



Fiji Meteorological Service



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Climate Outlook for Monasavu from May to July 2017

Current Conditions

Fiji's Climate

The tropical Pacific is in a neutral El Niño-Southern Oscillation (ENSO) state (that is, neither El Niño nor La Niña) during April 2017. However, the South Pacific Convergence Zone (SPCZ) was displaced away from the Fiji Group resulting in drier and hotter conditions in most parts of the country.

Rainfall was *below average* to *well below average* over majority of the places, with 17 out of the 25 rainfall monitoring sites recording less than half of the *normal* rainfall. Laucala Bay (Suva), Vunisea (Kadavu) and Rotuma were the only stations that recorded *average* rainfall.

Monasavu recorded 30% (163.8mm) of its *normal* rainfall during last month (Figure 3). Over the last three months (February to April 2017), Monasavu recorded 1126.9mm of rainfall (67% of *normal*), while in the past six months (November 2016 to April 2017), 3422.5mm of rainfall was received (104% of the *normal*) (Figures 3-5).

El Niño-Southern Oscillation (ENSO) Status

The sea surface temperatures are leaning towards El Niño conditions, but are within the neutral range in the central equatorial Pacific Ocean. Significant warm anomalies continue in the eastern Pacific Ocean. The waters below the surface of the western equatorial Pacific Ocean are warmer than average at depth, but an area of cool anomalies persist in the central region.

Rainfall and cloud patterns in the equatorial Pacific Ocean continue to reflect weak La Niña. However, other atmospheric indicators are close to normal. The Southern Oscillation Index for April was -6.3, with the 5-month running mean of 0.1. The Trade winds are close to average across the equatorial Pacific.

The Southern Oscillation Index (SOI) have been generally within the neutral range since mid-October 2016, with the April 2017 at -6.3 and a 5month running mean of 0.1 (Figure 6).

El Niño-Southern Oscillation and Monasavu Climate Predictions

El Niño-Southern Oscillation Prediction

El Niño conditions are anticipated to develop during the second half of 2017. However, it must be noted that this outlook overlaps the ENSO transition months during which most ENSO predicting models have their lowest forecast accuracy. Therefore, continuation of the ENSO neutral conditions cannot be ruled out. Chances of La Niña developing is very low.

SCOPIC Rainfall Predictions for Viti Levu:

May to July 2017:

Rainfall outlook for Viti Levu is more likely to be *average* for the May to July period (Table 1).

SCOPIC Air Temperature Predictions for Viti Levu:

May to July 2017:

Air temperatures are favoured to be around *normal* through the May to July 2017 period (Tables 2 & 3).

SCOPIC Rainfall Prediction for Monasavu:

Using Tercile method: May to July 2017:

There is 33% chance of *below average* or less than 626.0mm of rainfall, 33% chance of *average* rainfall and 34% chance of *above average* rainfall or more than 792.9mm of rainfall (*low* confidence) (Figure 1).

Using Median method - May to July 2017:

There is a 51% chance of receiving less than 728.4mm of rainfall and 49% chance of receiving greater than 728.4mm of rainfall (*low* confidence) (Figure 2 & Table 1).

SCOPIC Rainfall Prediction for Monasavu:

Using the Tercile method - August to October 2017:

There is 34% chance of *below average* or less than 756.0mm of rainfall, 34% chance of *average* and 32% chance of *above average* rainfall or more than 892.7mm of rainfall (*very low* confidence).

Using the Median method - August to October 2017:

There is a 49% chance of receiving less than 828.8mm of rainfall and 51% chance of receiving greater than 828.8mm of rainfall (*very low* confidence).

In summary, there is equal chances of *below normal*, *normal* and *above normal* rainfall at Monasavu for both May to July and August to October 2017 periods. As we transition onto the dry season, the amount of rainfall in the coming months is more likely to decrease in comparison to the amount of rainfall that have been received in the last few months.

