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# Fiji Climate Summary January 2013

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## 1.0 IN BRIEF

January was drier than *normal* in most parts of Fiji. Rainfall ranged from *well below average* to *above average* across the country. Out of the 26 reporting stations, 5 recorded *well below average*, 14 *below average*, 6 *average* and 1 *above average* rainfall.

Rainfall in the Western Division ranged from 22% to 79% of *normal*, 54% to 95% in the Central Division, 43% to 91% in the Northern Division and 26% to 57% in the Eastern Division. Viwa Island recorded the least amount of total rainfall (56mm), which was ranked the 4<sup>th</sup> lowest for the station in its entire history.

Both the day and the night-time average temperatures were *normal* at majority of the sites and ranged between 30.0°C and 32°C.

A new high mean monthly daytime temperature of 31.7°C was established at Vanuabalavu, replacing the record set in 2005, of 31.4°C.

Most parts of Fiji experienced hot and humid conditions, particularly between the 12<sup>th</sup> to 18<sup>th</sup>, as well as the 31<sup>st</sup>, as day time temperatures exceeded 34°C.

Notably, four new high daily temperatures of 35.5°C, 35.0°C, 34.9°C, and 34.8°C were recorded at Koronivia, Nausori Airport, Savusavu Airport, and Vanuabalavu, respectively. The new records now replace the 1976, 1975, 1981 and 2005 records of 35.0°C, 34.4°C, and 33.4°C for the above respective stations.

El Niño-Southern Oscillation (ENSO) indicators in the tropical Pacific remain at neutral levels. The majority of the climate prediction models favour neutral ENSO conditions to continue at least through the first quarter of 2013.

Three tropical cyclones have already formed in the Regional Specialised Meteorological Centre Nadi – Tropical Cyclone Centre (RSMC Nadi-TCC) Area of Responsibility (AOR). *Evan* and *Freda* were named on the 12<sup>th</sup> and 29<sup>th</sup> of December 2012, while *Garry*, on the 21<sup>st</sup> of January.

One to two tropical cyclones (TC) are anticipated to affect Fiji during this season, of which one may reach or exceed Category 3 status.

## 2.0 WEATHER PATTERNS

January's weather was influenced by the prevailing south-east trade flow, a series of troughs of low pressure and Tropical Depressions 08F and 11F.

On the first three days of the month, a ridge of high pressure from the south directed a southeast flow over Fiji causing brief showers over the eastern parts of the larger islands.

A trough approached Fiji from the west on the 4<sup>th</sup> and tarried over the group till the 8<sup>th</sup>. Rain was experienced over most places during this period, with Monasavu recording the highest 24-hour rainfall of 120mm on the 7<sup>th</sup>. The system cleared the country later on the 8<sup>th</sup>, with trade showers about the larger islands, till the 10<sup>th</sup>.

On the 11<sup>th</sup>, a Tropical Depression TD08F moved towards Fiji from the northeast but turned towards the south, just east of the group. The depression aided trade showers over the main islands till the 25<sup>th</sup>.

A ridge of high pressure gradually extended onto Fiji from the far south on 16<sup>th</sup> and directed a southeast wind flow, which prevailed until the 25<sup>th</sup>. Brief showers were experienced over the eastern parts of the country.

On the 26<sup>th</sup>, a second Tropical Depression TD11F developed to the south of Ono-i-lau and moved westwards. The depression lingered just south of the country till the end of the month, directing a west to southwest wind flow over the group and warranting a strong wind warning for the whole Fiji waters. Occasional showers were recorded especially over the western and southern parts of the country. During this period, Koronivia station reported the highest temperature for the month of 35.5°C.

Rotuma received most of its rain for January largely from the active SPCZ hovering near the island.

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

### 3.0 RAINFALL

Rainfall during January ranged from *average* to *well below average* during the month, except for Rotuma, which recorded *above average* rainfall (Table 2 & Figures 2-5). Of the 26 reporting stations, 5 recorded *well below average* rainfall, 14 *below average*, 6 *average* and 1 *above average*.

Rainfall ranged from 22% to 83% of the *normal* in the Western Division, 54% to 95% in the Central Division, 43% to 91% in the Northern Division and 26% to 55% in the Eastern Division. Monasavu and Rotuma registered 83% and 133% of the *normal*, respectively.

Rainfall in the Western Division ranged from 56.3mm to 311.4mm, 200.2mm to 354.2mm in the Central Division, 163mm to 379.5mm in the Northern Division and 71.8mm to 123.0mm in the Eastern Division. Monasavu recorded 508.6mm, while Rotuma recorded 470.9mm of rainfall.

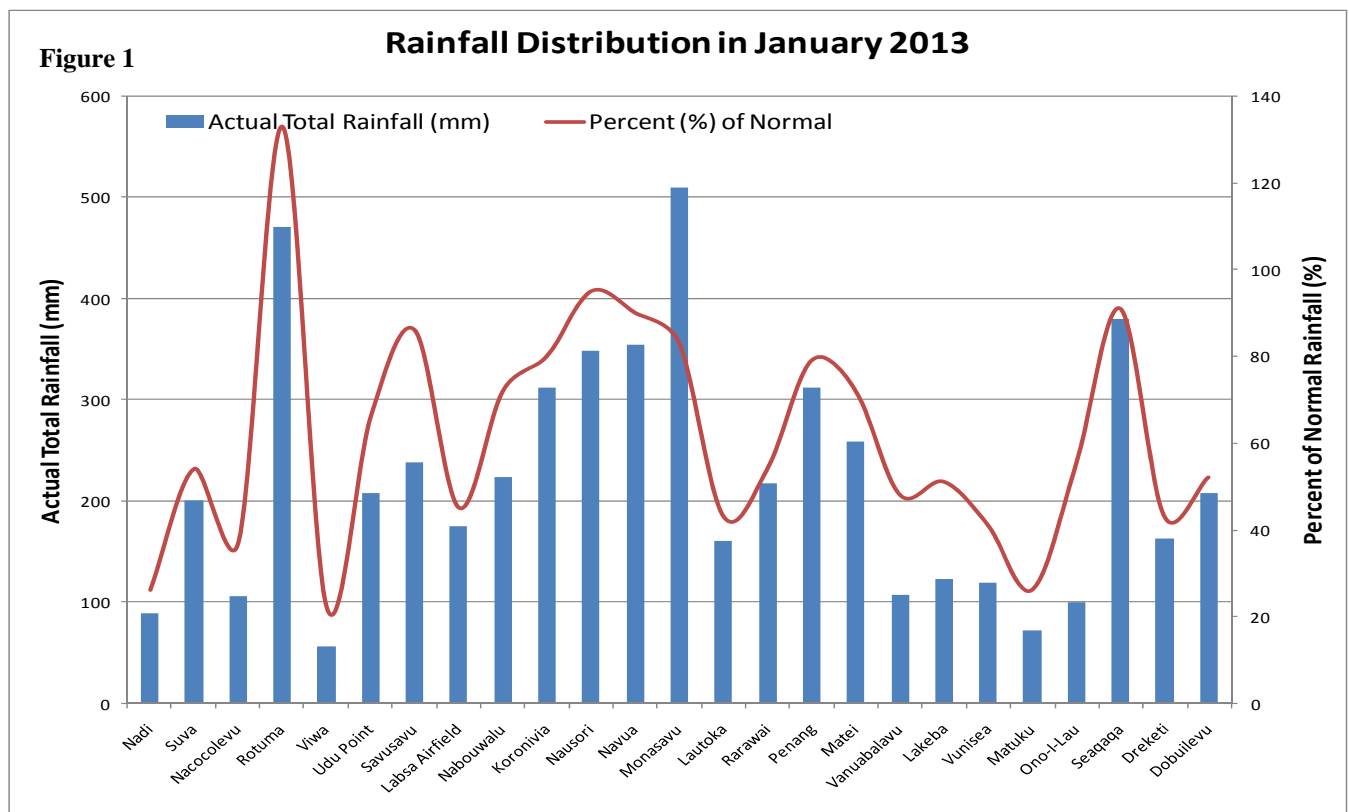
Monasavu recorded the highest total monthly rainfall of 508.6mm, followed by Rotuma with 470.9mm, Seaqaqa, 379.5mm, Navua, 354.2mm, and Nausori Airport, 347.6mm. On the other hand, the lowest total monthly rainfall was recorded at Viwa with 56.3mm, followed by Yasawa-i-rara, 70.1mm, then Matuku, 71.8mm, and Nadi Airport, 87.9mm (Figure 1).

