Fiji Meteorological Service

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Climate Outlook for Hydro-electricity Generation from June to August 2025

Current Conditions

Fiji's Climate

The weather across the country from 1st to 27th June was dominated by few troughs of low-pressure systems, afternoon showers, with fine weather experienced over most parts of Fiji.

There were 20 rainfall stations that reported in, in time for the compilation of this bulletin, with 1 station reporting *well below average,* 4 *below average,* 4 *average,* 8 *above average* and 3 stations reporting *well above average* rainfall.

Monasavu's total monthly rainfall, until 27th May was 518mm, which is in the *above average* category (165% of *normal*), when compared against the WMO standard 30-year average.

The total monthly rainfall recorded during March - 27th May 2025 period, was 1435mm , which was 111% of the *normal*, while 3102mm (100% of the *normal*) of rainfall was recorded during the past 6 months (December to 27th May), at the station (Figure 1).

El Niño Southern Oscillation (ENSO) Status

ENSO is currently in a neutral phase, with a high likelihood of persisting through the June to August 2025 period, and global climate models continue to favor neutral conditions through the end of the year. Sea surface temperatures (SSTs) are currently *near average* across most of the Pacific Ocean, with *near to below average* in the eastern Pacific.

The Southern Oscillation Index (SOI) for April 2025 was +3.6, with the 5-month running mean of 7.2. The latest 30-day value to 25th May 2025 was –12.4.

Trade winds have been closer to average in the western and the central Pacific. Cloudiness has been below average. Overall, ENSO indicators currently suggest neutral conditions, with these conditions expected to persist throughout 2025.

El Niño-Southern Oscillation and Monasavu Climate Predictions

El-Niño Southern Oscillation Prediction

Recently surveyed global climate models, favor neutral conditions during the June to August period, with chances for it to continue until the end of 2025.

Minimum & Maximum Air Temperature Predictions - June & June to August 2025:

Day and night time temperatures are both likely to be *above normal* across Viti Levu and Vanua Levu during June as well as the June to August 2025 period (Figure 4 and 5).

Rainfall Predictions: Fortnightly: 1st – 14th June & 8th – 21st June

Rainfall across Viti Levu is likely to be below median from 1st – 14th June, as well as from 8th to 21st June.

June 2025

There is 75% chance of receiving at least 47mm of rainfall at Nadarivatu station, 75% chance of at least 59mm of rainfall at the Nadarivatu and Monasavu Dams and 75% chance of receiving at least 68mm of rainfall at Wailoa. The confidence in this forecast is good (Table 1).

June to August 2025

For the June to August 2025 period, there is 75% chance of receiving at least 239mm of rainfall at Nadarivatu station, 75% chance of at least 258mm of rainfall at Nadarivatu Dam and Monasavu, and 75% chance of receiving at least 274mm of rainfall at Wailoa. There is high confidence on the generated outlook (Table 1).

Summary

There is no strong biasness for drier or wetter than usual condition across Viti Levu during June. However, there are chances of rainfall to be experienced, for most of Viti Levu during the June to August 2025 period.

Skill confidence is *good* for June, while there is *high* confidence for the June to August 2025 period.

