

# Pacific Islands - Online Climate Outlook Forum (OCOF) No. 149

Country: Fiji

TABLE 1: Monthly Rainfall

| Station (include data period)  | Nov-2019   | Dec-2019   | Jan-2020      |         |         |        |        |
|--------------------------------|------------|------------|---------------|---------|---------|--------|--------|
|                                |            |            | Total (mm)    | 33%tile | 67%tile | Median | Rank   |
|                                | Total (mm) | Total (mm) | Rainfall (mm) |         |         |        |        |
| <b>Western Division</b>        |            |            |               |         |         |        |        |
| Penang Mill (1910-2020)        | 96.2       | 164.6      | 127.5         | 246.2   | 455.7   | 331.0  | 17/111 |
| Lautoka Mill (1900-2020)       | 77.0       | 158.6      | 114.1         | 213.9   | 407.5   | 314.0  | 17/120 |
| Nadi Airport (1942-2020)       | 47.9       | 202.3      | 78.2          | 226.0   | 357.4   | 302.0  | 6/79   |
| <b>Central Division</b>        |            |            |               |         |         |        |        |
| Laucala Bay (Suva) (1942-2020) | 144.3      | 293.8      | 157.7         | 254.1   | 396.4   | 317.6  | 12/79  |
| Nausori Airport (1957-2020)    | 193.0      | 254.4      | 162.1         | 267.7   | 406.9   | 324.1  | 8/64   |
| Tokotoko (Navua) (1945-2020)   | 146.4      | 239.5      | 327.5         | 273.9   | 409.5   | 343.7  | 33/75  |
| <b>Eastern Division</b>        |            |            |               |         |         |        |        |
| Lakeba (1950-2020)             | 98.5       | 170.8      | 121.4         | 172.6   | 306.7   | 242.2  | 10/70  |
| Vunisea (Kadavu) (1931-2020)   | 120.8      | 387.9      | 132.9         | 172.5   | 297.4   | 246.6  | 16/85  |
| Ono-i-Lau (1943-2020)          | 16.8       | 226.0      | 53.1          | 130.7   | 230.4   | 186.5  | 10/73  |
| <b>Northern Division</b>       |            |            |               |         |         |        |        |
| Labasa Airport (1946-2020)     | 40.0       | 198.2      | 181.3         | 236.9   | 461.0   | 370.0  | 15/63  |
| Savusavu Airfield (1956-2020)  | 89.9       | 341.8      | 142.9         | 199.9   | 322.1   | 254.1  | 14/61  |
| Udu Point (1946-2020)          | 256.2      | 294.4      | 311.7         | 231.1   | 394.0   | 333.5  | 36/71  |
|                                |            |            |               |         |         |        |        |
| Rotuma (1912-2020)             | 723.3      | 184.6      | 281.5         | 271.0   | 410.4   | 335.7  | 35/108 |