Figure1: SCOPIC-3month Rainfall Outlook (Tercile Method) May to July 2017
T1: 626.0mm T2: 792.9mm

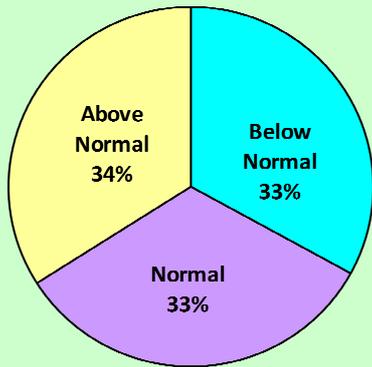


Figure2: SCOPIC-3month Rainfall Outlook (Median Method) May to July 2017
Median Rainfall 728.4 mm

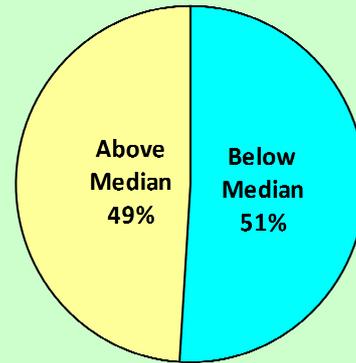


Figure 3 Monthly Rainfall Distribution for Monasavu from April 2016 to April 2017

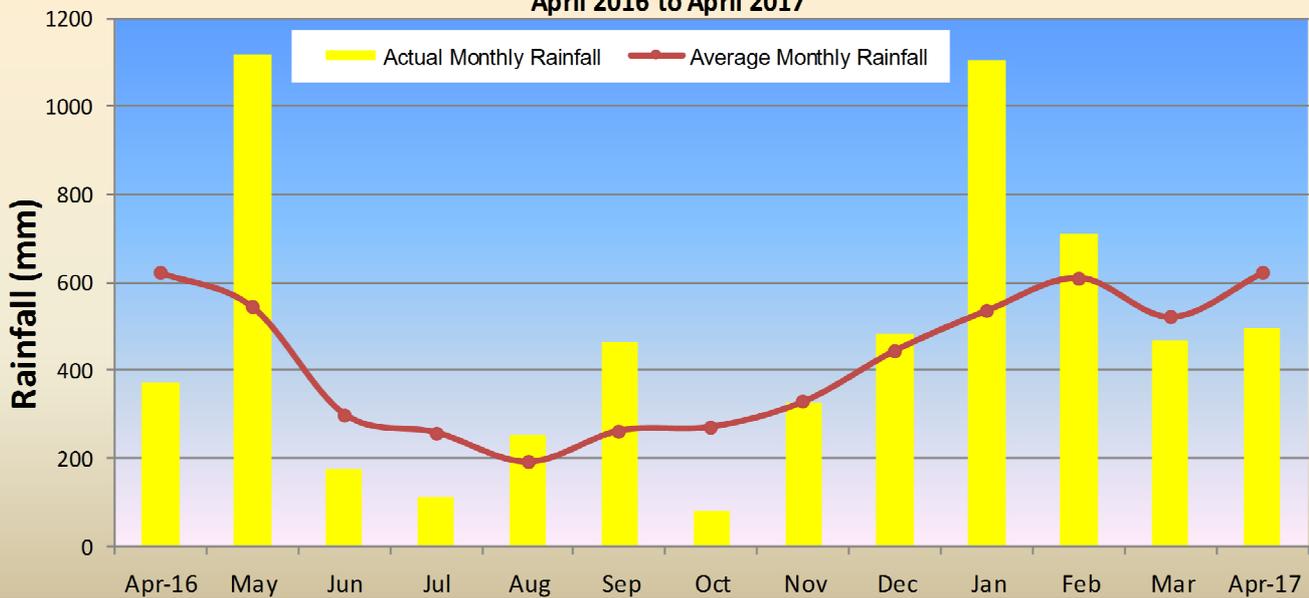


Figure 4 Actual and Long Term Average (LTA) Cumulative Rainfall for Monasavu (April 2016 to April 2017)