Figure 1

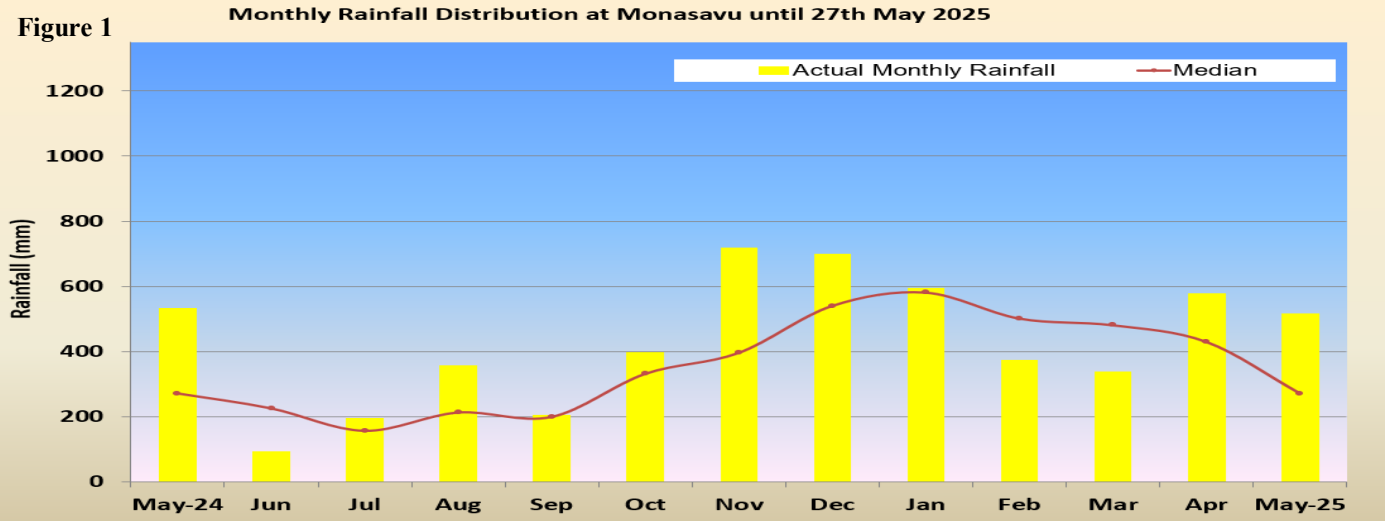


Table 1: Rainfall Outlook: June & June to August 2025

June Outlook				
	25% chance of at least (mm)	**50% chance of at least (mm)**	**75% chance of at least (mm)**	**Forecast Confidence**
Nadarivatu station	189	88	47	Good
Nadarivatu Dam	204	104	59	Good
Monasavu Dam	204	104	59	Good
Wailoa	202	111	68	Good
June to August Outlook				
	25% chance of at least (mm)	**50% chance of at least (mm)**	**75% chance of at least (mm)**	**Forecast Confidence**
Nadarivatu station	472	370	239	High
Nadarivatu Dam	487	403	258	High
Monasavu Dam	487	403	258	High
Wailoa	509	427	274	High

The table above provides 25%, 50% and 75% chances of each station receiving the amount of rainfall mentioned above.

