

# Pacific Islands - Online Climate Outlook Forum (OCOF) No. 146

Country: Fiji

TABLE 1: Monthly Rainfall

| Station (include data period)  | Aug-2019   | Sep-2019   | Oct-2019      |         |         |        |        |
|--------------------------------|------------|------------|---------------|---------|---------|--------|--------|
|                                |            |            | Total (mm)    | 33%tile | 67%tile | Median | Rank   |
|                                | Total (mm) | Total (mm) | Rainfall (mm) |         |         |        |        |
| Western Division               |            |            |               |         |         |        |        |
| Penang Mill (1910-2019)        | 17.5       | 74.8       | 44.1          | 44.1    | 120.2   | 72.8   | 34/110 |
| Lautoka Mill (1900-2019)       | 24.6       | 114.6      | 101.6         | 38.1    | 103.7   | 63.5   | 73/120 |
| Nadi Airport (1942-2019)       | 20.3       | 89.7       | 132.7         | 39.2    | 105.6   | 61.3   | 59/78  |
| Central Division               |            |            |               |         |         |        |        |
| Laucala Bay (Suva) (1942-2019) | 86.6       | 307.2      | 557.2         | 130.0   | 225.0   | 173.1  | 74/78  |
| Nausori Airport (1957-2019)    | 58.5       | 217.1      | 449.3         | 128.3   | 225.3   | 149.7  | 56/63  |
| Tokotoko (Navua) (1945-2019)   | 144.4      | 242.0      | 299.6         | 194.0   | 319.6   | 247.9  | 44/75  |
| Eastern Division               |            |            |               |         |         |        |        |
| Lakeba (1950-2019)             | 24.5       | 69.8       | 112.8         | 65.1    | 142.3   | 87.9   | 39/70  |
| Vunisea (Kadavu) (1931-2019)   | 78.9       | 76.9       | 170.5         | 94.9    | 165.2   | 126.5  | 59/82  |
| Ono-i-Lau (1943-2019)          | 23.0       | 90.1       | 76.1          | 40.0    | 111.5   | 76.0   | 38/63  |
| Northern Division              |            |            |               |         |         |        |        |
| Labasa Airport (1946-2019)     | 33.2       | 116.4      | 52.3          | 69.2    | 134.4   | 96.7   | 16/62  |
| Savusavu Airfield (1956-2019)  | 65.5       | 48.0       | 305.3         | 95.8    | 185.2   | 127.9  | 55/63  |
| Udu Point                      | 36.0       | 159.7      | 365.6         | 89.7    | 203.0   | 159.5  | 70/71  |
|                                |            |            |               |         |         |        |        |
| Rotuma (1912-2019)             | 319.9      | 248.2      | 377.9         | 242.8   | 367.9   | 289.5  | 76/105 |

