AWS)
                       27.5
                       23.4 23.1 22.6
MONASAVU HYDRO DAM
                                          96 21.1
                                         92 26.5
77 30.0
                       28.0 26.9 25.9
FSC LAUTOKA MILL
                       28.0 29.0 25.7
28.4 28.8 25.9
FSC RARAWAI MILL
                                         79
                                             29.6
FSC PENANG MILL
                       27.1 29.0 26.5
                                          82 30.0 11.7
MATEI AIRFIELD
VANUABALAVU
                       27.1 29.0 26.2
                                          80 30.0
LAKEBA (AWS)
                       28.3
                             28.5 25.9
VUNISEA
                       27.3
                       27.1 27.8 25.0
                                         80 27.9
MATUKU
ONO-I-LAU (AWS)
                       28.8
```

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(\le) TO 5 DAYS. U/S: UNSERVICEABLE







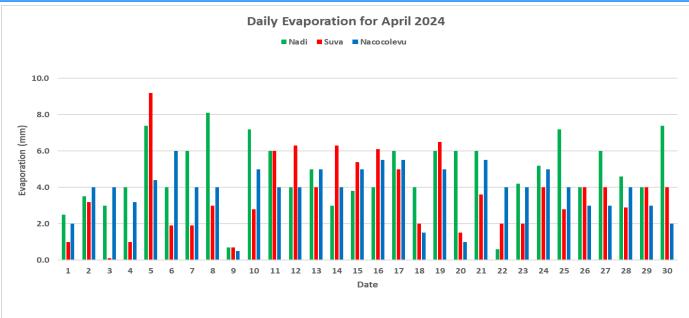


Figure 6: The total monthly raised pan evaporation at Nadi Airport, Laucala Bay (Suva) and Nacocolevu (Sigatoka) were 143.4mm, 107.2mm and 115.1mm, respectively. Nadi's highest daily evaporation was 8.1mm on the 8th, with Suva's highest daily evaporation of 9.2mm on the 5th, and Nacocolevu (Sigatoka) recorded its highest of 6.0mm on the 6th.

6. SOLAR RADIATION

The Nadi solar radiation instrument was unserviceable during the month of April 2024.

7. WIND SUMMARY

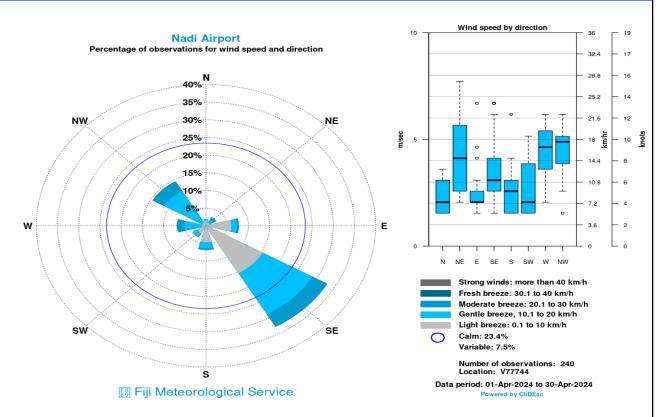


Figure 7a: Looking at Nadi's 3 hourly observations, southeasterly winds were most dominant during the month, followed by northwesterly and then easterly winds. Wind strength ranged from light to moderate breeze, while 23.4% observations accounted for calm winds.

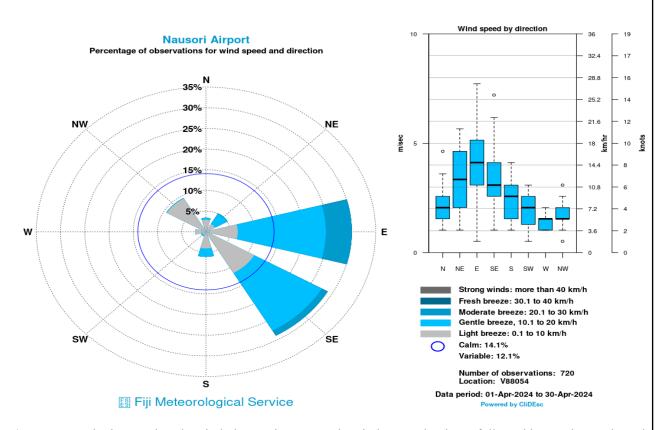


Figure 7b: For Nausori Airport's hourly wind observations, easterly winds were dominant followed by southeasterly and then northwesterly winds. Wind strength ranged from light to moderate breeze, while 14.1% of observations accounted for calm winds.