Matei Airfield recorded the highest number of rain days (rainfall  $\geq 0.1$ mm) with 26 days, followed by Rotuma with 25, and Seaqaqa, 24. Conversely, the least number of rain days was observed at Nacocolevu with 5 days, followed by Yasawa-i-rara, 8, and Viwa, 12.

Using the 3 months Standardised Precipitation Index (SPI) method of drought monitoring, Koroniwia, Labasa Airfield, Lakeba, Lautoka Mill, Nadi Airport, Tokotoko, Rarawai Mill, Laucala Bay, Vanuabalavu, Viwa and Vunisea are currently in drought warning stage. These locations can drift into meteorological drought conditions should the current *below average* rainfall trend continue in February.

However, it should be noted that at this stage, Matuku and Ono-i-lau are in meteorological drought conditions. Subsequently, rainfall at all locations will be closely monitored in the coming months, and updates provided.

For further information on SPI method, refer to ENSO Update at [http://www.met.gov.fj/ENSO\\_Update.pdf](http://www.met.gov.fj/ENSO_Update.pdf).



**Normal:** Long term average from 1971 to 2000.  
**Well Below Average:** Rainfall less than 40% of normal.  
**Below Average:** Rainfall between 40 to 79%.  
**Rain Day:** Rainfall  $\geq 0.1$ mm.  
**Average:** Rainfall between 80 to 119%.  
**Above Average:** Rainfall between 120 to 119%.  
**Well Above Average:** Rainfall greater than or equal to 200% of normal.

## 4.0 AIR TEMPERATURES

### A. Maximum Daytime Air Temperatures

The average maximum temperatures were *normal* to *above normal* over the country, with 57% of the stations recording anomalies within  $\pm 0.5^{\circ}\text{C}$  and 43% greater than  $0.5^{\circ}\text{C}$  (Table 2 & Figures 2-5)

The highest monthly average temperature was recorded at Viwa with  $32.7^{\circ}\text{C}$ , followed by Labasa Airfield,  $32.5^{\circ}\text{C}$ , and Rarawai Mill,  $33.1^{\circ}\text{C}$ . Conversely, the lowest average temperature of  $26.0^{\circ}\text{C}$  was recorded at Monasavu.

The majority of the stations recorded extreme daily maximum temperatures greater than  $33.0^{\circ}\text{C}$  this month. The highest daily maximum temperature was recorded at Koronivia with  $35.5^{\circ}\text{C}$ , followed by Nausori Airport,  $35.0^{\circ}\text{C}$ , and Viwa,  $34.9^{\circ}\text{C}$ , on the 31<sup>st</sup>. On the other hand, the lowest daytime temperature was observed at Monasavu with  $27.6^{\circ}\text{C}$  on the 27<sup>th</sup>.

A number of stations recorded significant positive maximum temperature anomalies, with the highest of  $+2.0^{\circ}\text{C}$  at Ono-i-lau, followed by Viwa and Vanuabalavu,  $+1.6^{\circ}\text{C}$ , Penang and Kronivia,  $+1.3^{\circ}\text{C}$  and  $+1.0^{\circ}\text{C}$  at Rarawai Mill. Navua was the lone site that recorded a negative departure of  $-0.4^{\circ}\text{C}$ .

New daily maximum temperature records were established at Savusavu ( $34.9^{\circ}\text{C}$ ), Koronivia ( $35.5^{\circ}\text{C}$ ), Nausori Airport ( $35.0^{\circ}\text{C}$ ) and Vanuabalavu ( $34.8^{\circ}\text{C}$ ). One new mean monthly maximum temperature record was established at Vanuabalavu ( $31.7^{\circ}\text{C}$ ) (Table 1).

### B. Minimum Night-time Air Temperatures

The average minimum temperatures were *normal* to *above normal*, with 29% of the stations recording anomalies within  $\pm 0.5^{\circ}\text{C}$  and 67% greater than  $0.5^{\circ}\text{C}$  (Table 2 & Figures 2-5).

The lowest average monthly minimum temperature was recorded at Monasavu with  $19.5^{\circ}\text{C}$ , followed by Nacocolevu,  $20.9^{\circ}\text{C}$ , Navua,  $22.2^{\circ}\text{C}$ , and Labasa Airfield,  $22.4^{\circ}\text{C}$ . On the other hand, the warmest night on average was experienced at Viwa with  $26.2^{\circ}\text{C}$ , followed by Rotuma,  $25.7^{\circ}\text{C}$ .

The lowest daily minimum temperature was recorded at Monasavu with  $17.0^{\circ}\text{C}$  on the 29<sup>th</sup>. This was followed by Navua with  $17.5^{\circ}\text{C}$  on the 22<sup>nd</sup> and  $18.9^{\circ}\text{C}$  at Nacocolevu on the 2<sup>nd</sup>. In contrast, the highest daily minimum temperature was observed at Matei Airfield with  $27.5^{\circ}\text{C}$  on the 31<sup>st</sup>, followed by Rotuma,  $27.3^{\circ}\text{C}$ , on the 21<sup>st</sup> and Viwa,  $27.1^{\circ}\text{C}$ , on the 16<sup>th</sup>.

The highest positive minimum temperature anomaly of  $+1.3^{\circ}\text{C}$  was recorded at Laucala Bay, followed by  $+1.2^{\circ}\text{C}$  at Viwa and  $+1.0^{\circ}\text{C}$  at Nadi Airport and Rotuma. On the other hand, Nacocolevu, Matuku and Ono-i-lau were the only stations to record negative departures of  $-1.4^{\circ}\text{C}$ ,  $-0.5^{\circ}\text{C}$  and  $-0.3^{\circ}\text{C}$ , respectively.

Viwa and Rotuma recorded their new mean monthly minimum temperatures during the month (Table 1).