**TABLE 2: Three-month Rainfall for August to October 2019**

| Station                        | Three-month Total |              | 33%tile | 67%tile | Median | Rank   | SCOPIC forecast probabilities<br>based on NINO3.4 May-June 2019 |    |     |      | Verification:<br>Consistent,<br>Near-consistent,<br>Inconsistent? |
|--------------------------------|-------------------|--------------|---------|---------|--------|--------|---|----|-----|------|---|
|                                | Rainfall (mm)     |              |         |         |        |        | B-N   | N  | A-N | LEPS |   |
| Western Division               |                   |              |         |         |        |        |   |    |     |      |   |
| Penang Mill (1910-2019)        | 136.4             | Below normal | 187.4   | 306.0   | 239.7  | 23/109 | 42  | 43 | 15  | 6    | Near-consistent   |
| Lautoka Mill (1900-2019)       | 240.8             | Normal       | 152.8   | 257.6   | 216.5  | 72/120 | 51  | 25 | 24  | 4    | Near-consistent   |
| Nadi Airport (1942-2019)       | 242.7             | Normal       | 165.2   | 285.7   | 225.0  | 44/78  | 48  | 33 | 19  | 6    | Near-consistent   |
| Central Division               |                   |              |         |         |        |        |   |    |     |      |   |
| Laucala Bay (Suva) (1942-2019) | 951.0             | Above normal | 414.8   | 625.3   | 513.2  | 72/78  | 49  | 34 | 17  | 7    | Inconsistent  |
| Nausori Airport (1957-2019)    | 724.9             | Above normal | 419.6   | 602.6   | 479.2  | 55/63  | 32  | 46 | 22  | 0    | Near-consistent   |
| Tokotoko (Navua) (1945-2019)   | 686.0             | Normal       | 546.3   | 786.9   | 637.6  | 38/73  | 46  | 40 | 14  | 7    | Near-consistent   |
| Eastern Division               |                   |              |         |         |        |        |   |    |     |      |   |
| Lakeba (1950-2019)             | 207.1             | Below normal | 255.1   | 345.8   | 309.9  | 16/69  | 44  | 31 | 25  | 1    | Consistent  |
| Vunisea (Kadavu) (1931-2019)   | 326.3             | Normal       | 325.4   | 449.4   | 394.1  | 34/80  | 36  | 43 | 21  | 1    | Consistent  |
| Ono-i-Lau (1943-2019)          | 189.2             | Below normal | 237.1   | 364.1   | 312.5  | 16/72  | 37  | 36 | 27  | -1   | Consistent  |
| Northern Division              |                   |              |         |         |        |        |   |    |     |      |   |
| Labasa Airport (1947-2019)     | 201.9             | Normal       | 169.8   | 242.4   | 198.9  | 31/60  | 41  | 32 | 27  | 0    | Near-consistent   |
| Savusavu Airfield (1957-2019)  | 418.8             | Above normal | 301.1   | 415.0   | 353.2  | 43/62  | 45  | 35 | 20  | 4    | Inconsistent  |
| Udu Point                      | 561.3             | Above normal | 296.1   | 406.5   | 337.5  | 61/70  | 38  | 45 | 17  | 3    | Near-consistent   |
|                                |                   |              |         |         |        |        |   |    |     |      |   |
| Rotuma (1912-2019)             | 946.0             | Above normal | 632.5   | 860.4   | 709.6  | 78/102 | 28  | 24 | 48  | 1    | Consistent  |

**TABLE 3: Seasonal Climate Outlooks using SCOPIC for December 2019 to February 2020****Predictor and Period used: NINO3.4 for September to October 2019**

| Station                        | Below<br>Median<br>(prob) | Median<br>Rainfall<br>(mm) | Above<br>Median<br>(prob) |  | LEPS (%)<br>[whole<br>numbers] | Hit-rate<br>(%) [whole<br>numbers] |
|--------------------------------|---------------------------|----------------------------|---------------------------|--|--------------------------------|------------------------------------|
| <b>Western Division</b>        |                           |                            |                           |  |                                |                                    |
| Penang Mill (1910-2019)        | 61                        | 957.7                      | 39                        |  | 15                             | 66                                 |
| Lautoka Mill (1900-2019)       | 62                        | 846.2                      | 38                        |  | 18                             | 73                                 |
| Nadi Airport (1942-2019)       | 68                        | 848.4                      | 32                        |  | 31                             | 78                                 |
| <b>Central Division</b>        |                           |                            |                           |  |                                |                                    |
| Lautoka Bay (Suva) (1942-2019) | 54                        | 880.0                      | 46                        |  | 0                              | 58                                 |
| Nausori Airport (1957-2019)    | 50                        | 870.8                      | 50                        |  | -2                             | 35                                 |
| Tokotoko (Navua) (1945-2019)   | 52                        | 989.9                      | 48                        |  | 0                              | 52                                 |
| <b>Eastern Division</b>        |                           |                            |                           |  |                                |                                    |
| Lakeba (1950-2019)             | 63                        | 666.2                      | 37                        |  | 21                             | 68                                 |
| Vunisea (Kadavu) (1931-2019)   | 56                        | 652.5                      | 44                        |  | 4                              | 66                                 |
| Ono-i-Lau (1943-2019)          | 57                        | 547.6                      | 43                        |  | 6                              | 58                                 |
| <b>Northern Division</b>       |                           |                            |                           |  |                                |                                    |
| Labasa Airport (1946-2019)     | 63                        | 897.2                      | 37                        |  | 28                             | 72                                 |
| Savusavu Airfield (1956-2019)  | 59                        | 707.8                      | 41                        |  | 14                             | 64                                 |
| Udu Point                      | 58                        | 929.8                      | 42                        |  | 7                              | 57                                 |
|                                |                           |                            |                           |  |                                |                                    |
| Rotuma (1912-2019)             | 60                        | 964.2                      | 40                        |  | 13                             | 57                                 |