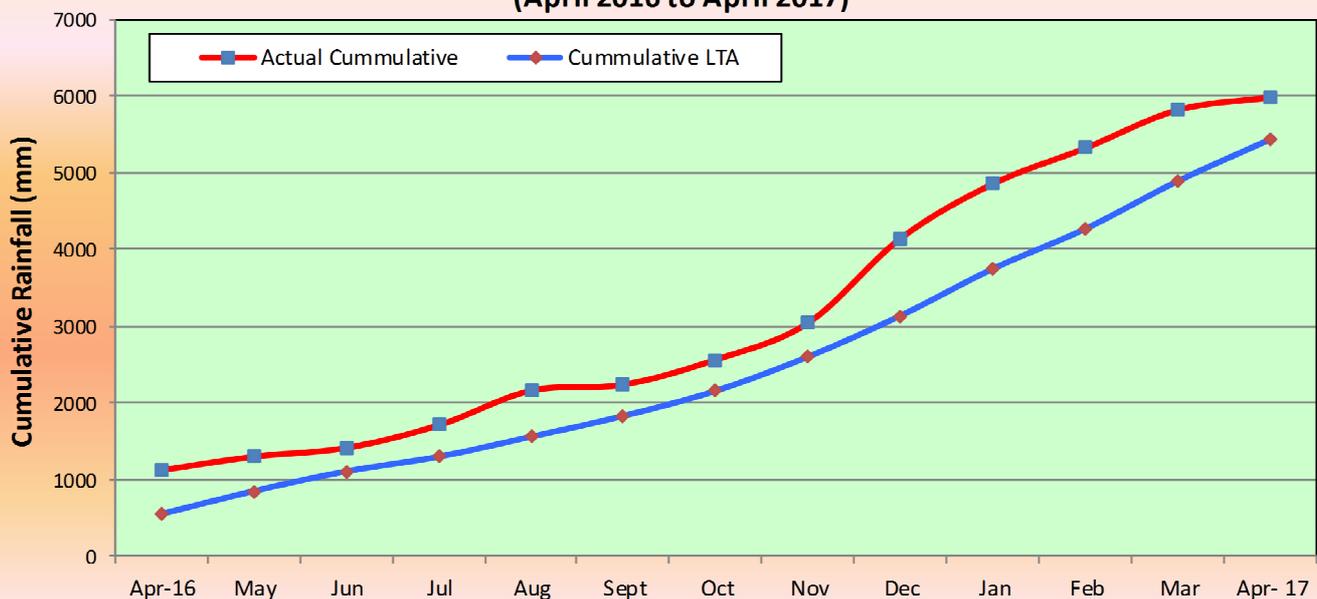
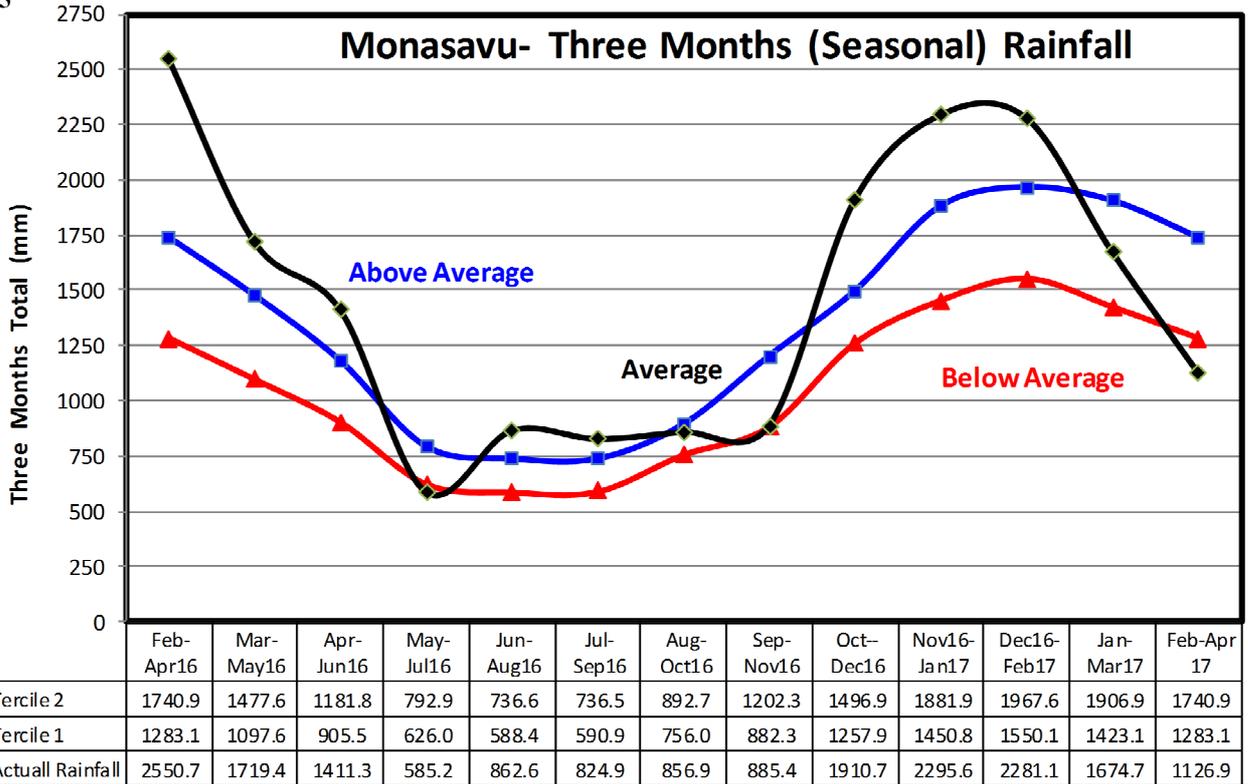