**TABLE 2: Three-month Rainfall for November 2019 to January 2020**

| Station                        | Three-month Total |              | 33%tile | 67%tile | Median | Rank   | SCOPIC forecast probabilities<br>based on NINO3.4 August-September 2019 |    |     |      | Verification:<br>Consistent,<br>Near-consistent,<br>Inconsistent? |
|--------------------------------|-------------------|--------------|---------|---------|--------|--------|-------------------------------------------------------------------------|----|-----|------|-------------------------------------------------------------------|
|                                | Rainfall (mm)     |              |         |         |        |        | B-N                                                                     | N  | A-N | LEPS |                                                                   |
| <i>Western Division</i>        |                   |              |         |         |        |        |                                                                         |    |     |      |                                                                   |
| Penang Mill (1910-2020)        | 388.3             | Below normal | 573.1   | 924.4   | 718.0  | 15/105 | 35                                                                      | 40 | 25  | 24   | Near-consistent                                                   |
| Lautoka Mill (1900-2020)       | 349.7             | Below normal | 430.4   | 753.3   | 622.0  | 24/120 | 34                                                                      | 41 | 25  | 31   | Near-consistent                                                   |
| Nadi Airport (1942-2020)       | 328.4             | Below normal | 427.1   | 750.8   | 650.8  | 12/77  | 35                                                                      | 43 | 22  | 33   | Near-consistent                                                   |
| <i>Central Division</i>        |                   |              |         |         |        |        |                                                                         |    |     |      |                                                                   |
| Laucala Bay (Suva) (1942-2020) | 595.8             | Below normal | 703.0   | 1045.0  | 913.8  | 18/78  | 36                                                                      | 36 | 28  | 5    | Near-consistent                                                   |
| Nausori Airport (1957-2020)    | 609.5             | Below normal | 743.6   | 1051.6  | 863.8  | 14/64  | 35                                                                      | 36 | 29  | 13   | Near-consistent                                                   |
| Tokotoko (Navua) (1945-2020)   | 713.4             | Below normal | 863.7   | 1135.4  | 953.2  | 12/73  | 35                                                                      | 32 | 33  | 6    | Consistent                                                        |
| <i>Eastern Division</i>        |                   |              |         |         |        |        |                                                                         |    |     |      |                                                                   |
| Lakeba (1950-2020)             | 390.7             | Below normal | 464.5   | 683.7   | 587.0  | 14/70  | 36                                                                      | 37 | 27  | 15   | Near-consistent                                                   |
| Vunisea (Kadavu) (1931-2020)   | 641.6             | Normal       | 484.3   | 707.7   | 556.8  | 54/82  | 37                                                                      | 37 | 26  | 14   | Near-consistent                                                   |
| Ono-i-Lau (1943-2020)          | 295.9             | Below normal | 368.2   | 515.7   | 452.0  | 22/70  | 37                                                                      | 41 | 22  | 24   | Near-consistent                                                   |
| <i>Northern Division</i>       |                   |              |         |         |        |        |                                                                         |    |     |      |                                                                   |
| Labasa Airport (1947-2020)     | 419.5             | Below normal | 565.0   | 928.6   | 666.6  | 14/58  | 34                                                                      | 42 | 24  | 32   | Near-consistent                                                   |
| Savusavu Airfield (1957-2020)  | 574.6             | Normal       | 572.3   | 762.1   | 663.9  | 21/60  | 34                                                                      | 36 | 30  | 11   | Consistent                                                        |
| Udu Point (1946-2020)          | 862.3             | Normal       | 671.8   | 916.8   | 752.4  | 42/69  | 37                                                                      | 37 | 26  | 5    | Near-consistent                                                   |
|                                |                   |              |         |         |        |        |                                                                         |    |     |      |                                                                   |
| Rotuma (1912-2020)             | 1189.4            | Above normal | 850.3   | 1055.8  | 965.0  | 87/104 | 35                                                                      | 32 | 33  | 10   | Inconsistent                                                      |

**TABLE 3: Seasonal Climate Outlooks using SCOPIC for March to May 2020****Predictor and Period used: NINO3.4 for December 2019 to January 2020**

| Station                        | Below<br>Median<br>(prob) | Median<br>Rainfall<br>(mm) | Above<br>Median<br>(prob) |  | LEPS (%)<br>[whole<br>numbers] | Hit-rate<br>(%)<br>[whole<br>numbers] |
|--------------------------------|---------------------------|----------------------------|---------------------------|--|--------------------------------|---------------------------------------|
| <b>Western Division</b>        |                           |                            |                           |  |                                |                                       |
| Penang Mill (1910-2020)        | 63                        | 770.3                      | 37                        |  | 14                             | 65                                    |
| Lautoka Mill (1900-2020)       | 57                        | 601.0                      | 43                        |  | 4                              | 62                                    |
| Nadi Airport (1942-2020)       | 59                        | 584.5                      | 41                        |  | 6                              | 65                                    |
| <b>Central Division</b>        |                           |                            |                           |  |                                |                                       |
| Laucala Bay (Suva) (1942-2020) | 52                        | 909.5                      | 48                        |  | -1                             | 51                                    |
| Nausori Airport (1957-2020)    | 54                        | 915.9                      | 46                        |  | 1                              | 52                                    |
| Tokotoko (Navua) (1945-2020)   | 55                        | 1027.0                     | 45                        |  | 1                              | 54                                    |
| <b>Eastern Division</b>        |                           |                            |                           |  |                                |                                       |
| Lakeba (1950-2020)             | 57                        | 647.9                      | 43                        |  | 3                              | 59                                    |
| Vunisea (Kadavu) (1931-2020)   | 58                        | 712.7                      | 42                        |  | 3                              | 63                                    |
| Ono-i-Lau (1943-2020)          | 58                        | 526.1                      | 42                        |  | 5                              | 64                                    |
| <b>Northern Division</b>       |                           |                            |                           |  |                                |                                       |
| Labasa Airport (1946-2020)     | 53                        | 688.3                      | 47                        |  | -1                             | 54                                    |
| Savusavu Airfield (1956-2020)  | 59                        | 663.8                      | 41                        |  | 8                              | 66                                    |
| Udu Point (1946-2020)          | 51                        | 718.2                      | 49                        |  | -1                             | 50                                    |
|                                |                           |                            |                           |  |                                |                                       |
| Rotuma (1912-2020)             | 48                        | 947.4                      | 52                        |  | -1                             | 50                                    |