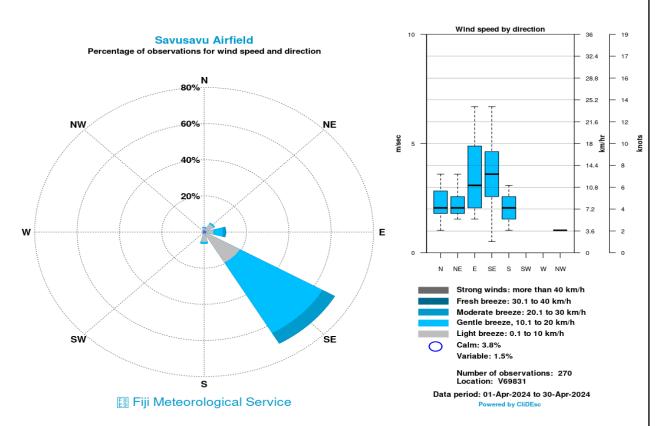


Figure 7c: For Savusavu Airfield's hourly observations (0800hrs to 1600hrs), southeasterly winds were most dominant during the month, followed by easterly and then northeasterly winds. Wind strength ranged from light to moderate breeze, with calm winds observed 3.8% of the time.

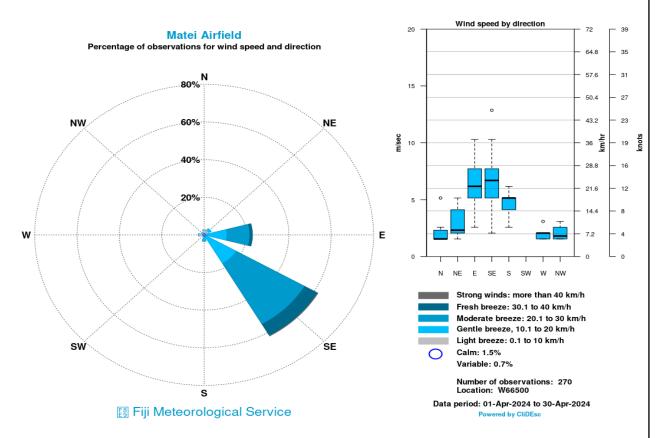


Figure 7d: For Matei Airfield's hourly wind observations (0800hrs to 1600hrs), southeasterly winds were dominant followed by easterly and then northeasterly winds. Wind strength ranged from light to fresh breeze, with calm winds observed 1.5% of the time.

SEA SURFACE TEMPERATURE (SST) 8.

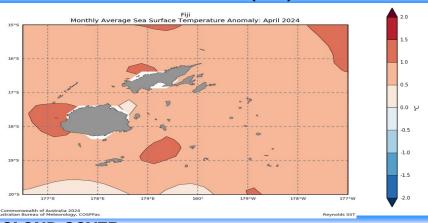


Figure 8:

Warmer than normal sea surface temperature anomalies were observed across most of the Fiji Waters, with anomalies 0.5-1.0°C.

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

9. **CLOUD COVER**

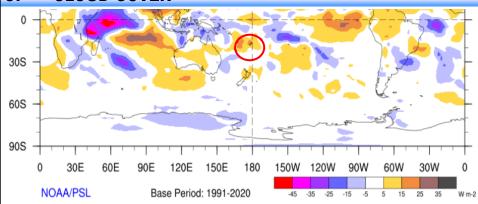


Figure 9:

Below normal cloud cover was present over the Fiji Group during April, which is related to the more dry days experienced in April (Fiji in red circle).

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

10. **SEA LEVEL**

Monthly sea level anomalies map for the month of April was unavailable at the time of this issue, due to technical difficulties.

11. WIND ANOMALIES Figure 11: Southeasterly wind anomalies were observed over the Fiji Group during the month (base period: 1991-2020) (Fiji in red circle). 60S 3 Source: https:// www.esrl.noaa.gov/psd/map/ images/rnl/ 60E 120E 120W 60W sfcwnd 30b.rnl.html REANALYSIS DATA SURFACE WINDS (m/s) 30-DAY ANOMALY FOR: Mon APR 01 2024 - Tue APR 30 2024 (climatology: 1991-2020, smoothed with 5-day running mean)

EXPLANATORY NOTES

Anomalies - denote the departure of an element (rainfall, temperature, sea surface temperature, cloud cover, sea level and wind) from its long-period average value for a particular location.

Trough - an elongated area of low atmospheric pressure that is associated with a cyclone, or low. Sometimes referred to as a 'trough of low pressure'.

Rain - Liquid precipitation in the form of water droplets. Rain falls from dense, continuous clouds, called 'stratiform' clouds.

Shower - precipitation from individual clouds, often characterised by the sudden beginning or ending. Showers fall from 'lumpy looking', 'cauliflower' clouds, called 'cumuloform' clouds.

Trade Winds - the trade winds are the east to southeasterly winds (in the Southern Hemisphere) which affect tropical and subtropical regions.

High pressure systems or anticyclones are atmospheric circulations that rotate anti-clockwise in the Southern Hemisphere. Anticyclones are areas of higher pressure and are generally associated with lighter winds and fine and settled conditions.

Low pressure systems or mid-latitude cyclones are atmospheric circulations that rotate clockwise in the Southern Hemisphere (anti-clockwise in the Northern Hemisphere). Cyclones are areas of lower pressure and generally associated with stronger winds, unsettled conditions, cloudiness and rainfall.

Sea Surface Temperature (SST) - the temperature of the water's surface. It is usually measured using buoys, ship data, and satellites.