

# Pacific Islands - Online Climate Outlook Forum (OCOF) No. 147

Country: Tuvalu

**TABLE 1: Monthly Rainfall**

| Station (include data period) | Sep-2019   | Oct-2019   | Nov-2019      |         |         |        |          |
|-------------------------------|------------|------------|---------------|---------|---------|--------|----------|
|                               |            |            | Total (mm)    | 33%tile | 67%tile | Median | Rank     |
|                               | Total (mm) | Total (mm) | Rainfall (mm) |         |         |        |          |
| Nanumea (1941-2019)           | 144.6      | 183.7      | 43.1          | 115.1   | 205.0   | 155.4  | 9 of 78  |
| Nui (1946-2019)               | 273.9      | 146.5      | 133.5         | 198.1   | 273.0   | 235.2  | 11 of 74 |
| Funafuti (1933-2019)          | 409.3      | 142.7      | 330.1         | 211.8   | 308.7   | 250.0  | 63 of 87 |
| Niulakita (1953-2019)         | 221.4      | 58.3       | 313.6         | 214.0   | 320.1   | 277.0  | 41 of 66 |

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

| Station               | Three-month Total |              | 33%tile | 67%tile | Median | Rank     | SCOPIC forecast probabilities<br>based on NINO3.4 June-July 2019 |    |     |      | Verification:<br>Consistent,<br>Near-consistent,<br>Inconsistent? |
|-----------------------|-------------------|--------------|---------|---------|--------|----------|------------------------------------------------------------------|----|-----|------|-------------------------------------------------------------------|
|                       | Rainfall (mm)     |              |         |         |        |          | B-N                                                              | N  | A-N | LEPS |                                                                   |
| Nanumea (1941-2019)   | 371.4             | Normal       | 334.4   | 577.7   | 472.4  | 30 of 78 | 5                                                                | 30 | 65  | 34   | Near-consistent                                                   |
| Nui (1946-2019)       | 553.9             | Normal       | 492.0   | 738.3   | 620.0  | 32 of 74 | 13                                                               | 32 | 55  | 19   | Near-consistent                                                   |
| Funafuti (1933-2019)  | 882.1             | Above normal | 626.1   | 834.9   | 737.2  | 63 of 87 | 16                                                               | 35 | 49  | 12   | Consistent                                                        |
| Niulakita (1953-2019) | 593.3             | Below normal | 608.2   | 842.7   | 720.0  | 19 of 66 | 33                                                               | 35 | 32  | -2   | Near-consistent                                                   |

**TABLE 3: Seasonal Climate Outlooks using SCOPIC for January to March 2020**

Predictor and Period used: NINO3.4 for October to November 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>(%)<br>[whole<br>numbers] |
|-----------------------|---------------------------|----------------------------|---------------------------|--|--------------------------------|---------------------------------------|
| Nanumea (1941-2019)   | 21                        | 942.7                      | 79                        |  | 42                             | 75                                    |
| Nui (1946-2019)       | 36                        | 983.2                      | 64                        |  | 14                             | 73                                    |
| Funafuti (1933-2019)  | 39                        | 1070.3                     | 61                        |  | 8                              | 61                                    |
| Niulakita (1953-2019) | 56                        | 1080.2                     | 44                        |  | 3                              | 61                                    |

| 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] |
|-----------------------|---------------------------|----------------------------|------------------|----------------------------|---------------------------|--------------------------------|---------------------------------------|
| Nanumea (1941-2019)   | 12                        | 733.5                      | 35               | 1081.9                     | 53                        | 34                             | 58                                    |
| Nui (1946-2019)       | 26                        | 846.7                      | 33               | 1087.1                     | 41                        | 5                              | 49                                    |
| Funafuti (1933-2019)  | 24                        | 981.7                      | 37               | 1172.5                     | 39                        | 6                              | 46                                    |
| Niulakita (1953-2019) | 36                        | 950.2                      | 36               | 1166.3                     | 28                        | 1                              | 39                                    |

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

| 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) |
|-----------|---------------------------|----------------------------|------------------|----------------------------|---------------------------|
| Nanumea   | 18                        | 796.0                      | 30               | 1148.0                     | 52                        |
| Nui       | 9                         | 917.0                      | 58               | 1162.0                     | 33                        |
| Funafuti  | 27                        | 1022.0                     | 18               | 1201.0                     | 55                        |
| Niulakita | 24                        | 966.0                      | 18               | 1189.0                     | 58                        |

## **Summary Statements**

### **Rainfall for November 2019:**

Below normal rainfall was collected at Nanumea and Nui, normal rainfall was collected at Niulakita with above normal rainfall at Funafuti.

### **Accumulated rainfall for September to November 2019, including outlook verification:**

Normal rainfall was collected at Nanumea and Nui with an outlook verification of near-consistent. Above normal rainfall was observed at Funafuti, with consistent outlook verification. Niulkita recorded below normal rainfall, with near-consistent outlook verification.

### **Outlooks for January to March 2020:**

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

The outlook for the season at Nanumea, favours above normal rainfall.

For Nui, the outlook shows above normal rainfall as the most likely outcome for the season, with normal rainfall is the next most likely. Below normal rainfall is the least likely outcome.

The outlook for Funafuti shows a near-equal likelihood of above normal and normal rainfall. Below normal is the least likely.

The outlook for the season at Niulakita offers little guidance as the chance of below normal, normal and above normal rainfall are similar.

The outlook verification ranges from very high skills at Nanumea, moderate skills at Nui and Funafuti, with very low skills at Niulakita.

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

The outlook for the season at Nanumea, Funafuti and Niulakita favours above normal rainfall while at Nui, the outlook favours normal rainfall.

**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**

| <b>Product</b>                 | <b>Date:<br/>November<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> |
|--------------------------------|------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------|---------------------------|-----------------------------|
| Climate<br>Bulletin            |                                    | Governments<br>civil servants,<br>including<br>departments,<br>Tuvalu Red<br>Cross and<br>Media | All civil servants<br>and NGOs          |                           |                             |
| EAR Watch                      |                                    |                                                                                                 |                                         |                           |                             |
| Monthly<br>Climate<br>Briefing |                                    | Governments<br>civil servants,<br>including<br>departments,<br>Tuvalu Red<br>Cross and<br>Media | All civil servants<br>and NGOs          |                           |                             |
| Ocean Bulletin                 |                                    | Governments<br>civil servants,<br>including<br>departments,<br>Tuvalu Red<br>Cross and<br>Media | All civil servants<br>and NGOs          |                           |                             |
| <b>Total</b>                   |                                    |                                                                                                 |                                         |                           |                             |