| Station                        | Below<br>Normal<br>(prob) | 33%ile<br>Rainfall<br>(mm) | Normal<br>(prob) | 67%ile<br>Rainfall<br>(mm) | Above<br>Normal<br>(prob) | LEPS (%)<br>[whole<br>numbers] | Hit-rate<br>(%)<br>[whole<br>numbers] |
|--------------------------------|---------------------------|----------------------------|------------------|----------------------------|---------------------------|--------------------------------|---------------------------------------|
| <b>Western Division</b>        |                           |                            |                  |                            |                           |                                |                                       |
| Penang Mill (1910-2020)        | 43                        | 645.4                      | 31               | 892.3                      | 26                        | 7                              | 52                                    |
| Lautoka Mill (1900-2020)       | 43                        | 517.4                      | 32               | 712.9                      | 25                        | 9                              | 46                                    |
| Nadi Airport (1942-2020)       | 43                        | 508.6                      | 33               | 654.2                      | 24                        | 10                             | 51                                    |
| <b>Central Division</b>        |                           |                            |                  |                            |                           |                                |                                       |
| Laucala Bay (Suva) (1942-2020) | 38                        | 814.5                      | 33               | 1072.9                     | 29                        | 1                              | 38                                    |
| Nausori Airport (1957-2020)    | 36                        | 803.4                      | 32               | 1027.5                     | 32                        | -1                             | 22                                    |
| Tokotoko (Navua) (1945-2020)   | 34                        | 926.5                      | 32               | 1219.9                     | 34                        | -2                             | 32                                    |
| <b>Eastern Division</b>        |                           |                            |                  |                            |                           |                                |                                       |
| Lakeba (1950-2020)             | 41                        | 545.3                      | 32               | 721.3                      | 27                        | 5                              | 41                                    |
| Vunisea (Kadavu) (1931-2020)   | 43                        | 636.3                      | 30               | 761.7                      | 27                        | 8                              | 46                                    |
| Ono-i-Lau (1943-2020)          | 39                        | 462.1                      | 35               | 643.8                      | 26                        | 4                              | 43                                    |
| <b>Northern Division</b>       |                           |                            |                  |                            |                           |                                |                                       |
| Labasa Airport (1946-2020)     | 37                        | 558.2                      | 34               | 846.0                      | 29                        | 1                              | 38                                    |
| Savusavu Airfield (1956-2020)  | 40                        | 569.5                      | 33               | 724.3                      | 27                        | 7                              | 48                                    |
| Udu Point (1946-2020)          | 37                        | 618.2                      | 35               | 844.3                      | 28                        | 1                              | 41                                    |
|                                |                           |                            |                  |                            |                           |                                |                                       |
| Rotuma (1912-2020)             | 32                        | 813.6                      | 33               | 1013.8                     | 35                        | -1                             | 28                                    |

**TABLE 4: Seasonal Climate Outlooks using POAMA2 for March to May 2020**

| Station   | Below Normal (prob) | 33%ile Rainfall (mm) | Normal (prob) | 67%ile Rainfall (mm) | Above Normal (prob) |
|-----------|---------------------|----------------------|---------------|----------------------|---------------------|
| Lakeba    | 55                  | 448.0                | 18            | 732.0                | 27                  |
| Nadi      | 64                  | 469.0                | 12            | 647.0                | 24                  |
| Nabouwalu | 49                  | 623.0                | 33            | 885.0                | 18                  |
| Udu Point | 37                  | 590.0                | 33            | 807.0                | 30                  |
| Vunisea   | 64                  | 636.0                | 12            | 756.0                | 24                  |
| Suva      | 64                  | 807.0                | 12            | 971.0                | 24                  |
| Rotuma    | 36                  | 836.0                | 40            | 1043.0               | 24                  |

