

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 67

Country Name: TONGA

TABLE 1: Monthly Rainfall

| Station (include data period) | March 2013 | | | | | | |
|-------------------------------|--------------------|---------------------|-------|-----------------------|-----------------------|----------------------|---------|
| | January 2013 Total | February 2013 Total | Total | 33%tile Rainfall (mm) | 67%tile Rainfall (mm) | Median Rainfall (mm) | Ranking |
| Northern Division | | | | | | | |
| Niuafoóu | 362.6 | 314.0 | 450.4 | 213.0 | 348.0 | 268.4 | 34/43 |
| Niutatoputapu | 573.0 | 210.2 | 116.8 | 187.0 | 322.7 | 241.5 | 8/67 |
| Central Division | | | | | | | |
| Vavaú | 316.4 | 201.6 | 311.3 | 227.3 | 366.7 | 301.0 | 35/67 |
| Haápai | 282.6 | 271.4 | 335.4 | 179.0 | 313.0 | 233.5 | 51/67 |
| Southern Division | | | | | | | |
| Nukuálofa | 301.3 | 287.8 | 531.2 | 168.3 | 252.6 | 209.0 | 69/69 |
| Fuaámotu | 335.2 | 550.5 | 445.0 | 145.3 | 213.3 | 173.0 | 34/34 |

TABLE 2: Three-monthly Rainfall

January 2013 to March 2013

[Please note that the data used in this verification should be sourced from table 3 of OCOF #62]

| 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?) |
|--------------------------|-------------------|-----------------------|-----------------------|----------------------|---------|---------------------------------|--|
| Northern Division | | | | | | | |
| Niuafoóu | 1127.0 | 753.0 | 955.2 | 893.5 | 30/43 | 21,24,55 (9.1) | Consistent |
| Niutatoputapu | 900.0 | 650.0 | 939.7 | 810.0 | 41/67 | 44,36,20 (12.9) | Near consistent |
| Central Division | | | | | | | |
| Vavaú | 829.3 | 687.3 | 946.7 | 858.5 | 31/67 | 40,29,31 (9.9) | Near Consistent |
| Haápai | 889.4 | 538.4 | 764.0 | 651.0 | 56/67 | 27,37,36 (26.2) | Near Consistent |
| Southern Division | | | | | | | |
| Nukuálofa | 1120.3 | 485.3 | 807.3 | 633.0 | 67/69 | 27,58,15 (15.9) | Near Consistent |
| Fuaámotu | 1330.7 | 455.3 | 770.3 | 584.0 | 34/34 | 24,51,25 (26.2) | Near Consistent |

Period: *below normal/normal/above normal

Predictors and Period used for January 2013 to March 2013 Outlooks (refer to OCOF #62):

Predictors – SSTa's I@9 Period; Sept – November with 1 month lead.

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

Forecast is near-consistent 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 inconsistent 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
May to July 2013**

Predictors and Period used: SSTa's 1@9 – January 2013 to March 2013

| Station | Below Normal (prob) | 33%ile rainfall (mm) | Normal (prob) | 66%ile rainfall (mm) | Above Normal (prob) | LEPS | Hit-rate |
|--------------------------|---------------------------|----------------------------|------------------|----------------------------|------------------------|------|----------|
| Northern Division | | | | | | | |
| Niuafo'ou | 32 | 373.7 | 32 | 476.9 | 36 | -2.6 | 23.7 |
| Niuaotoputapu | 28 | 321.3 | 41 | 405.0 | 31 | 2.3 | 39.3 |
| Central Division | | | | | | | |
| Vava'u | 31 | 300.0 | 32 | 402.0 | 37 | 11.4 | 42.2 |
| Haapai | 32 | 208.3 | 33 | 307.7 | 35 | 5.3 | 33.3 |
| Southern Division | | | | | | | |
| Nuku'alofa | 22 | 237.3 | 39 | 343.0 | 39 | 15.6 | 32.8 |
| Fua'amotu | 25 | 273.6 | 37 | 441.9 | 38 | 10.9 | 34.4 |

**TABLE 4: Seasonal Climate Outlooks using POAMA2 for
May to July 2013**

| Station | Lower Tercile (prob) | 33%ile rainfall (mm) | Middle Tercile (prob) | 66%ile rainfall (mm) | Upper Tercile (prob) | | |
|------------|----------------------------|----------------------------|-----------------------------|----------------------------|----------------------------|--|--|
| Nuku'alofa | | | | | | | |

Summary Statements

Rainfall for March 2013:

Northern Division: Above normal for Niuafo'ou. Below normal for Niuaotoputapu.

Central Division: Normal to above normal.

Southern Division: Above Normal.

Accumulated rainfall for December 2012–February 2013, including outlook verification:

Northern Division: Normal to Above Normal. Forecast was Near Consistent to Consistent.

Central Division: Normal to Above Normal. Forecast was Near Consistent

Southern Division: Above Normal. Forecast was Near Consistent.

Outlooks for April–June 2013:

1. SCOPIC:

Northern Division: Normal to above normal.

Central Division: Normal to above normal.

Southern Division: Above Normal.

2. POAMA: Outlook

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: $X \geq 35$