

FIJI METEOROLOGICAL SERVICE

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IN BRIEF

- *Flash floods in the Eastern and Southern parts of Viti Levu.*
- *Warm and dry in parts of the Western Division.*
- *El Niño Southern Oscillation (ENSO) to remain neutral.*
- *Generally Average rainfall likely in most parts of Fiji.*

CLIMATE IN SEPTEMBER

It was generally dry and warm for most of September except over the last week. The country received significant rainfall towards the end of the month when an active trough drifted over the Group and intensified. Associated heavy rainfalls saw records broken and flash floods in many areas in the Eastern and the Southern parts of Viti Levu. A new record was set at Nausori Airport when 187.2mm of rain fell in 24 hours on the 28th.

The majority of the sites received average to above average rainfall as a result of heavy falls towards the end of the month, however, there were few areas that received below average rainfall in parts of western Viti Levu, southern Vanua Levu and on isolated islands. A few areas received above average rainfall especially in the Central Division. Rainfall varied considerably in the Western Division and ranged from 44% to 220%. In the Northern Division rainfall ranged from 31% to 128%, 152% to 299% in the Central Division and 69% to 177% of average in the Eastern Division. Rotuma experienced showers for most of the month.

Rainfall in the last three months was generally average to above average across the country. There was one site well below average, five sites below average, nine sites average and six sites above average rainfall category.

The number of rain days in the western Division ranged from 04 to 10 days, 05 to 15 days in the northern, 11 to 19 days in the eastern and 17 to 23 days in the Central Division. The table below summarises some of the climatic variables recorded at some locations around the country.

	Monthly Rainfall (mm) and Percentage of Average Rainfall (%)	Number of Rain Days.	Average Maximum (°C).	Average Minimum (°C).
Nadi Airport	35mm (50%)	4	29.7	21.1
Lautoka	31mm (44%)	6	29.0	21.7
Rarawai (Ba)	40mm (54%)	7	31.1	20.0
L/Bay, Suva	269mm (152%)	23	27.9	22.2
Tokotoko (Navua)	517mm (223%)	17	26.4	20.8
Nausori Airport	494mm (299%)	22	27.0	21.2

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Noticeably, country generally experienced 0.4°C to 1.5°C below normal temperatures during the day and 0.5°C to 2.3°C during the night. A 21 year record was broken at Matuku when it recorded its warmest night time temperature of 25.6°C on the 18th replacing 24.6°C recorded in 1984. The total sunshine hours were near normal around the country except at Rotuma (above normal) and wind speeds were below normal at all recording sites around the country.

The current El Niño Southern Oscillation (ENSO) indicators are showing bias towards neutral ENSO conditions and indicating that this will continue for the remainder of 2005. With the present atmospheric and oceanic conditions, Fiji is likely to receive generally average rainfall over the next three months. As this forecast extends towards the middle of the cyclone season, the predictions may significantly change should a tropical depression or cyclone affect the country.

EL-NIÑO SOUTHERN OSCILLATION (ENSO) UPDATE

The **Southern Oscillation Index** (SOI) for September was 3.9 (August was -6.9) with the five-month running mean of -3 centred on July (June was -6). A varying combination of El Niño like and neutral ENSO indicators persisted through the later part of 2004 and most of 2005. The sea surface temperature pattern in the tropical Pacific Ocean displays a typical climatological pattern. With moderation of some of these indicators in the recent months, the key ENSO indicators from the tropical Pacific confirm the continuation of neutral climate pattern. The model guidance and historical precedence suggest that neutral ENSO conditions are most likely to continue for the remainder the rest of 2005.

In the latest survey of General Circulation Models (GCM), ten favours neutral temperature patterns till February 2006, one each suggests warm (El Niño) and cold (La Nina) conditions. By May 2006, nine of the models indicate neutral conditions and only indicates continuation of warm conditions. There is roughly an even split between models indicating the central Pacific remaining on the warm side of the normal temperatures for the rest of 2005.

Source: <http://www.bom.gov.au/climate/tropnote/tropnote.shtml>. Please contact FMS for further interpretations if required.