## Summary Statements

### Rainfall for January 2020:

*Below normal* rainfall was recorded at most of the places in the Fiji Group during the month. However, Tokotoko (Navua), Udu Point and Rotuma received *near normal* rainfall.

Nadi Airport recorded its sixth driest January on record, with Nausori Airport registering its eighth driest January rainfall.

### Accumulated rainfall for November 2019 to January 2020, including outlook verification:

Most of the places in Fiji recorded *below normal* rainfall during the November 2019 to January 2020 period. The exceptions to this were Vunisea in the Eastern Division and Savusavu Airfield and Udu Point in the Northern Division, where *near normal* rainfall was registered. Rotuma recorded *above normal* rainfall during the past 3-month period.

The rainfall outlooks were 'Consistent' at two sites, 'Near-consistent' at ten sites and 'Inconsistent' at one site.

### Outlooks for March to May 2020:

#### 1. SCOPIC:

- Western Division, Eastern Division and Savusavu Airfield (Northern Division):** The outlook shows *below normal* rainfall as the most likely outcome, with *near normal* as the next most likely and *above normal* as the least likely.
- Central Division, Labasa Airport and Udu Point (Northern Division) and Rotuma:** The outlook offers little guidance as the chances of *above normal*, *normal* and *below normal* rainfall are similar.

#### 2. POAMA:

**Lakeba, Nadi, Vunisea and Suva:** *Below normal* rainfall is favoured for these stations.

**Nabouwalu:** *Below normal* rainfall is the most likely outcome, with *normal* the next most likely. *Above normal* is the least likely.

**Rotuma:** The outlook favours *near normal* rainfall as the most likely outcome, with *below normal* as the next most likely.

**Udu Point:** The outlook offers little guidance as the chances of *above normal*, *normal* and *below normal* rainfall are similar.

**NB: The X LEPS % score has been categorised as follows:**

Very Low:  $X < 0.0$

Low:  $0 \leq X < 5$

Moderate  $5 \leq X < 10$

Good:  $10 \leq X < 15$

High:  $15 \leq X < 25$

Very High:  $25 \leq X < 35$  Exceptional:  $X \geq 35$

**Table: 5 Stakeholder Engagement- Evaluations of how effective NMS engage with stakeholders**

| Product                        | Date:<br>January<br>2020 | Stakeholder                                                                                                                                                 | Total Number<br>of Participants | Number of<br>male | Number of<br>female |
|--------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------------|---------------------|
| Fiji Climate Summary           | 09/01/20                 | General public                                                                                                                                              | 140                             | 106               | 34                  |
| Fiji Climate Outlook           | 10/01/20                 | General public                                                                                                                                              | 124                             | 93                | 31                  |
| Climate Outlook for Monasavu   | 09/01/20                 | EFL                                                                                                                                                         | 13                              | 13                | -                   |
| EAR Watch                      | 06/01/20                 | Humanitarian partners                                                                                                                                       | 122                             | 96                | 26                  |
| Ocean Outlook                  | 16/01/20                 | Reef Explorer Fiji Limited, Maritime Safety Authority of Fiji, World Wildlife Fund, Wildlife Conservation Society, Ministry of Fisheries and Tourism Sector | 36                              | 29                | 7                   |
| ENSO Update                    | 24/01/20                 | General Public                                                                                                                                              | 142                             | 116               | 26                  |
| Fiji Sugarcane Climate Outlook | 24/01/20                 | Sugar Industry stakeholders                                                                                                                                 | 77                              | 60                | 17                  |
| Meteorological Data Request    | 01/01/20 to 31/01/20     | A range of stakeholders                                                                                                                                     | 66                              | 62                | 4                   |
| <b>Total</b>                   |                          |                                                                                                                                                             | 720                             | 575               | 145                 |