

# 2013/14 Tropical Cyclone Season Outlook in the Regional Specialised Meteorological Centre Nadi -Tropical Cyclone Centre Area of Responsibility

The Tropical Cyclone (TC) activity in the 2013/14 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 **average to below average** with **moderate confidence**. The official 2013/14 TC Season begins on 1<sup>st</sup> of November 2013, and ends on 30<sup>th</sup> April, 2014.

Four to eight (4 to 8) tropical cyclones are expected to occur in the RSMC Nadi AOR during the 2013/14 Season. On average, for all 44 seasons from 1969/70 to 2012/13, 7.4 cyclones usually occur, 8.7 for El Niño, 6.6 for neutral and 6.5 for La Niña seasons. An analogue of five (5) seasons with similar atmospheric and oceanic conditions was used as basis for this outlook (Table 1).

For the 2013/14 season, the TC genesis trough is expected to be located near and west of the Dateline supported by the current and expected ENSO characteristics, and existence of the Pacific Warm Pool and sub-surface warm temperature anomalies in this region. Thus for countries near and to the west of the Dateline, there is a higher chance of exceeding the climatological average this season.

Subsequently, **below average** TC activity is likely for Samoa, Tokelau, Niue and the Cook Islands, while **average to above average** for Wallis and Futuna, Solomon Islands, Tonga, Vanuatu, New Caledonia, Tuvalu and Fiji (Table 2). However, historical tropical cyclone data suggests that tropical cyclones could affect any country, irrespective of the prevailing El Niño Southern Oscillation (ENSO) condition. Additionally, these records show that TCs have formed outside the official TC Season. Because of this, it is critical that all communities remain alert and prepared throughout the 2013/14 TC Season.

Furthermore, there is an increased risk of severe TCs affecting the region this season, compared to last, with **very high** risk for Tonga, Fiji, Wallis & Futuna and New Caledonia, **high** risk for Tokelau, Samoa, Niue, Solomon Islands and Vanuatu, and **low to moderate** risk for Cook Islands (Table 3).

For Fiji, one to two (1-2) cyclones could be expected this season, of which one (1) may reach or exceed category 3 status. There is also a high probability that any tropical cyclone directly affecting or passing near the country will approach from the western and/or northern quadrants of the group. For those tropical cyclones passing close to the country, associated, active, cloud and rain bands may bring heavy rain and squally conditions with possible flooding, including sea flooding of low-lying coastal areas.

Table 1: Analogue Years for 2013/14 Season

Seasons	TC Occurrence (RSMC-TCC Nadi AOR)	TC Formation (RSMC-TCC Nadi AOR)	Severe TCs (Cat 3-5) (RSMC-TCC Nadi AOR)
1981/82	6	3	5
1984/85	9	6	5
1990/91	2	1	1
1996/97	11	9	6
2001/02	5	4	2
Average (Median)	6.6 (9)	4.6 (4)	3.8 (5)

Table 2: Tropical Cyclone Occurrence Risks

Countries	TC Risks 2013/14 Season	
Tokelau	Low	(10%)
Samoa	Low to Moderate	(40%)
Niue	Low to Moderate	(40%)
Cook Islands	Low to Moderate	(40%)
Solomon Islands	High	(100%)
Vanuatu	High	(100%)
Tonga	High	(114%)
Wallis and Futuna	High	(120%)
New Caledonia	Very High	(121%)
Tuvalu	Very High	(133%)
Fiji	Very High	(157%)

Table 3: Severe Tropical Cyclone Risks

Countries	Severe TC (Cat 3-5) Risks 2013/14 Season
Cook Islands	Low to Moderate (40%)
Tokelau	High (100%)
Samoa	High (100%)
Niue	High (100%)
Solomon Islands	High (100%)
Vanuatu	High (114%)
Tonga	Very High (171%)
Fiji	Very High (175%)
Wallis and Futuna	Very High (200%)
New Caledonia	Very High (100%)

In summary, based on the historical tropical cyclone records, the prediction for the upcoming 2013/14 tropical cyclone season indicates:

- ▶ **Average to below average** TC occurrence in RSMC Nadi AOR in the 2013/14 season;
- ▶ Four to eight (4 to 8) TCs are expected in the RSMC Nadi AOR;
- ▶ 2 to 4 of these cyclones are expected to reach category 3, and 1 to 2 may reach category 4 or 5;
- ▶ **Below average** TC activity for Tokelau, Samoa, Niue and Cook Islands;
- ▶ **Average** TC activity for Wallis & Futuna, Solomon Islands, Vanuatu and Tonga;
- ▶ **Above average** TC activity for New Caledonia, Tuvalu and Fiji;
- ▶ **Very high** risk for severe TCs for Tonga, Fiji, Wallis & Futuna and New Caledonia;
- ▶ **High risk** for severe TCs for Tokelau, Samoa, Niue, Solomon Islands and Vanuatu region;
- ▶ **Low to moderate** risk for severe TCs for Cook Islands;

- ▶ For Fiji, 1 to 2 tropical cyclones could affect some part(s) of Fiji, with 1 expected to reach category three (3) or above;
- ▶ High probability for TCs to approach Fiji from the western and/or northern quadrants;
- ▶ Active cloud and rain bands associated with TCs passing close to the Fiji may bring heavy rain and squally conditions with possible flooding, including sea flooding of low-lying coastal areas;
- ▶ Non-TCs, or Tropical Depressions, have, and can cause loss of lives and severe damages to property.

It should be noted that the information provided is only to be used as guidance. The given range of tropical cyclone numbers is indicative only. It is expected that the total number of TCs could be within 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 in the Southwest Pacific should remain alert and prepared throughout the 2013/14 TC Season, heed TC warnings and advisories and take appropriate action(s) to mitigate the impacts on life and property.

Issued by :

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