**TABLE 1. CLIMATE RECORDS ESTABLISHED IN JANUARY 2013**

<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>
Daily Max Temperature	Savusavu Airfield	$34.9^{\circ}\text{C}$	31st	New High	$34.4^{\circ}\text{C}$	1981	1956
Daily Max Temperature	Koronivia	$35.5^{\circ}\text{C}$	31st	New High	$35.0^{\circ}\text{C}$	1976	1984
Daily Max Temperature	Nausori Airport	$35.0^{\circ}\text{C}$	31st	New High	$34.4^{\circ}\text{C}$	1975	1957
Daily Max Temperature	Vanuabalavu	$34.8^{\circ}\text{C}$	25th	New High	$33.4^{\circ}\text{C}$	2005	1985
Mean Mthly Max Temp.	Vanuabalavu	$31.7^{\circ}\text{C}$	-	New High	$31.4^{\circ}\text{C}$	2005	1985
Mean Mthly Min Temp.	Viwa	$26.2^{\circ}\text{C}$	-	New High	$26.1^{\circ}\text{C}$	2007	1978
Mean Mthly Min Temp.	Rotuma	$25.7^{\circ}\text{C}$	-	New High	$25.5^{\circ}\text{C}$	1990/98	1912

*Note: All comparisons in this summary are with respect to "Climatic Normal". This is defined to be the average climate conditions over a 30-year period. Fiji uses 1971-2000 period as its "climatic normal" period unless stated otherwise.*

**TABLE 2. DAILY CLIMATE REPORTING SITES: SUMMARY FOR JANUARY 2013**

	RAINFALL					AIR TEMPERATURES								SUNSHINE			
	TOTAL	RAIN		MAX.		AVERAGE DAILY				EXTREME				TOTAL	*		
	MM	%	+	MM	ON	MAX.	#	MIN.	#	MAX.	C	ON	MIN.	C	ON	HRS	%
NADI AIRPORT	88	26	13	21	4	31.6	0.1	23.8	1.0	34.2	12	19.9	10	251	119		
SUVA/LAUCALA BAY	200	54	22	49	15	31.2	0.4	25.2	1.3	34.0	31	22.7	29	202	105		
NACOCOLEVU	106	37	5	40	2	31.6	0.4	20.9	-1.4	34.4	1	18.9	2	225	126		
ROTUMA	471	133	25	88	3	30.8	0.2	25.7	1.0	31.7	24	24.5	22	151	89		
VIWA	56	22	12	26	6	32.7	1.6	26.2	1.2	34.5	18	24.6	24				
UDU POINT	208	66	16	76	3	30.7	0.2	25.2	0.9	32.3	31	23.4	9				
SAVUSAVU AIRFIELD	238	86	17	80	15	31.2	0.6	24.4	0.9	34.9	31	22.4	22				
LABASA AIRFIELD	174	45	18	49	4	32.5	0.8	22.4	0.2	34.4	16	21.0	4				
NABOUWALU	223	72	17	55	6	31.1	0.9	24.8	0.6	33.2	14	23.2	15				
KORONIVIA	311	80	21	57	15	31.7	1.3	23.4	0.7	35.5	31	20.0	10				
NAUSORI AIRPORT	348	95	23	69	15	30.8	0.4	23.2	0.0	35.0	31	20.6	19				
NAVUA/TOKOTOKO	354	90	19	107	6	30.1	-0.4	22.2	0.8	31.8	3	17.5	22				
MONASAVU	509	83	23	120	7	26.0	0.5	19.5	0.5	27.6	27	17.0	29				
LAUTOKA AES	160	43	13	48	12	I N S U F F I C I E N T D A T A											
BA/RARAWAI MILL	217	54	18	37	11	33.1	1.0	22.8	0.7	34.5	12	19.6	10				
PENANG MILL	311	79	20	94	4	31.6	1.3	24.2	0.2	33.2	12	20.7	29				
MATEI AIRFIELD	258	72	26	85	8	30.6	0.5	25.0	0.9	31.9	19	23.6	7				
VANUABALAVU	106	48	17	31	3	31.7	1.6	25.3	0.9	34.8	25	24.6	1				
LAKEBA	123	51	21	23	9	30.6	0.5	24.9	0.9	32.6	31	21.8	20				
ST. JOHNS COLLEGE						S U S P E N D E D											
VUNISEA	119	41	22	20	29	30.4	0.5	24.3	0.9	31.5	19	21.5	28				
MATUKU	72	26	12	22	4	30.2	0.0	23.9	-0.5	31.7	20	22.5	8				
ONO-I-LAU	99	57	19	37	26	31.2	2.0	23.9	-0.3	33.6	31	20.5	27				
SEAQAQA	337	111	18	99	16												
DREKETI	446	186	22	131	17												
VATUKOULA	247	103	12	125	17												
DOBUILEVU	565	208	21	215	17												
YASAWA-I-RARA						INSUFFICIENT DATA											

	TEMPERATURE (C)		HUMIDITY		WIND	SUN RAD				
	MEAN	(AVERAGE AT 9AM)	DRY	WET		RH%	VP	%OF MJ/		
NADI AIRPORT	27.7	29.0	24.9	71	28.2	5.9	64 23.6			
SUVA/LAUCALA BAY	28.2	28.3	25.3	78	29.9		52 23.3			
NACOCOLEVU	26.3	28.2	25.5	80	30.4		58 23			
ROTUMA	28.3	28.7	26.4	83	32.7	4.3	40 19			
VIWA	29.5	30.4	27.1	77	33.2					
UDU POINT	28.0	28.4	25.9	81	31.3	8.3				
SAVUSAVU AIRFIELD	27.8	28.8	25.6	76	30.2					
LABASA AIRFIELD	27.5	28.7	25.6	77	30.3					
NABOUWALU	28.0	29.0	25.9	77	30.9	8.8				
KORONIVIA	27.5	28.6	25.2	76	29.5					
NAUSORI AIRPORT	27.0	28.0	25.1	79	29.7	2.7				
NAVUA/TOKOTOKO	26.2	26.1	24.0	84	28.4					
MONASAVU	22.8	22.3	20.9	87	23.5					
LAUTOKA AES	I N S U F F I C I E N T D A T A									
BA/RARAWAI MILL	27.9	29.4	25.3	71	29.0					
PENANG MILL	27.9	28.8	25.5	76	30.0					
MATEI AIRFIELD	27.8	28.2	25.5	80	30.5					
VANUABALAVU	28.5	29.4	26.1	80	31.7					
LAKEBA	27.8	28.6	25.7	79	30.8	8.0				
ST. JOHNS COLLEGE	S U S P E N D E D									
VUNISEA	27.3	28.1	25.2	78	29.9	3.2				
MATUKU	27.1	27.2	24.1	76	27.5					
ONO-I-LAU	27.5	28.6	25.0	74	29.0	8.9				

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 (1971-2000). + :NUMBER OF DAYS WITH 0.1 MM OR MORE RAIN.  
 \* :PERCENT OF LONG-TERM AVERAGES. DATA MISSING ON ONE OR MORE DAYS.