SEASONAL OUTLOOK — NOVEMBER 2005 TO JANUARY 2006

Fiji Meteorological Service (FMS) currently uses “The Seasonal Climate Outlook for Pacific Island Countries (SCOPIC) Model” for seasonal rainfall guidance. SCOPIC uses Sea Surface Temperatures (SST) as a predictor across the Pacific Ocean and finds the most similar patterns experienced over the historical record. Then it constructs a rainfall forecast in a form of tercile probability distribution for a location. The SST’s usually tends to have better skills with the predictants and this model allows the predictor period to be varied to gain the maximum skills.

Based on the global, regional and local model predictions and the current atmospheric & oceanic conditions, Fiji’s rainfall from November 2005 to January 2006 is most likely to be **Average** over most of the country. However, there is a possibility that some areas may either end up getting below average or above average rainfall. Significant fluctuations in monthly rainfall distribution can be expected.

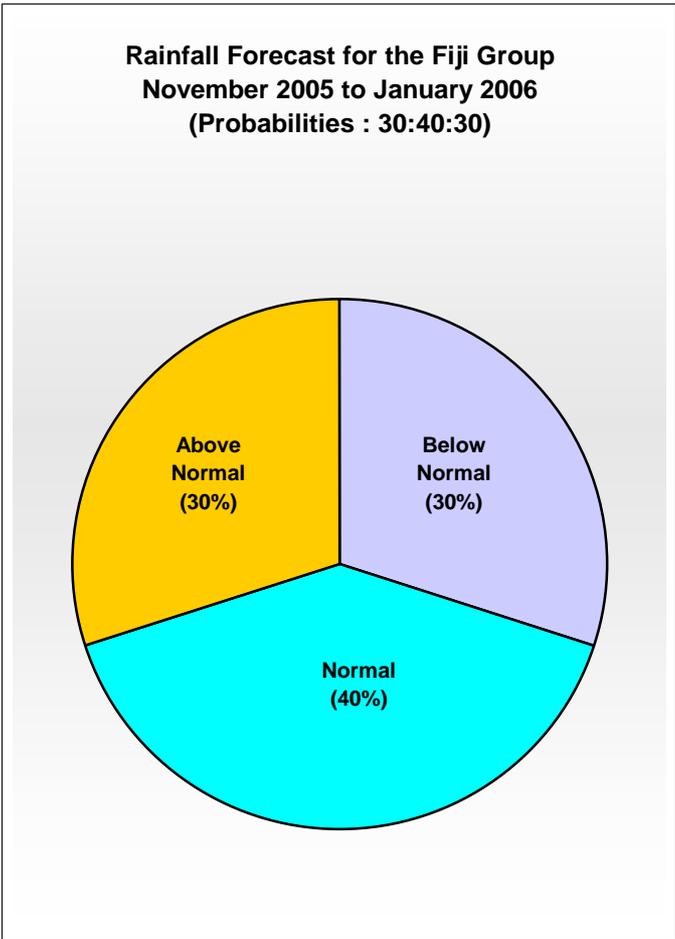
The **SCOPIC Model** predicts that rainfall in the next three months is likely be **Average** in the Western and Northern Divisions and most likely to be **Average or Above** in the Central Division. However, the model prediction is uncertain in the Eastern Division and is indicated that there is an equal chances of getting either below or above average rainfall. As for Rotuma, the model is more biased towards below average rainfall while Monasavu is likely to receive **Average** rainfall.

With the expected neutral ENSO conditions and since we are heading towards wet (warm) season, temperatures tend to be warmer which is expected during this time of the year.

FMS will continue to closely monitor any abnormal oceanic and atmospheric patterns in the coming months and keep updating as new development comes to hand.

Confidence in the forecast.

Outlook confidence is related to the influence of the Pacific Ocean temperatures on seasonal rainfall. During neutral ENSO, the predictability is low even we move towards wet season. The confidence is low to moderately consistent across much of the country.



This product is in its early stages of development and views and comments can be sent through e-mail (climate@met.gov.fj). This bulletin gives a one month lead forecast so that the predictions are well in time for clients to plan and make sound decisions to manage their risk better with informed climate information. Please contact us for more information and details.

Note: This “Fiji climate News” is prepared for rapid dissemination for sectorial support by the middle of the of each month. For detailed information and clarification, please contact FMS for expert advice or visit our website “www.met.gov.fj”. Any person wishing to re-print any information provided in this bulletin must seek permission from the Director of Meteorology and adequately acknowledge the source.