Figure 5



The tercile values have been calculated from January 1980 to February 2017 data. In the tercile method, three months rainfall is arranged from the lowest on record to highest on record. The observed three months rainfall below tercile 1 (T1) is considered to be below average, while rainfall above tercile 2 (T2) is considered to be above average. By this method, extreme conditions either wet or dry is flagged by T1 and T2 boundary.

Figure 6

Southern Oscillation Index Vs 5-Month Running Mean
(January 2012 - April 2017)

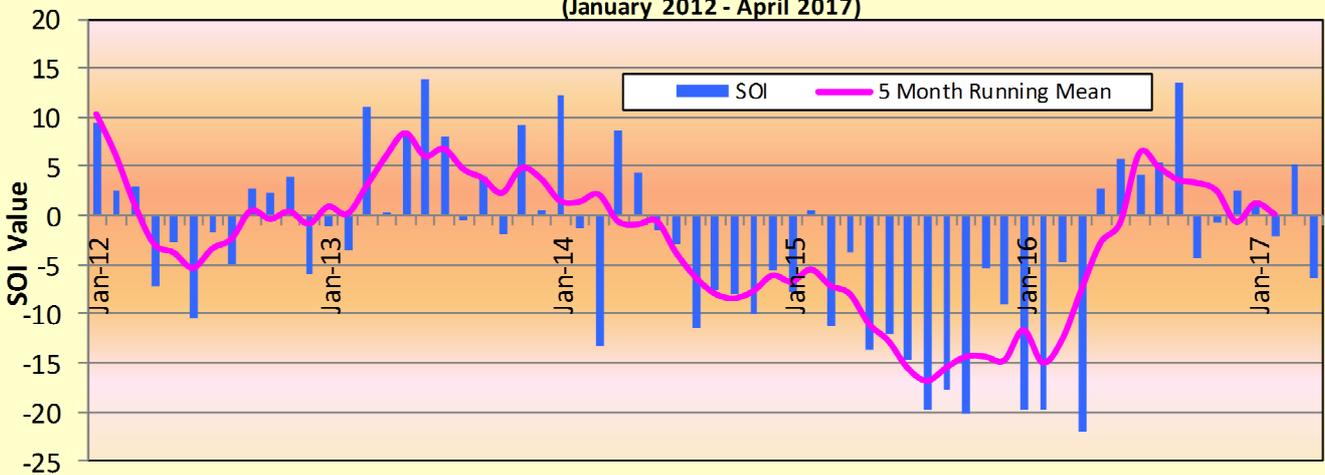


Figure 7

Niño Regions

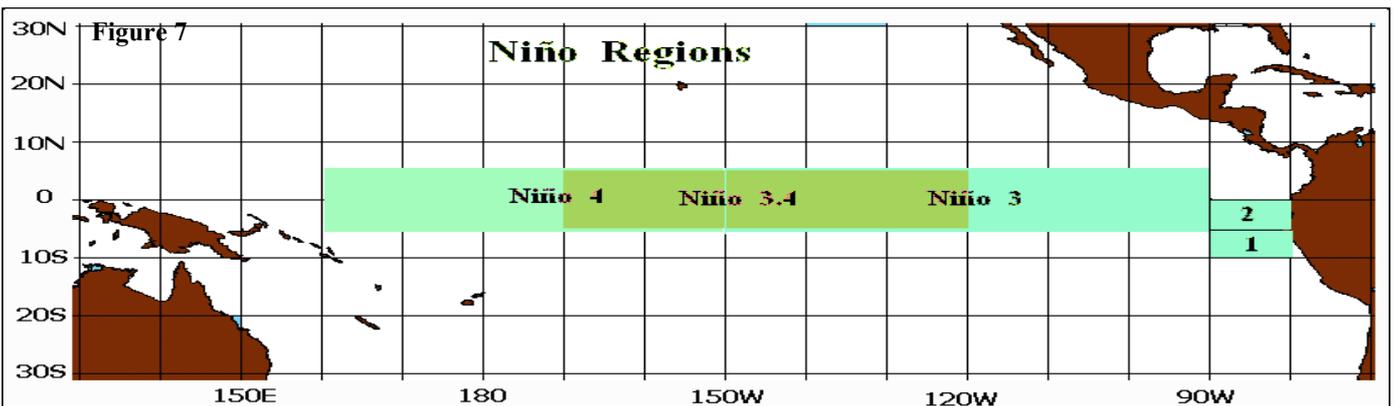


Table 1: Rainfall Predictions from May to July 2017

Rainfall	Below Average (%)	Average (Median) (mm)	Above Average (%)
Monasavu Dam	51	728.4	49
Nadi Airport	60	184.0	40
Penang Mill	55	250.9	45
Laucala Bay (Suva)	60	506.1	40
Nacocolevu (Sigatoka)	60	244.0	40

Table 2: Maximum Air Temperature Predictions from May to July 2017

MAXIMUM TEMPERATURE	Below Average (%)	Average (Median) (°C)	Above Average (%)
Monasavu	50	22.0	50
Laucala Bay (Suva)	53	27.6	47
Nadi Airport	50	29.1	50

Table 3: Minimum Air Temperature Predictions from May to July 2017

MINIMUM TEMPERATURE	Below Average (%)	Average (Median) (°C)	Above Average (%)
Monasavu	52	16.5	48
Laucala Bay (Suva)	50	19.5	50
Nadi Airport	50	21.4	50

Climate bulletins issued by the Climate Services Division of Fiji Meteorological Service include:

- 1) *Fiji Climate Summary at <http://www.met.gov.fj/Summary1.pdf> (issued monthly)*
- 2) *Fiji Climate Outlook at <http://www.met.gov.fj/Outlook1.pdf> (issued monthly)*
- 3) *Climate Outlook for Monasavu at <http://www.met.gov.fj/Monasavu1.pdf> (issued monthly)*
- 4) *Fiji Sugarcane Rainfall Outlook at <http://www.met.gov.fj/SOutlook.pdf> (issued quarterly)*
- 5) *ENSO Update at http://www.met.gov.fj/ENSO_Update.pdf (issued every second month)*
- 6) *Fiji Annual Climate Summary at <http://www.met.gov.fj/Summary2.pdf> (issued annually)*

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