Figure 2

Nadi Airport (Western Division) - Temperature & Rainfall Records for the last 13 Months (January 2012 - January 2013)

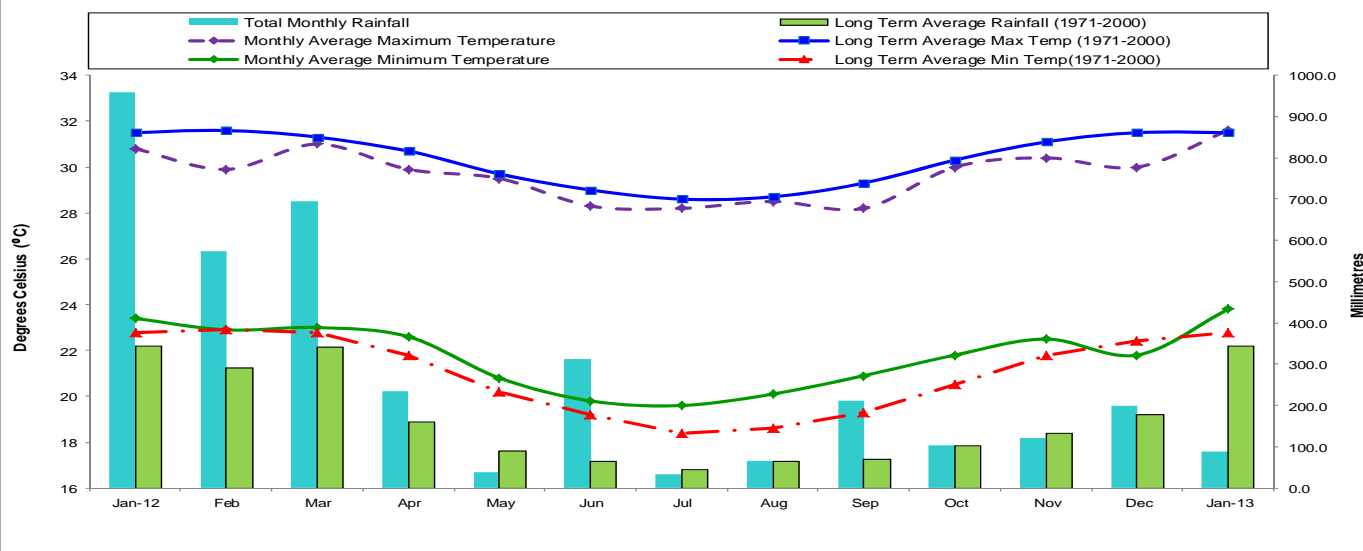


Figure 3

Laucala Bay - (Suva) (Central Division) - Temperature & Rainfall Records for the last 13 Months (January 2012 - January 2013)

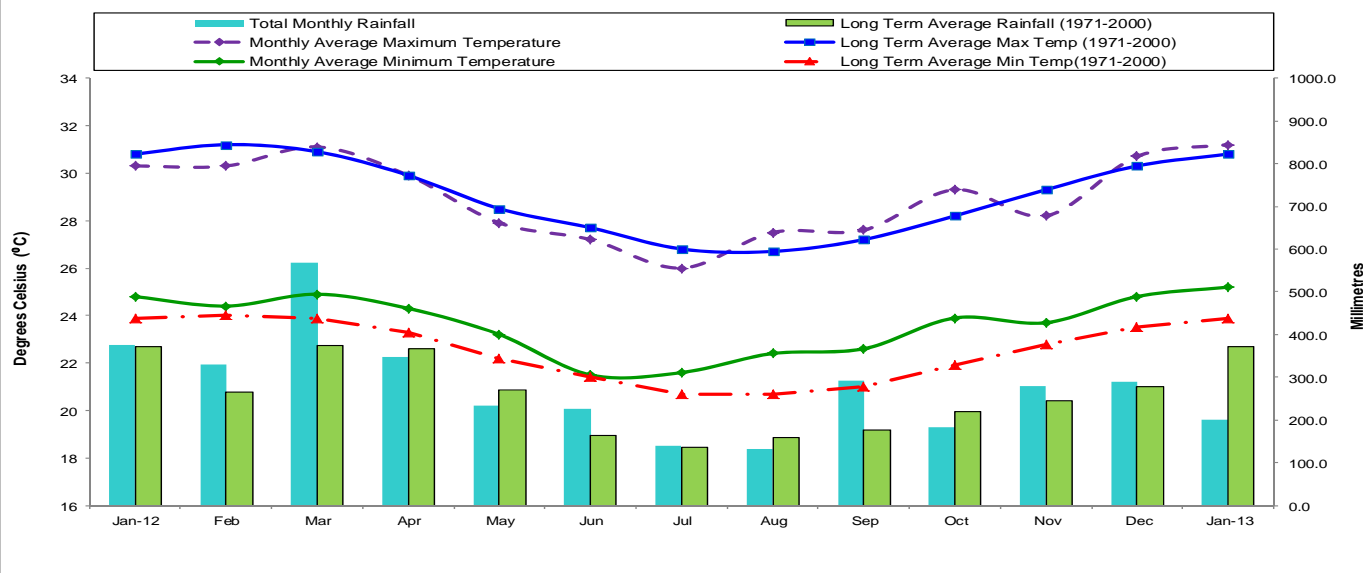


Figure 4

Labasa Airport (Northern Division) - Temperature & Rainfall Records for the last 13 Months (January 2012 - January 2013)