Figure 2: Rainfall Outlook: Fortnightly: 1st – 14th June & 8th – 21st June

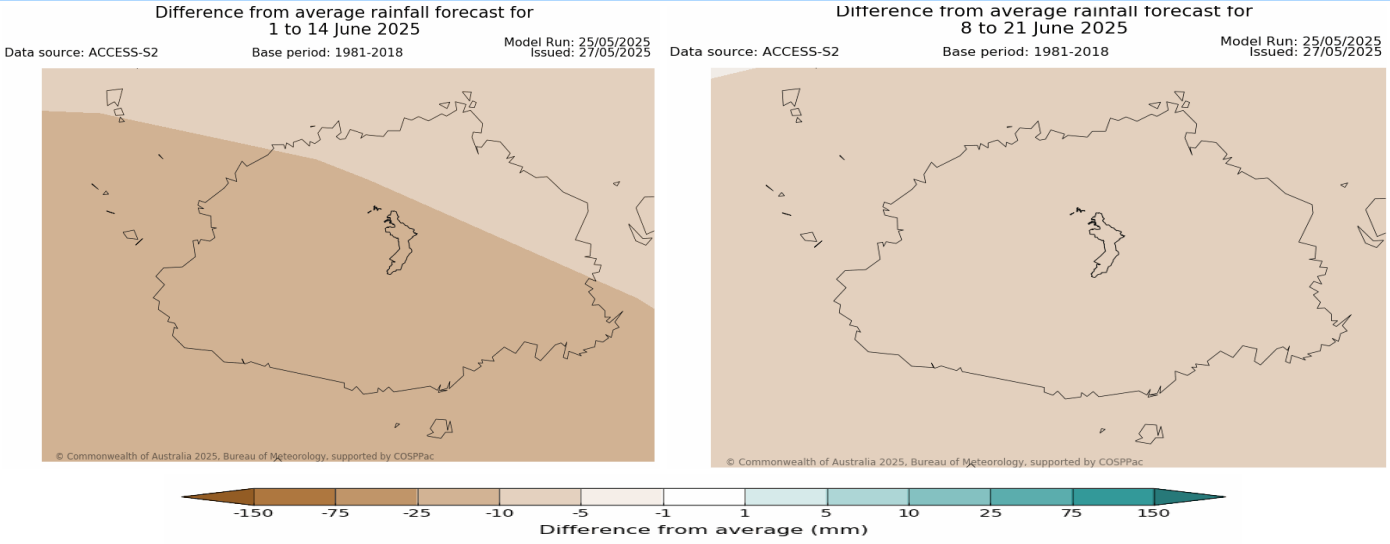


Figure 3: Rainfall Outlook: June & June to August 2025

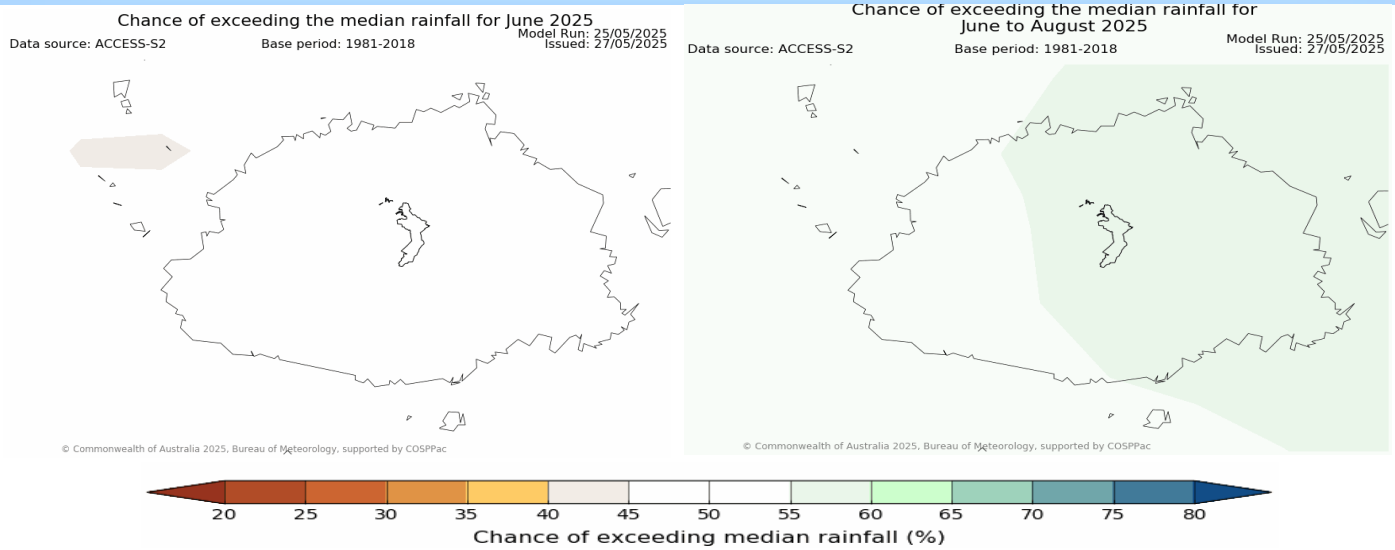
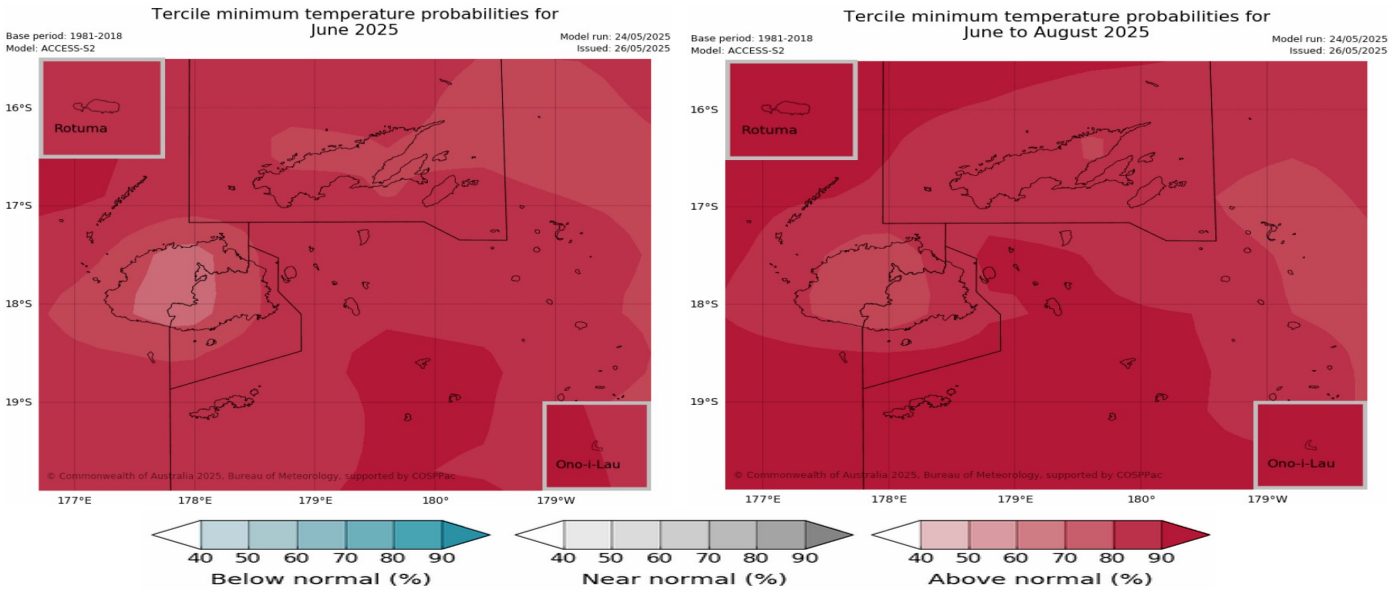
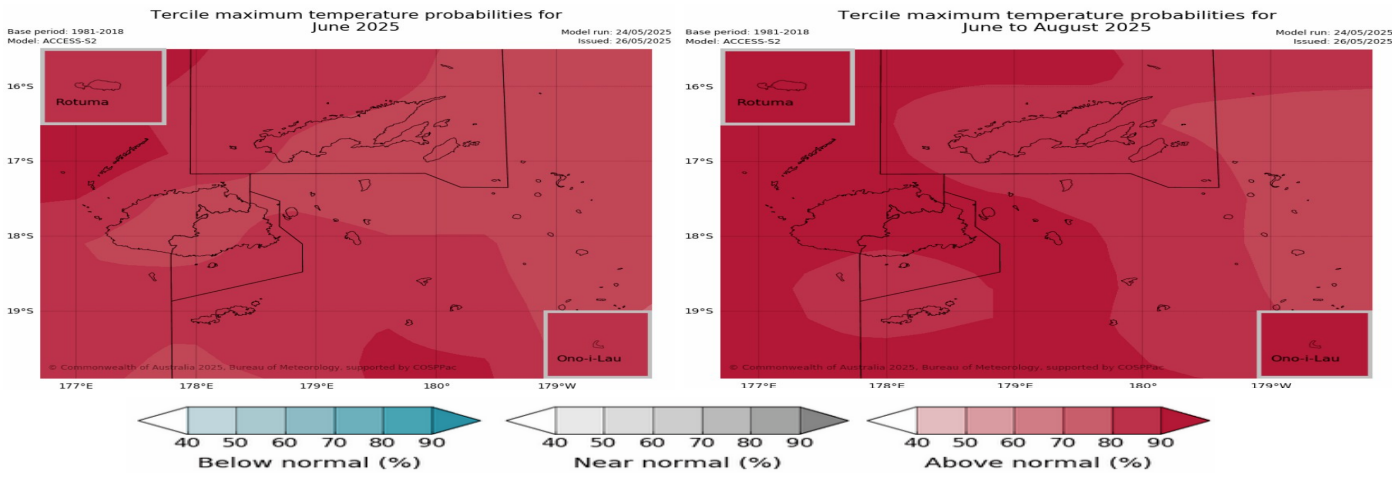


