

2011/12 Tropical Cyclone Season Outlook in the Regional Specialised Meteorological Centre Nadi – Tropical Cyclone Centre (RSMC Nadi – TCC) Area of Responsibility (AOR)

Tropical Cyclone activity in the 2011/12 TC Season within the RSMC Nadi-TCC AOR (Equator to 25°South between 160°East and 120°West), is anticipated to be *below average* with moderate to low confidence. The official 2011/12 TC Season begins on the 1st of November 2011, and ends on April 30th, 2012.

5 to 8 tropical cyclones are expected to occur within RSMC Nadi AOR during the 2011/12 season. On average, for all the 42 seasons from 1969/70 to 2010/11, 9 cyclones usually occur, 7 for the La Niña seasons, and 10 for the El Niño seasons. For the 2011/12 season outlook, seven analogue seasons were used (Table 3).

In the 2011/12 season, the tropical cyclone genesis trough is expected to be located in the Coral Sea region based on the current ENSO characteristics and existence of the warm pool of sea surface and sub-surface temperature anomalies in this area. Subsequently, west of the Dateline, there is an elevated chance of the number of cyclones exceeding average, while reduced chances east of the Dateline. However, islands around French Polynesia could expect elevated chances of cyclone later in the season due to the unfolding La Niña episode.

Thus, for New Caledonia and Vanuatu, the associated risk is high, moderate to high for Fiji, Tonga and Cook Islands, and moderate for Niue, Wallis & Futuna, Samoa, and Solomon Islands. Tropical cyclone risk is low to moderate for Tuvalu and very low for Tokelau (Table 1). Despite this, historical tropical cyclone information indicates tropical cyclones can affect any country, irrespective of the prevailing ENSO phase. It is therefore critical that all countries remain alert and prepared throughout the 2011/12 tropical cyclone season.

Furthermore, there is elevated risk for severe tropical cyclones to affect New Caledonia, Vanuatu, Fiji and Tonga. Normal to near normal risks for Samoa, Solomon Islands, Wallis and Futuna and Cook Islands and reduced risks for Niue, Tokelau and Tuvalu (Table 2).

For Fiji, one to two (1-2) cyclones are expected in the 2011/12 season, of which one (1) may reach or exceed category 3 status. With the genesis trough in the Coral Sea region, there is a high probability that tropical cyclones will approach Fiji from the west or northwest. For those tropical cyclones passing further to the southwest of the country, associated active cloud and rain bands may occasionally affect Fiji and bring heavy rain and possible flooding, including sea flooding of low-lying coastal areas.

Table 1 : Tropical Cyclone Occurrence Risks

Countries	TC Risks 2011/12 Season
New Caledonia	High (121%)
Vanuatu	High (95%)
Fiji	Moderate to high (79%)
Tonga	Moderate to high (71%)
Cook Islands	Moderate to high (70%)
Samoa	Moderate (60%)
Niue	Moderate (60%)
Wallis/Futuna	Moderate (60%)
Solomon Islands	Moderate (50%)
Tuvalu	Low to moderate (33%)
Tokelau	Very Low (0%)

Table 2 : Severe Tropical Cyclone Risks

Countries	Hurricane Risks 2011/12 Season
Vanuatu	High (93%)
Fiji	Moderate to high (75%)
New Caledonia	Moderate to high (71%)
Tonga	Moderate to high (71%)
Cook Islands	Moderate (60%)
Solomon Islands	Moderate (50%)
Samoa	Low to moderate (33%)
Wallis/Futuna	Low to moderate (33%)
Tuvalu	Low to Moderate (33%)
Tokelau	Very Low (0%)
Niue	Very low (0%)

Table 3 : Analogue Years for 2011/12 Season

Years	Frequency	Severe TC Frequency
1971/72	13	11
1974/75	5	3
1983/84	8	3
1985/86	10	4
2000/01	4	1
2005/06	5	3
2008/09	5	0
Average	7.1 (Median – 5)	3.6 (Median – 3)

In summary :

- ▶ *Below average* tropical cyclones occurrence expected in the RSMC Nadi AOR;
- ▶ 5 to 8 named tropical cyclones expected in the RSMC Nadi AOR;
- ▶ 4 to 5 of these cyclones are expected to reach category 3 status and 1 to 2 may reach category 4 or 5;
- ▶ Tropical cyclone risk is high for the countries west of the Dateline, especially New Caledonia and Vanuatu;
- ▶ Moderate to high risk is expected for Fiji, Tonga and Cook Islands;
- ▶ Moderate risk is expected for Samoa, Solomon Islands, Wallis & Futuna and Niue;
- ▶ Moderate to low risk is expected for Tuvalu and very low risk likely for Tokelau;
- ▶ Later in the season, genesis trough is expected to shift eastwards, which may enhance the chances of tropical cyclone development for Southern Cook Islands and French Polynesia;
- ▶ For Fiji, 1 to 2 tropical cyclones expected to affect some part(s) of Fiji, with 1 expected to reach category 3;
- ▶ Risks are elevated for tropical cyclones to approach Fiji from the west to northwest sector and reduced risks for systems approaching from the northeast quadrant.

It should be noted that the information provided is only to be used as guidance and the given range is indicative only. It is expected that the total number of tropical cyclones will be in the vicinity of the values listed, and not necessarily within the given range. The values are the most likely number of tropical cyclones, based on statistical and scientific evidence, including the influences by regional and global weather and climate variability.

All communities must remain alert and prepared throughout the season to avoid loss of life and property.

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