

Tropical Cyclone Outlook 2017-18

Regional Specialized Meteorological Centre, Nadi

Tropical Cyclone Centre Area of Responsibility

The Tropical Cyclone (TC) activity in the 2017-18 TC season within the Regional Specialized Meteorological Center Nadi – Tropical Cyclone Centre (RSMC Nadi-TCC) Area of Responsibility (AoR) (Equator to 25° South between 160° East and 120° West) is anticipated to be **below average** with **moderate confidence**. The official 2017-18 TC Season begins on 1st November 2017 and ends on 30 April 2018.

Four to six (4 to 6) tropical cyclones are expected to occur in the RSMC Nadi-TCC AoR during the 2017-18 season. The average for all the 47 seasons from 1969-70 to 2016-17 is 7.1 cyclones. The average for El Niño, La Niña and neutral seasons are 8.6, 6.1 and 6.3 tropical cyclones, respectively. Analogues of nine (9) seasons with similar atmospheric and oceanic conditions to present were used for this outlook (Table 1).

Tropical cyclone activity in the South Pacific region is likely to be shifted westward (Coral Sea) during the 2017-18 season. This outlook is based upon the status of the El Niño - Southern Oscillation (ENSO) over the preceding July to September period. During this period in 2017, neutral to borderline La Niña conditions were present. Furthermore, the analogue seasons were further narrowed based on international guidance forecast for neutral to weak La Niña conditions during most of the coming TC season. Historically, these conditions have favoured a westward shift in tropical cyclone activity in the South Pacific.

TC activity in southern Vanuatu, New Caledonia, Fiji and Wallis & Futuna Waters is likely to be **normal** this season, while there is **reduced** risk for Solomon Islands, Tokelau, Samoa, Tonga, Niue, Cook Islands and French Polynesia. TC activity in the Kiribati and Marquesas area is unlikely. Refer to Table 2 for climatological number of TCs.

There is **normal** risk of severe TCs for Vanuatu, New Caledonia, Fiji and Samoa, while there is **reduced** risk for Solomon Islands, Tokelau, Samoa, Tonga, Niue, Cook Islands, Society Islands, Austral Islands and Tuamotu Archipelago/Gambier Islands. Severe TC is unlikely in the Marquesas, Pitcairn Islands and Kiribati regions. Refer to Table 3 for climatological number of severe TCs.

For Fiji, one to two (1-2) TCs could be expected this season of which one (1) may reach or exceed category 3 status. For those tropical cyclones passing close to the country, associated active cloud and rain bands may occasionally affect Fiji with marked rainfall and possible flooding, including sea flooding of low-lying coastal areas. With the expectation of tropical cyclone genesis to lie to the west of the Dateline in the Coral Sea region, there is high chance of TCs to approach Fiji from the Northern, Western and Southern sectors.

Historical records show that TCs have occasionally formed outside the official TC Season. Because of this, it is critical that all communities remain alert and prepared throughout the 2017-18 TC season and beyond.

Table 1: Analogue Years for 2017-18 Season

Seasons	TC Occurrence (RSMC Nadi-TCC AoR)	Severe TCs (Cat 3-5) (RSMC Nadi-TCC AoR)
1974-75	5	3
1983-84	5	1
1995-96	5	1
2005-06	5	3
2008-09	6	0
2011-12	3	1
2012-13	5	4
2013-14	6	2
2016-17	4	2
Average (Median)	4.9 (5)	1.9 (2)

Table 2: TC occurrence risks during 2017-18 season in comparison to climatology

Country	Climatology	Analogue Seasons	Risk
Solomon Islands	1.7	0.6	Reduced
Vanuatu	2.0	1.1	Normal
New Caledonia	2.9	2.7	Normal
Fiji	2.1	1.8	Normal
Tuvalu	0.4	0.1	Reduced
Wallis & Futuna	0.5	0.6	Normal
Tokelau	0.1	0.0	Reduced
Samoa	0.3	0.1	Reduced
Tonga	1.7	1.8	Normal
Niue	0.6	0.3	Reduced
Northern Cook Islands	0.5	0.1	Reduced
Southern Cook Islands	1.1	0.6	Reduced
Society Islands	0.5	0.0	Reduced
Austral Islands	0.7	0.1	Reduced
Tuamotu Archipelago/Gambier Islands	0.4	0.0	Reduced
Pitcairn Islands	0.1	0.0	Reduced
Marquesas	0.0	0.0	Unlikely
Kiribati	0.0	0.0	Unlikely

Table 3: Severe TC (Cat 3-5) risks during 2017-18 season in comparison to climatology

Country	Climatology	Analogue Seasons	Risk
Solomon Islands	0.6	0.2	Reduced
Vanuatu	0.9	0.6	Normal
New Caledonia	1.3	1.2	Normal
Fiji	0.8	0.6	Normal
Tuvalu	0.1	0.0	Reduced
Wallis & Futuna	0.2	0.1	Reduced
Tokelau	0.1	0.0	Reduced
Samoa	0.1	0.1	Normal
Tonga	0.5	0.3	Reduced
Niue	0.2	0.0	Reduced
Northern Cook Islands	0.2	0.1	Reduced
Southern Cook Islands	0.4	0.1	Reduced
Society Islands	0.2	0.0	Reduced
Austral Islands	0.3	0.0	Reduced
Tuamotu Archipelago/Gambier Islands	0.1	0.0	Reduced
Marquesas	0.0	0.0	Unlikely
Pitcairn Islands	0.0	0.0	Unlikely
Kiribati	0.0	0.0	Unlikely

In summary, based on the historical TC data, the predictions for the upcoming 2017-18 TC season are as follows:

- ▶ **Below average** TC occurrence in the RSMC Nadi-TCC AoR in the 2017-18 season is anticipated;
- ▶ Four to six (4 to 6) TCs are expected to occur in the RSMC Nadi-TCC AoR;
- ▶ One to three (1-3) TCs may reach category 3 status or above;
- ▶ **Normal** TC activity is expected for Vanuatu, New Caledonia, Fiji and Wallis & Futuna;
- ▶ **Reduced** TC risk likely for Solomon Islands, Tokelau, Samoa, Tonga, Niue, Cook Islands and French Polynesia;
- ▶ TC activity in the Kiribati and Marquesas area is unlikely;
- ▶ There is **normal** risk of severe TCs for Vanuatu, New Caledonia, Fiji and Samoa;

- ▶ **Reduced** risk of severe TCs is anticipated for Solomon Islands, Tokelau, Samoa, Tonga, Niue, Cook Islands, Society Islands, Austral Islands and Tuamotu Archipelago/Gambier Islands;
- ▶ Severe TC unlikely in the Marquesas, Pitcairn Islands and Kiribati regions;
- ▶ For Fiji, 1 to 2 TCs could pass through the Fiji Waters this season, with 1 expected to reach category three (3) or above status;
- ▶ Active cloud and rain bands associated with TCs may occasionally affect Fiji with marked rainfall and possible flooding, including sea flooding of low-lying coastal areas;
- ▶ Non-TCs or Tropical Depressions have and can still cause loss of lives and severe damages to properties.

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

All communities should remain alert and prepared throughout the 2017-18 TC season and take heed of TC alerts, warnings and advisories seriously whenever it is issued to reduce the effects on life and property.

Issued by:

The Director

Fiji Meteorological Service

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