Figure 4: Minimum Air Temperature Predictions: June & June to August 2025



Minimum air temperatures are expected to be *above normal* across Viti Levu and Vanua Levu, during June and June to August 2025 period. *Source: ACCESS-S2 Model.*

Figure 5: Maximum Air Temperature Predictions: June & June to August 2025



Maximum air temperatures are likely to be *above normal* across Viti Levu and Vanua Levu, during June and June to August 2025 period. *Source: ACCESS-S2 Model.*

Explanatory Notes

Climate Outlook for Hydro-electricity Generation is produced to provide advisories to Energy Fiji Limited (EFL). It aims to provide advanced warning on climate abnormalities for planning on economic generation mix and hydro-storage optimization.

Climate (Rainfall/Air Temperature) Outlook

Above normal – indicates that the rainfall/temperature value lies in the highest third of observation recorded in the standard 30 year normal period.

Near normal – indicates that the rainfall/temperature value lies in the middle third of observation recorded in the standard 30 year normal period.

Below normal – indicates that the rainfall/temperature value lies in the lowest third of observation recorded in the standard 30 year normal period.
Climatology – means that there are equal chances of receiving below normal, normal and above normal rainfall.

Median – rainfall value which marks the level dividing the ranked data set in half, that is, the midpoint of the ordered (lowest to highest) monthly or yearly rainfall totals.

Above Median – rainfall value that lies above the median value.

Below Median – rainfall value that lies below the median value.

El Niño Southern Oscillation (ENSO)

ENSO is the principal driver of the year-to-year variability of Fiji's climate. There are three phases of this phenomenon, ***El Niño, La Niña*** and ***Neutral*** conditions. El Niño or La Niña events are a natural part of the global climate system and usually recur after every 2 to 7 years. It normally develops around April to June, attains peak intensity between December to February and usually starts to decay around April to June period the following year. While most events last for a year, some have persisted for up to 2 years. It should be also noted that no two El Niño or La Niña events are the same. Different events have different impacts, but most exhibit some common climate characteristics.

Usually there is a lag effect on Fiji's climate with ENSO events, that is, once an El Niño or La Niña event is established in the tropical Pacific, it may take 2-6 months before its impact is seen on Fiji. Similarly, once an event finishes, it can take 2 -6 months for climate to normalise.

El Niño events are associated with warming of the central and eastern tropical Pacific. El Niño events usually result in reduction of Fiji's rainfall. Often the whole of Fiji is affected in varying degrees and it is quite unusual for one part of the country to experience a prolonged dry spell, while the other is in a wet spell. The relationship and level of rainfall suppression is greater in the Dry Zone than in the Wet Zone. It is the suppression of rainfall during the Cool/Dry Season (May to October) that is normally of most concern. A reduction in Cool/Dry Season rainfall in the Dry Zone results in little or no rainfall until the next Wet Season. While usually the strength of an ENSO event is proportional to its impact on Fiji, at times weak event can also have a significant impact.

La Niña events are associated with cooling of the central and eastern tropical Pacific. Usually La Niña results in wetter than normal conditions for Fiji, occasionally leading to flooding during the Warm/Wet Season (November to April).

During **Neutral** condition, neither El Niño nor La Niña is present, it has little effect on global climate, meaning other climate influences are more likely to dominate.

Lag effects – means that there is a delay in a change of some aspect of climate due to influence of other factors that is acting slowly.

Climate bulletins that can be viewed together with this bulletin include:

1) *Fiji Climate Summary at https://www.met.gov.fj/index.php?page=FijiClimateSummary (issued monthly)*
2) *Fiji Climate Outlook at https://www.met.gov.fj/index.php?page=ClimateOutlook (issued monthly)*

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