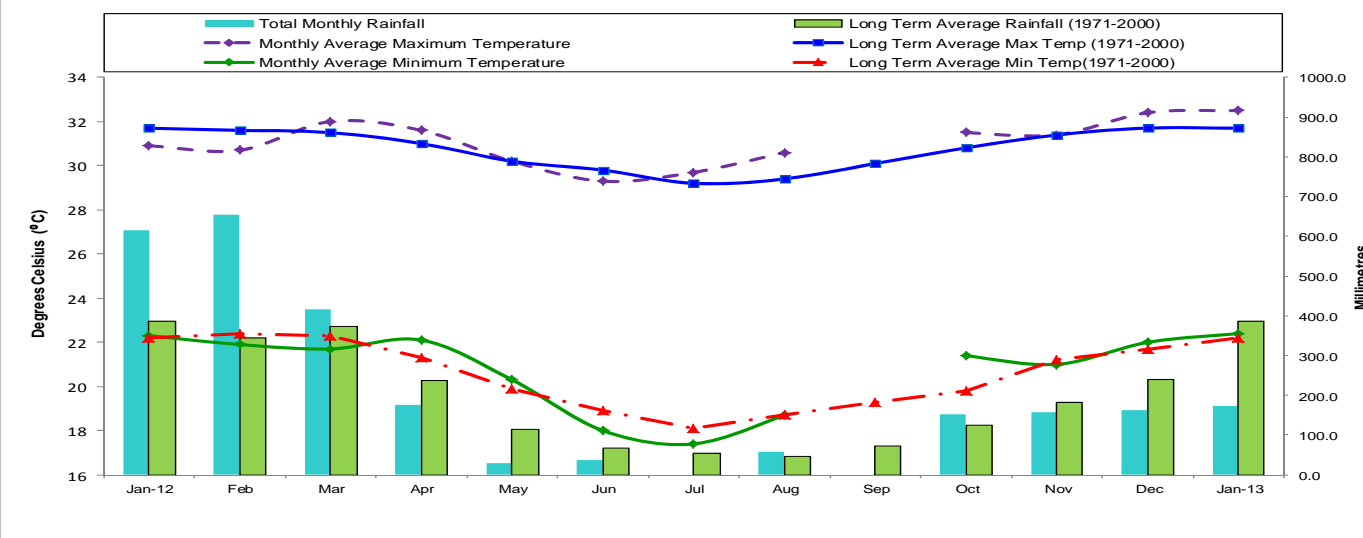
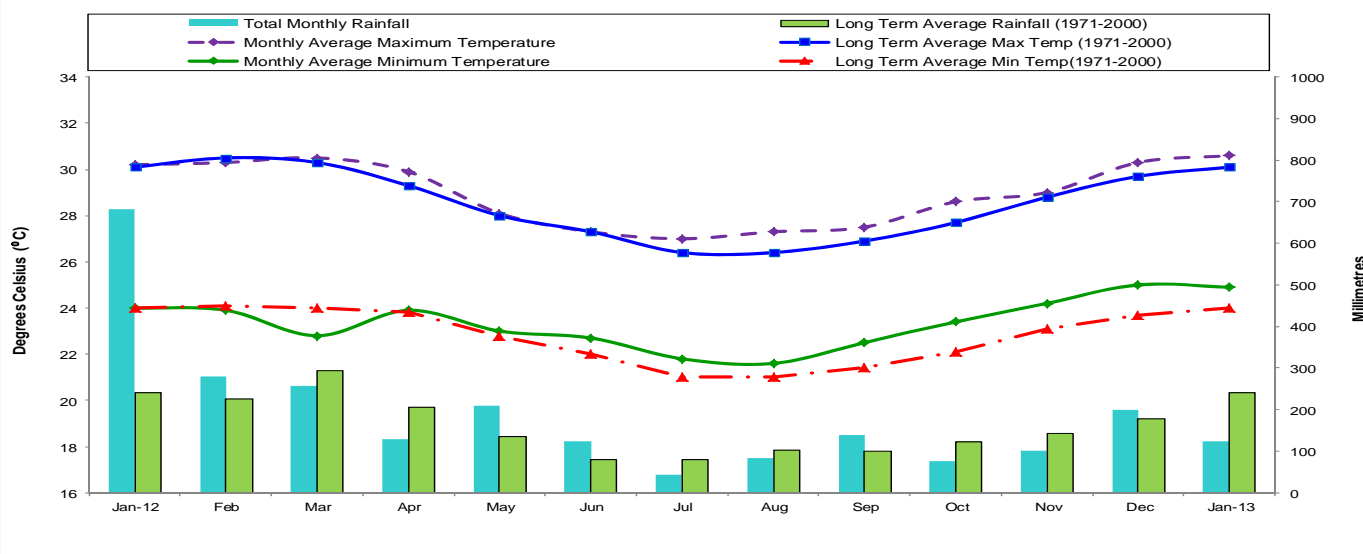


Figure 5

Lakeba (Eastern Division) - Temperature & Rainfall Records for the last 13 Months (January 2012 - January 2013)



## 5.0 RELATIVE HUMIDITY AT 0900HOURS

The 0900am average relative humidity (RH) was generally *normal to below normal*. The average relative humidity ranged from 71% to 87% (Table 2), with the daily range from 51% to 99%.

The stations in the Western Division recorded daily average relative humidity in the range of 71% to 87%. Positive RH departure from the *normal* of +1.7% was recorded at Monasavu, while Penang and Rarawai Mills recorded negative departures of -10.3% and -6.2%, respectively.

The Central Division stations recorded daily average relative humidity in the range of 76% to 84%. Navua recorded a positive departure of +1.2%, while Koronivia, Laucala Bay and Nausori Airport recorded negative departures of -4.4%, -2.9% and -1.5%, respectively.

The daily average relative humidity in the Northern Division ranged from 76% to 81%. With the exception of Udu Point (+0.5%), all other stations in the Division recorded positive departures from the *normal*, with the highest of +3.3% recorded at Savusavu Airfield.

The Eastern Division stations recorded daily average relative humidity in the range of 74% to 80%. Ono-i-lau (-4.4%), Matuku (-1.2%) and Vunisea (-1.0%) recorded negative departures, while Lakeba (+1.2%) and Vanua-balavu (+2.0%) recorded positive departures.

The daily average relative humidity at Rotuma was 83% and recorded a positive departure of +2.5% from normal.

## 6.0 SUNSHINE

Nacocolevu, Nadi Airport, Laucala Bay and Rotuma recorded 126%, 119%, 105% and 89% of *normal* bright sunshine hours during the month respectively, (Table 2).

Nadi Airport recorded 251.0 hours of bright sunshine, with a mean of 8.1 hours per day. More than 10 hours of bright sunshine was recorded on a number of days, with the highest being 11.7 hours, observed on the 10<sup>th</sup>. The least amount of bright sunshine was recorded on the 3<sup>rd</sup> (0.5 hours).

Laucala Bay recorded 202.0 hours of bright sunshine during January. The mean daily bright sunshine for the month was 6.5 hours. The longest duration of bright sunshine (11.3 hours) at the station was observed on the 18<sup>th</sup>, while overcast conditions were experienced on 7<sup>th</sup> and 8<sup>th</sup>.

Nacocolevu recorded 224.7 hours of bright sunshine during January. The mean daily bright sunshine for the month was 7.2 hours. The longest duration of bright sunshine (12.3 hours) at the station was observed on the 9<sup>th</sup>, while the overcast conditions were experienced on the 7<sup>th</sup>.

Rotuma received 150.8 hours of bright sunshine during the month, with the daily mean of 4.9 hours. More than 10 hours of bright sunshine was recorded on the 22<sup>nd</sup> and 23<sup>rd</sup>. For the rest of the month, hours of bright sunshine was under 10 hours, including the 10<sup>th</sup>, 15<sup>th</sup>, 16<sup>th</sup>, 28<sup>th</sup> and 29<sup>th</sup>, which were overcast days. The 10<sup>th</sup> and 16<sup>th</sup> were overcast days, with no bright sunshine recorded.



**7.0 WIND SUMMARY**

The 10-minute average wind statistics recorded at three hour intervals at Nadi Airport show that southeast winds were common during January, accounting for 20.6% of the total observations, followed by northwesterly winds with 16.5%, and westerly winds, 11.3% (Figure 6(a)). Calm conditions were observed on 19.4% of the occasions. The mean wind speed at Nadi Airport was 5.8 knots this month. The 10-minute average wind speeds were generally light to moderate in strength, however, fresh breeze were experienced from 28<sup>th</sup> to 31<sup>st</sup> (Figure 6(b)). The maximum wind gust of 29.0 knots was recorded on the 30<sup>th</sup>.

(Figure 7(a)).

*Below normal* mean wind speed of 3.0 knots was recorded at Nausori Airport. The 10-minute average wind speeds generally ranged from slight to gentle in strength (Figure 7 (b)).