| 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>(%) [whole<br>numbers] |
|--------------------------------|---------------------------|----------------------------|------------------|----------------------------|---------------------------|--------------------------------|------------------------------------|
| <b>Western Division</b>        |                           |                            |                  |                            |                           |                                |                                    |
| Penang Mill (1910-2019)        | 43                        | 825.6                      | 42               | 1089.7                     | 15                        | 23                             | 55                                 |
| Lautoka Mill (1900-2019)       | 43                        | 678.0                      | 40               | 999.7                      | 17                        | 27                             | 57                                 |
| Nadi Airport (1942-2019)       | 42                        | 672.4                      | 38               | 948.6                      | 20                        | 18                             | 51                                 |
| <b>Central Division</b>        |                           |                            |                  |                            |                           |                                |                                    |
| Lautoka Bay (Suva) (1942-2019) | 36                        | 782.9                      | 34               | 1015.2                     | 30                        | 1                              | 28                                 |
| Nausori Airport (1957-2019)    | 34                        | 786.9                      | 34               | 1023.7                     | 32                        | -1                             | 33                                 |
| Tokotoko (Navua) (1945-2019)   | 34                        | 879.9                      | 34               | 1113.2                     | 32                        | -2                             | 3                                  |
| <b>Eastern Division</b>        |                           |                            |                  |                            |                           |                                |                                    |
| Lakeba (1950-2019)             | 44                        | 582.1                      | 40               | 757.3                      | 16                        | 29                             | 54                                 |
| Vunisea (Kadavu) (1931-2019)   | 41                        | 548.2                      | 30               | 764.6                      | 29                        | 8                              | 32                                 |
| Ono-i-Lau (1943-2019)          | 38                        | 439.1                      | 33               | 630.9                      | 29                        | 4                              | 45                                 |
| <b>Northern Division</b>       |                           |                            |                  |                            |                           |                                |                                    |
| Labasa Airport (1946-2019)     | 41                        | 785.9                      | 42               | 1088.0                     | 17                        | 30                             | 55                                 |
| Savusavu Airfield (1956-2019)  | 39                        | 581.5                      | 36               | 854.6                      | 25                        | 9                              | 44                                 |
| Udu Point                      | 42                        | 749.2                      | 28               | 1049.1                     | 30                        | 10                             | 29                                 |
|                                |                           |                            |                  |                            |                           |                                |                                    |
| Rotuma (1912-2019)             | 41                        | 866.5                      | 39               | 1058.8                     | 20                        | 17                             | 43                                 |

