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THE CLIMATE OF FIJI

Fiji enjoys a tropical maritime climate without great extremes of heat or cold.

Winds

At all seasons the predominant winds over Fiji are the trade winds from the east to south-east. On the coast of both main islands Viti Levu and Vanua Levu, day time sea breezes blow across with great regularity.

In general, the winds over Fiji are light or moderate; strong winds are uncommon and are most likely to occur through channels and around the headlands in the period June to November when the trade winds are most persistent.

Temperatures

Temperatures at the lower levels around Fiji are fairly uniform. In the leeward side of the mountains, however, on the western and northern sides of the main islands (including Taveuni), the day-time air temperatures often rise 1°C to 2°C above those on the windward sides or on the smaller islands. Also, the humidity on the leeward side tends to be somewhat lower.

Due to the influence of the surrounding ocean, the changes in the temperature from day to day and season to season are relatively small. The average temperatures change by only about 2°C to 4°C between the coolest months (July and August) and the warmest months (January and February). Around the coast, the average night-time air temperatures can be as low as 18°C to 20°C and the average day-time temperatures can be as high as 30°C to 32°C. South-eastern coastal areas and the high interior often experience persistent cloudy humid weather.

Rainfall

Rainfall is highly variable and mainly orographic (influenced by the island topography and the prevailing south-east trades). The south-east trade winds are saturated with moisture, any high land mass lying in their path receives much of the precipitation. The mountains of Viti Levu and Vanua Levu create wet climatic zones on their windward sides and dry climatic zones on their leeward sides, hence, the main islands have pronounced dry and wet zones. Little climatic differentiation occurs on the smaller islands having low relief.

Fiji experiences a distinct wet season (November to April) and a dry season (May to October) that is controlled largely by the north and south movements of the South Pacific Convergence Zone which is the main rainfall producing system for the region. Much of the Fiji's rain however falls in heavy brief local showers.

Rainfall is usually abundant during the wet season (November to April), especially over the larger islands, and it is often deficient during the rest of the year, particularly in the 'dry zone' on the north-

western sides of the main islands. In the drier half year, from May to October, the heaviest rainfall occurs on the windward (south-east) parts of the larger islands. Annual rainfall in the dry zones averages around 2000mm, whereas in the wet zones, it ranges from 3000mm around the coast to 6000mm on the mountainous sites. The smaller islands receive amounts intermediate between those on the wet and dry sides of the larger islands.

The south-eastern parts of main islands, generally receive monthly total rainfall of 150mm during the dry season and 400mm during the wettest months. These parts of the islands have rain on about six out of ten days for the dry season and about eight out of ten days in wet season. The north-western parts of these islands are in the rain shadow and receive generally less than 100mm per month during the dry period. The variation in the monthly totals between the two zones during the wet season is little. The wettest month is usually March and the driest month is almost always July. During the wet season, brief heavy afternoon showers and thunderstorms are common.

Fiji experiences prolonged dry spells quite often, usually for three to four months duration, when the north-western parts of the main islands receive little or no rain. The ENSO (El Nino Southern Oscillation) phenomenon appears to be a major contribution to the fluctuations of climate, especially rainfall in the South Pacific. It has been seen that during most of the ENSO episodes, the rainfalls are extremely low in the dry zones.

Due to the great variability of rainfall in the region, averages have little value as indicators of what the rainfall is likely to be in any particular month or season.

Tropical Cyclones

Fiji lies in the area occasionally traversed by tropical cyclones. They are mostly confined to the period November to April, with greatest frequency around January and February. On average, some ten to twelve cyclones per decade affect some part of Fiji, and two or three causing severe damage. Specific locations may not be directly affected for several years but the dominant north-west tracks give some increased risk of damage in the outlying north-west island groups.

Statistics

The following statistics relate to Suva (the capital, located on the south-eastern side of (Viti Levu), and Nadi (on the western side), the airport of arrival for most visitors and hub of the principal resort areas. Outlying extreme temperatures at these locations are 4°C to 6°C above the average maximum and 4 to 8°C below the average minimum in any month. Average minimum temperatures in smaller outlying islands are 2°C to 3°C higher than Suva and Nadi, which are being controlled by the surrounding sea temperatures, with extremes also more confined. Humidity on the coast or the outlying islands is around 90% at 6am (lowest temperatures) and 65% to 75% around noon (highest temperatures). Average sea temperatures are at a range from 26°C to 29°C throughout the year.

Some average climatic values for Suva and Nadi:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
AVERAGE DAILY MAXIMUM TEMPERATURES - °C (1971-2000)												
Suva	30.8	31.2	30.9	29.9	28.5	27.7	26.8	26.7	27.2	28.2	29.3	30.3
Nadi	31.5	31.6	31.3	30.7	29.7	29.0	28.6	28.7	29.3	30.3	31.1	31.5
AVERAGE DAILY MINIMUM TEMPERATURES - °C (1971-2000)												
Suva	23.9	24.0	23.9	23.3	22.2	21.4	20.7	20.7	21.0	21.9	22.8	23.5
Nadi	22.8	22.9	22.8	21.8	20.2	19.2	18.4	18.6	19.3	20.5	21.8	22.4

AVERAGE DAILY SUNSHINE - hours (1971-2000)

Suva	6.2	6.3	5.5	5.1	4.7	4.7	4.4	4.6	4.5	5.3	5.6	6.3
Nadi	6.8	6.7	6.2	6.6	6.7	6.8	7.1	7.4	7.0	7.6	7.5	7.4

AVERAGE MONTHLY TOTAL RAINFALL -mm (1971-2000)

Suva	371	265	374	366	270	163	136	158	177	221	245	277
Nadi	343	292	341	160	89	65	45	65	70	102	132	178

AVERAGE NUMBER OF DAYS WITH RAIN -rainfall amount > 0.1 mm (1961-2004)

Suva	23	22	24	23	21	18	19	18	17	19	19	22
Nadi	18	18	19	13	7	6	5	6	7	8	11	14

AVERAGE SEA TEMPERATURES- °C (1961-1990)

	28.0	29.0	28.0	28.0	27.0	26.0	26.0	26.0	26.0	26.0	27.0	28.0
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Climate Services Division
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