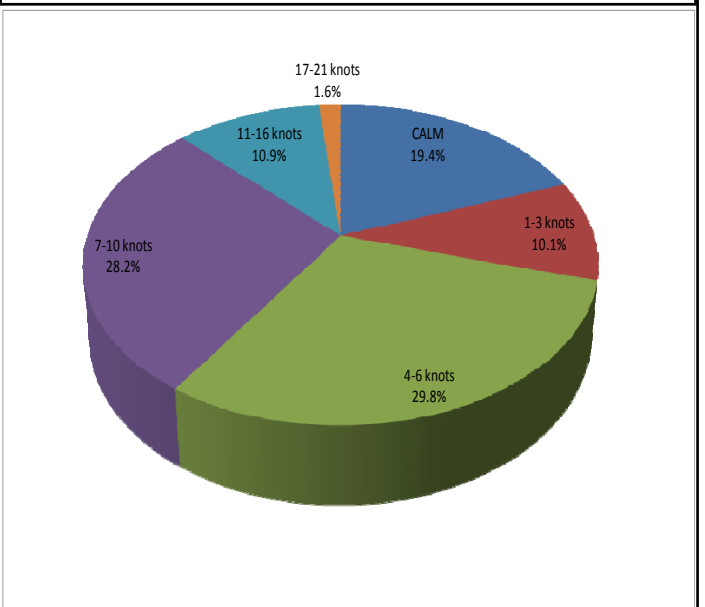
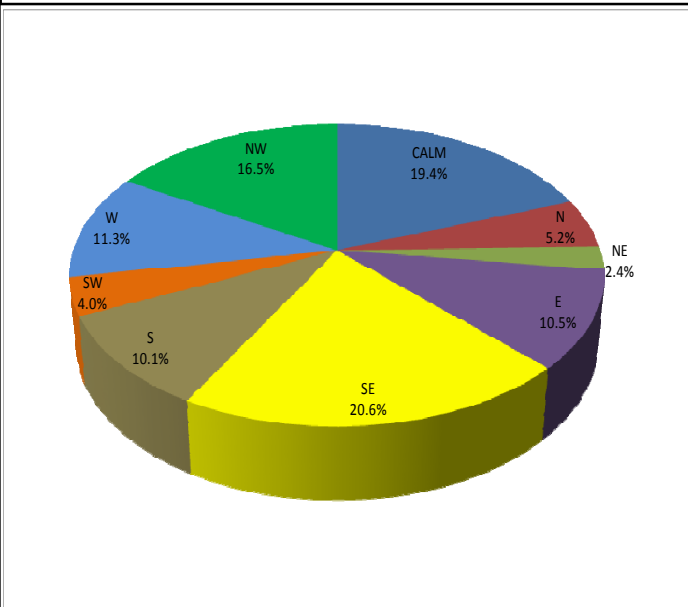
The wind anomalies map on the NOAA website indicated that variable winds of 2-3m/s persisted in the Fiji region (Figure 13).

Calm conditions accounted for 56.5% of the three hourly observations at Nausori Airport. The predominant wind direction was east, which was recorded on 17.3% of instances, followed by southeasterly winds, with 16.1%

*light breeze: 1-3 knots, slight breeze: 4-6 knots, gentle breeze: 7-10 knots, moderate breeze: 11-16 knots, fresh breeze: 17-21 knots, strong breeze: 22-27knots, near gale: 28-33 knots; gale: 34-40 knots*

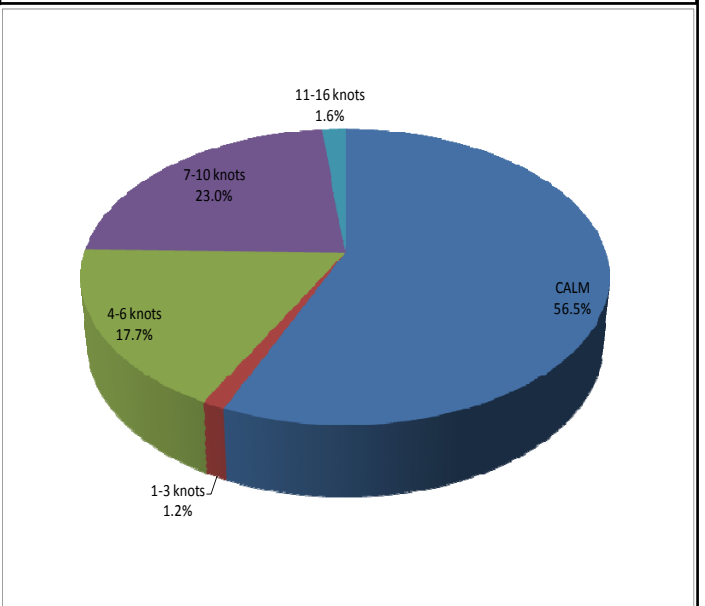
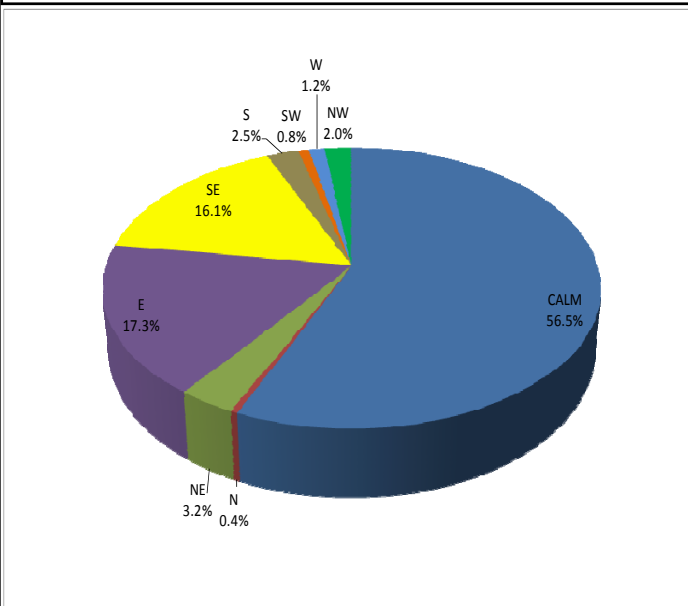
**Figure 6(a) Surface Wind Direction for Nadi Airport, Fiji. (WMO 91680 Lat 17° 45'35"South Long 177° 26'42"East Height above MSL 22m)**

**Figure 6(b) Surface Wind Speed for Nadi Airport, Fiji. (WMO 91680 Lat 17° 45'35"South Long 177° 26'42"East Height above MSL 22m)**



**Figure 7(a) Surface Wind Direction for Nausori Airport, Fiji. (WMO 91683 Lat 18° 02'47"South Long 178° 33'33"East Height above MSL 3m)**

