Pacific Islands - Online Climate Outlook Forum (OCOF) No. 94

Country Name: Tuvalu

TABLE 1: Monthly Rainfall

| Station (include data period) | | | June 2015 | | | | | | |
|-------------------------------|------------------------|----------------------|-----------|-----------------------------|-----------------------------|-------------------------|----------|--|--|
| | April 2015 Total | May 2015 Total | Total | 33%tile Rainfall (mm) | 67%tile Rainfall (mm) | Median Rainfall (mm) | Ranking | | |
| Nanumea | 286.9 | 152 | 108.9 | 135.3 | 206.2 | 170.5 | 17 of 75 | | |
| Nui | 227.8 | 222.2 | 289.6 | 145.3 | 216.1 | 172.7 | 61 of 70 | | |
| Funafuti | 356.2 | 282.8 | 194.7 | 162.4 | 265.7 | 216.6 | 39 of 83 | | |
| Niulakita | 276.3 | 208 | 303.8 | 142.1 | 241.4 | 192.4 | 50 of 63 | | |

TABLE 2: Three-monthly Rainfall April to June 2015

[Please note that the data used in this verification should be sourced from table 3 of OCOF #90]

| Station | Three-month Total | 33%tile Rainfall (mm) | 67%tile Rainfall (mm) | Median Rainfall (mm) | Ranking | Forecast probs.* (include LEPS) | Verification* (Consistent, Near-consistent Inconsistent? |
|-----------|----------------------|-----------------------------|-----------------------------|----------------------------|---------|------------------------------------|---|
| Nanumea | 547.8 | 549.7 | 880.5 | 770 | 27/75 | 18/36/46 [14.6%] | Inconsistent |
| Nui | 739.6 | 603.2 | 828.1 | 698.5 | 49/70 | 27/31/42 [10.9%] | Near Consistent |
| Funafuti | 833.7 | 671.1 | 886.4 | 787.1 | 65/83 | 25/32/43 [9.6%] | Near Consistent |
| Niulakita | 788.1 | 674.1 | 914.0 | 828.6 | 49/63 | 22/41/37 [3.6%] | Consistent |

<u>Period</u>:*below normal/normal/above normal

Predictors and Period used for April to June 2015 Outlooks (refer to OCOF #90):

Forecast is <u>consistent</u> when observed and predicted (tercile with the highest probability) categories coincide (are in the same tercile).

Forecast is <u>near-consistent</u> when observed and predicted (tercile with the highest probability) differ by only one category (i.e. terciles 1 and 2 or terciles 2 and 3).

Forecast is <u>inconsistent</u> when observed and predicted (tercile with the highest probability) differ by two categories (i.e. terciles 1 and 3).

TABLE 3: Seasonal Climate Outlooks using SCOPIC for August to October 2015

Predictors and Period used: NINO 3.4

| Station | Below Median (prob) | Median Rainfall (mm) | Above Median (prob) | LEPS | Hit-rate |
|-----------|---------------------------|----------------------------|---------------------------|-------|----------|
| Nanumea | 6% | 502.4 | 94% | 29.6% | 75.8% |
| Nui | 6% | 567.0 | 94% | 20.7% | 72.7% |
| Funafuti | 11% | 673.0 | 89% | 20.3% | 69.7% |
| Niulakita | 43% | 663.0 | 57% | -2.8% | 57.6% |

| Station | Below Normal (prob) | 33%ile rainfall (mm) | Normal (prob) | 66%ile rainfall (mm) | Above Normal (prob) | LEPS | Hit-rate |
|-----------|---------------------------|----------------------------|------------------|----------------------------|---------------------------|-------|----------|
| Nanumea | 4% | 342.1% | 15% | 595.2 | 81% | 23.0% | 42.4% |
| Nui | 7% | 485.5 | 21% | 702.5 | 72 % | 15.2% | 48.5% |
| Funafuti | 7% | 597.4 | 21% | 799.6 | 72 % | 13.9% | 51.5% |
| Niulakita | 28% | 574.4 | 24% | 829.1 | 48% | -2.4% | 30.3% |
| | | | | | | | |

TABLE 4: Seasonal Climate Outlooks using POAMA2 for August to October 2015

| Station | Lower Tercile (prob) | 33%ile rainfall (mm) | Middle Tercile (prob) | 66%ile rainfall (mm) | Upper Tercile (prob) | |
|-----------|----------------------------|----------------------------|-----------------------------|----------------------------|----------------------------|--|
| Nanumea | 15.15% | 428 | 27.27 | 636 | 58% | |
| Nui | 9% | 530 | 30% | 637 | 61% | |
| Funafuti | 36% | 592 | 31% | 845 | 33% | |
| Niulakita | 33% | 490 | 34% | 799 | 33% | |
| | | | | | | |

Summary Statements

Rainfall for June 2015:

Rainfall from last month was Above Normal for Nui and Funafuti Island. Nanumea recorded as Below Normal while Niulakita recorded Normal Rainfall.

Accumulated rainfall for April to June 2015, including outlook verification:

Rainfall over the last 3 months was Normal rainfall for the 3 stations including Nui, Funafuti and Niulakita. While Nanumea Island received Below Normal rainfall for the last three month.

Verification of the 3-month rainfall, the SCOPIC outlooks for the last three month were Near Consistent for Nui and Funafuti, consistent for Niulakita, while Nanumea was Inconsistent.

Outlooks for August to October 2015:

1. SCOPIC:

Nanumea and Nui, Above Normal rainfall is the most likely outcome with Normal rainfall the next most likely. Confidence in the outlook is high.

Funafuti also predict Above Normal rainfall is the most likely outcome with Normal rainfall the next most likely. Confidence in the outlook is high.

Niulakita, Above Normal rainfall is the most likely outcome with Below Normal rainfall the next most likely. Confidence in the outlook is very low.

2. POAMA:

For Nanumea and Nui Above Normal is favoured with Normal rainfall the next mostly likely.

Funafuti is favoured Below Normal with Above Normal rainfall the next mostly likely.

Niulakita result from POAMA: There is near equal likelihood of below normal, above normal and normal rainfall for the coming season.

Overall for Tuvalu is Above Normal to Normal

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

 $Very \ Low: \ X < 0.0 \\ Low: \ 0 \le X < 5 \\ Moderate \ 5 \le X < 10 \\ Good: \ 10 \le X < 15 \\ High: \ 15 \le X < 25 \\$

Very High: $25 \le X < 35$ Exceptional: $X \ge 35$