**TABLE 4: Seasonal Climate Outlooks using POAMA2 for December 2019 to February 2020**

| Station   | <b>Below<br/>Normal<br/>(prob)</b> | <b>33%ile Rainfall<br/>(mm)</b> | <b>Normal<br/>(prob)</b> | <b>67%ile<br/>Rainfall (mm)</b> | <b>Above<br/>Normal<br/>(prob)</b> |
|-----------|------------------------------------|---------------------------------|--------------------------|---------------------------------|------------------------------------|
| Lakeba    | 15                                 | 508.0                           | 21                       | 701.0                           | <b>64</b>                          |
| Nadi      | 9                                  | 597.0                           | 30                       | 860.0                           | <b>61</b>                          |
| Nabouwalu | 15                                 | 679.0                           | 24                       | 885.0                           | <b>61</b>                          |
| Udu Point | 9                                  | 680.0                           | 21                       | 927.0                           | <b>70</b>                          |
| Vunisea   | 9                                  | 496.0                           | 30                       | 669.0                           | <b>61</b>                          |
| Suva      | 9                                  | 739.0                           | 30                       | 956.0                           | <b>61</b>                          |
| Rotuma    | 30                                 | 817.0                           | 15                       | 1018.0                          | <b>55</b>                          |

## **Summary Statements**

### **Rainfall for October 2019:**

*Normal to above normal* rainfall was recorded across the Western, Central and Eastern Divisions, together with Savusavu and Udu Point in the Northern Division. *Above normal* rainfall was recorded at Rotuma, while Labasa was the lone station with *below normal* rainfall.

Udu Point recorded its second wettest October on record, while Laucala Bay (Suva) recorded its fifth wettest October on record.

### **Accumulated rainfall for August to October 2019, including outlook verification:**

*Normal to above normal* rainfall was recorded at most parts of the country, except for Penang Mill, Lakeba and Ono-i-Lau, which recorded *below normal* rainfall.

Laucala Bay (Suva) recorded its seventh wettest August to October period on record, while at Nausori Airport it was the ninth wettest.

The rainfall outlooks were 'Consistent' at four sites, 'Near-Consistent' at seven sites and 'Inconsistent' at two sites.

### **Outlooks for December 2019 to February 2020:**

#### **1. SCOPIC:**

- **Nadi Airport, Lakeba, Vunisea and Udu Point:** The outlook shows *below normal* as the most likely, with *normal* the next most likely. *Above normal* is the least likely.
- **Penang Mill, Lautoka Mill, Labasa Airport, Savusavu and Rotuma:** The outlook shows a near-equal likelihood of below normal and normal rainfall. *Above normal* is the least likely.
- **Central Division and Ono-i-Lau:** The outlook offers little guidance as the chances of *above normal*, *normal* and *below normal* rainfall are similar.

#### **2. POAMA:**

*Above normal* rainfall is favoured across the country.

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

| <b>Product</b>                  | <b>Date:<br/>October<br/>2019</b> | <b>Stakeholder</b>   | <b>Total Number<br/>of Participants</b> | <b>Number of<br/>male</b> | <b>Number of<br/>female</b> |
|---------------------------------|-----------------------------------|--|---|---------------------------|-----------------------------|
| Fiji Climate Summary            | 07/10/2019                        | General public   | 140                                     | 106                       | 34                          |
| Fiji Climate Outlook            | 11/10/2019                        | General public   | 124                                     | 93                        | 31                          |
| Climate Outlook for Monasavu    | 08/10/2019                        | EFL  | 13                                      | 13                        | -                           |
| EAR Watch                       | 04/10/2019                        | Humanitarian partners  | 122                                     | 96                        | 26                          |
| Fiji Sugarcane Rainfall Outlook | 25/10/2019                        | Sugar industry stakeholders  | 77                                      | 60                        | 17                          |
| Ocean Outlook                   |                                   | Reef explorer Fiji limited, Maritime safety authority, World wildlife fun, wiulodlife conservation society and Tourisn sector. | 36                                      | 29                        | 7                           |
| Meteorological Data Requests    | 01/10/19 to 31/10/19              | A range of stakeholders  | 53                                      | 49                        | 4                           |
| <b>Total</b>                    |                                   |  | <b>565</b>                              | <b>446</b>                | <b>119</b>                  |