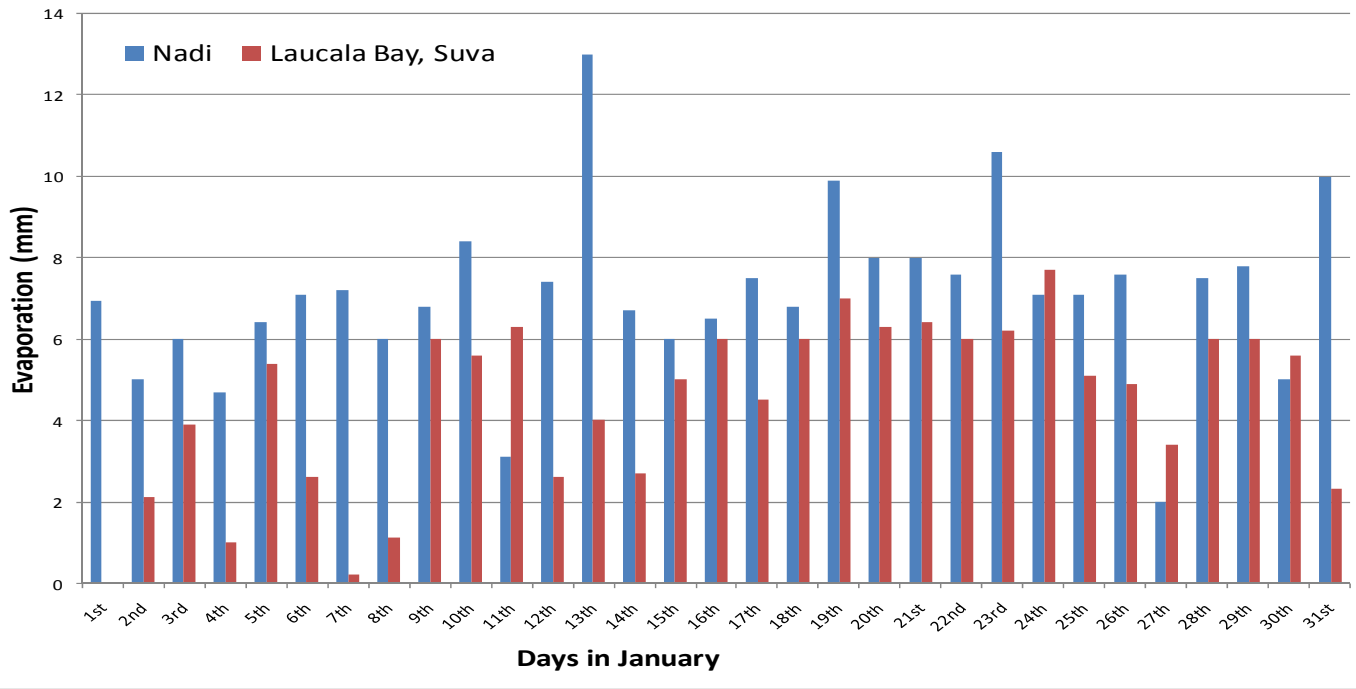
**Figure 7(b) Surface Wind Speed for Nausori Airport, Fiji. (WMO 91683 Lat 18° 02'47"South Long 178° 33'33"East Height above MSL 3m)**



**8.0 EVAPORATION**

Figure 8

**Daily Evaporation for January 2013**



The total monthly evaporation at Nadi Airport was 219.8mm, while Suva recorded 137.9mm. The highest evaporation at Nadi Airport of 10.6mm was recorded on the 23<sup>rd</sup>, while the highest of 7.7mm at Laucala Bay (Suva) was recorded on the 24<sup>th</sup>.

**9.0 RADIATION**

No data available for radiation

**SEA SURFACE TEMPERATURE (SST)**

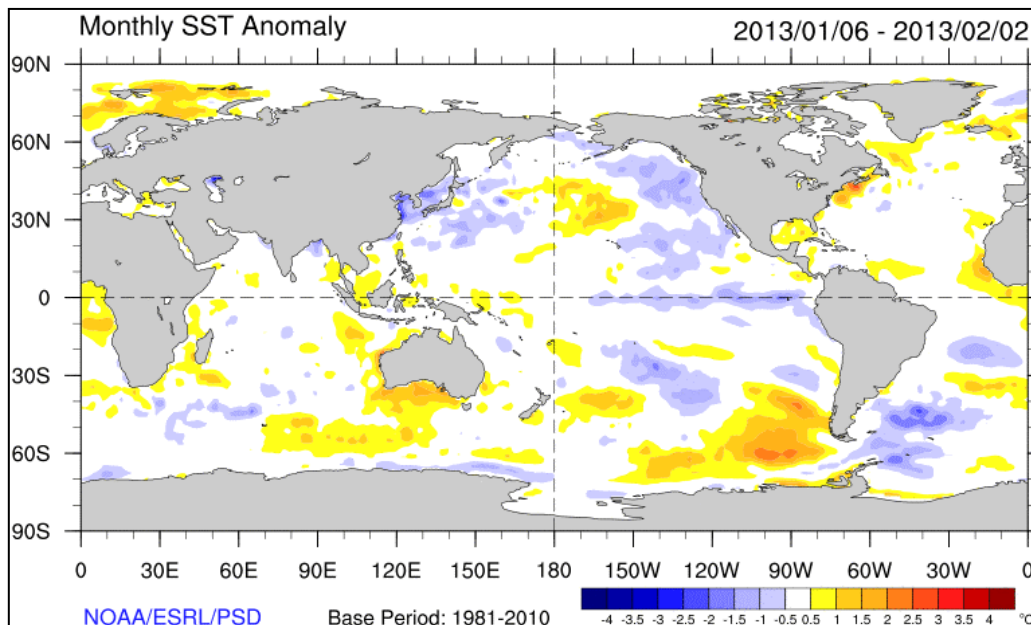


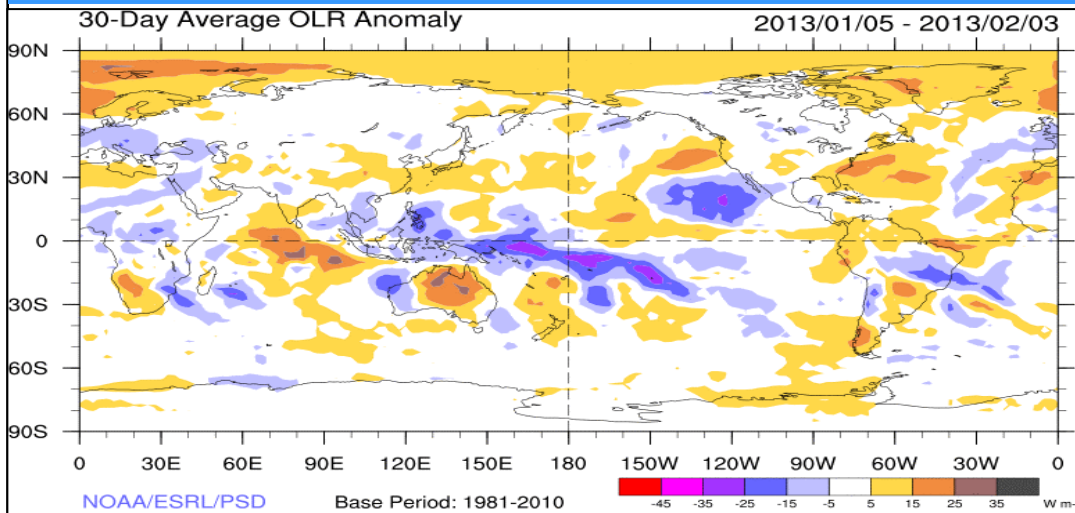
Figure 10:

SST anomalies (°C) from the 6<sup>th</sup> January to 2<sup>nd</sup> February, 2013. SST was near normal to above normal in the Fiji region in January. (Fiji: ~17°S, 180°), (base period : 1981-2010).

<http://www.cdc.noaa.gov/map/images/sst/sst.anom.month.gif>



**CLOUD COVER**

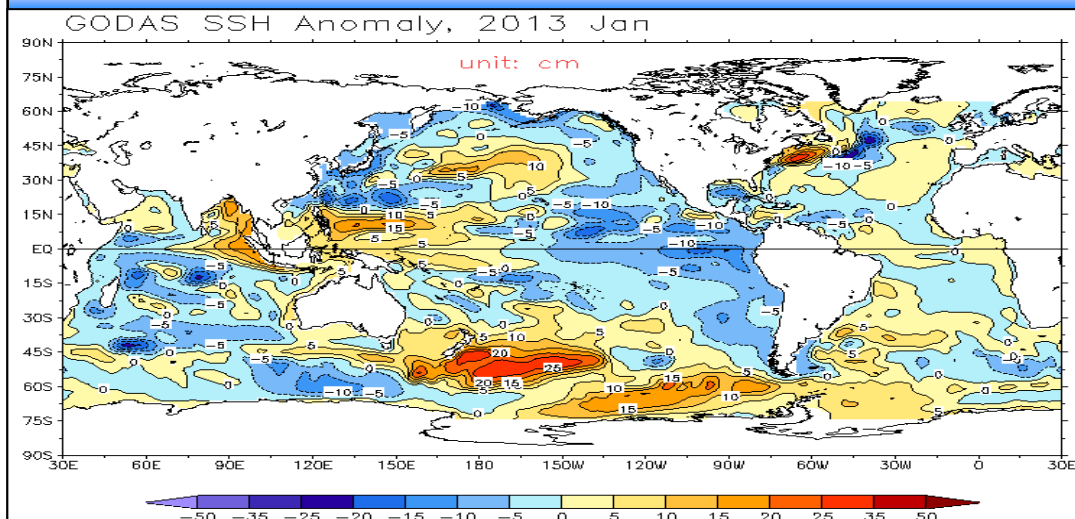


**Figure 11:**  
Outgoing Longwave Radiation anomalies ( $Wm^{-2}$ ) from 5<sup>th</sup> January to 3<sup>rd</sup> February, 2013.

The map suggests *normal* cloud cover in the Northern Division and *below normal* cloud cover for the rest of the Fiji region (Fiji:  $\sim 17^{\circ}S, 180^{\circ}$ ).

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

**SEA LEVEL**

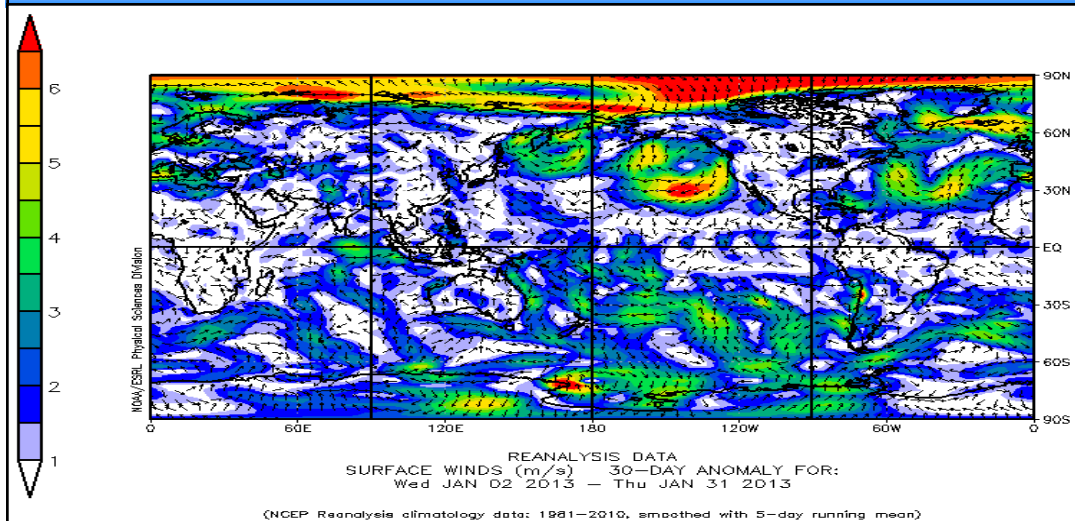


**Figure 12:**  
Sea Level anomalies (cm) for January 2012.

Sea level was normal to *above normal* in the Fiji region, with anomalies at around 0 to +5cm persisting in the Fiji Waters (Fiji:  $\sim 17^{\circ}S, 180^{\circ}$ ).

<http://www.cpc.ncep.noaa.gov/products/GODAS/monthly.shtml>

**WIND ANOMALIES**



**Figure 13:**  
Wind anomalies for 2<sup>nd</sup> to 31<sup>st</sup> January 2013.

Variable winds of 2-3m/s persisted in the Fiji region (Fiji:  $\sim 17^{\circ}S, 180^{\circ}$ ) during January 2013.

[http://www.esrl.noaa.gov/psd/map/images/rnl/sfcwnd\\_30a.rnl.gif](http://www.esrl.noaa.gov/psd/map/images/rnl/sfcwnd_30a.rnl.gif)

This Summary is prepared as soon as ENSO, climate and oceanographic data is received from recording stations around Fiji and Meteorological Agencies around the World. Delays in data collection, communication and processing occasionally arise. While every effort is made to verify observational data, the Fiji Meteorological Service does not guarantee the accuracy and reliability of the analyses presented, and accepts no liability for any losses incurred through the use of this information and its contents. The information may be freely disseminated provided the source is acknowledged.

For further information, contact: The Director of Meteorology, Fiji Meteorological Service, Private Mail Bag NAP0351, Nadi Airport, Fiji. Phone: (679) 6724888, Fax: (679) 6720430, E-mail: fms@met.gov.fj or climate@met.gov.fj. URL: <http://www.met.gov.fj>



**Climate Services Division**  
**Fiji Meteorological Service**  
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*Quality Management System*  
*Customer Products and Services*  
*Survey Form*

As part of our ongoing commitment to meet our customer needs for climate products and services, the Climate Services Division (CSD) maintains a Quality Management System to meet World Meteorological Organisation (WMO) standards.

In this effort, customer feedback will assist us to ensure that customer needs are addressed and continual improvement of our systems are maintained. Please take this opportunity to make your say in this Customer Feedback Survey.

**CUSTOMER SATISFACTION FEEDBACK FORM**

**File Ref:**

**FULL NAME:** \_\_\_\_\_

**FULL CONTACT ADDRESS:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PHONE NO:** \_\_\_\_\_

**FAX NO:** \_\_\_\_\_

**EMAIL:** \_\_\_\_\_

### Survey Questions

1. Did the product or services meet your expectations?  Yes/No
  
2. Was the product or service delivered in a timely manner?  Yes/No
  
3. Are you a regular user of this product?  Yes/No
  
4. What section/s or aspects of the product do you mostly use?
  
  
  
  
  
  
  
  
  
  
5. Are there ways you think we can improve this product? Explain.
  
  
  
  
  
  
  
  
  
  
6. Please comment on ways and means that CSD could better service your needs, improve products and/or service your needs more effectively?
  
  
  
  
  
  
  
  
  
  
7. General Comments

(Please send survey forms to:

The Director, Fiji Meteorological Service, Private Mail Bag (NAP 0351) Nadi Airport, Fiji Islands; Fax +679-6724050; fms@met.gov.fj or climate@met.gov.fj)

Please note that any data request and use means an obligation on the part of the user to also submit a copy of the results of the analysis or work where FMS data has been used and to abide by all terms of the data request agreement.