

## Pacific Islands - Online Climate Outlook Forum No 81

**Country:** PAPUA NEW GUINEA

### TABLE 1: Monthly Rainfall

| Station (include data period) | May 2014    |             |              |                       |                       |                      |         |
|-------------------------------|-------------|-------------|--------------|-----------------------|-----------------------|----------------------|---------|
|                               | March Total | April Total | Total        | 33%tile Rainfall (mm) | 67%tile Rainfall (mm) | Median Rainfall (mm) | Ranking |
| <b>Momase Region</b>          |             |             |              |                       |                       |                      |         |
| Madang (1944-2014)            | 418.2       | 288.2       | -            |                       |                       |                      |         |
| Nadzab(1973-2014)             | 153.8       | 160.0       | <b>48.0</b>  | 64.7                  | 107.1                 | 76.0                 | 6/40    |
| Wewak (1894-2014)             | 135.8       | 217.8       | <b>159.4</b> | 190.2                 | 272.8                 | 223.1                | 17/59   |
| Vanimo (1918-2014)            | 168.4       | 439.4       | <b>124.4</b> | 167.1                 | 271.6                 | 209.3                | 12/61   |
| <b>New Guinea Islands</b>     |             |             |              |                       |                       |                      |         |
| Momote (1949-2014)            | 154.0       | 264.8       | <b>181.4</b> | 197.1                 | 259.4                 | 230.4                | 18/66   |
| Kavieng (1916-2014)           | 286.2       | 449.2       | <b>177.2</b> | 205.0                 | 304.7                 | 249.2                | 22/84   |
| <b>Southern Region</b>        |             |             |              |                       |                       |                      |         |
| Misima (1917-2014)            | 241.0       | 724.6       | <b>201.8</b> | 183.0                 | 323.2                 | 248.0                | 37/89   |
| PortMoresby(1875-2014)        | 220.2       | 144.2       | <b>0.0</b>   | 30.7                  | 73.6                  | 50.8                 | 1/123   |

### TABLE 2: Three-monthly Rainfall (March-May 2014)

*Predictors: SSTa's 1-9 –Period: November 2013 -January 2014*

[Please note that the data used in this verification should be sourced from table 3 of OCOF #77]

| Station                   | Three-month Total | 33%tile Rainfall (mm) | 67%tile Rainfall (mm) | Median Rainfall (mm) | Ranking | Forecasted probs.* (include LEPS) | Verification (Consistent, Near-consistent Inconsistent?) |
|---------------------------|-------------------|-----------------------|-----------------------|----------------------|---------|-----------------------------------|--|
| <b>Momase Region</b>      |                   |                       |                       |                      |         |                                   |  |
| Madang (1944-2014)        | -                 | 1001.9                | 1209.6                | 1151.9               |         | 39/36/25 (-2.7)                   |  |
| Nadzab (1973-2014)        | <b>361.8</b>      | 354.2                 | 432.4                 | 387.0                | 14/38   | 42/41/17 (-1.3)                   | Near-consistent  |
| Wewak (1894-2014)         | <b>513.0</b>      | 522.0                 | 657.1                 | 612.6                | 19/58   | 22/36/42 (-2.2)                   | Inconsistent   |
| Vanimo (1918-2014)        | <b>732.2</b>      | 583.4                 | 840.2                 | 695.8                | 33/59   | 16/34/50 (2.8)                    | Near-consistent  |
| <b>New Guinea Islands</b> |                   |                       |                       |                      |         |                                   |  |
| Momote (1949-2014)        | <b>600.2</b>      | 736.2                 | 894.3                 | 823.0                | 6/64    | 20/30/50 (0.0)                    | Inconsistent   |
| Kavieng (1916-2014)       | <b>912.6</b>      | 756.1                 | 947.5                 | 832.6                | 50/81   | 38/33/30 (-0.7)                   | Near-consistent  |
| <b>Southern Region</b>    |                   |                       |                       |                      |         |                                   |  |
| Misima (1917-2014)        | <b>1167.4</b>     | 681.0                 | 992.0                 | 784.4                | 73/89   | 32/33/35 (21.1)                   | Consistent   |
| Port Moresby (1875-2014)  | <b>364.4</b>      | 306.6                 | 450.5                 | 381.8                | 54/120  | 16/46/38 (1.1)                    | Near-consistent  |

Period: \*below normal/normal/above normal

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 for July to September 2014**

*Predictors: [NINO3.4 SST Anomalies](#)-Period: [March – May 2014](#)*

| Period:Station            | Below Median (prob) | Median Rainfall (mm) | Above Median (prob) |  | LEPS (%) | Hit-rate (%) |
|---------------------------|---------------------|----------------------|---------------------|--|----------|--------------|
| <b>Momase Region</b>      |                     |                      |                     |  |          |              |
| Madang (1944-2014)        |                     |                      |                     |  |          |              |
| Nadzab(1973-2014)         | <b>50</b>           | 367.0                | <b>50</b>           |  | -2.7     | 27.0         |
| Wewak (1894-2014)         | 47                  | 559.5                | <b>53</b>           |  | 36.9     | 81.0         |
| Vanimo (1918-2014)        | <b>50</b>           | 510.9                | <b>50</b>           |  | 0.4      | 62.5         |
| <b>New Guinea Islands</b> |                     |                      |                     |  |          |              |
| Momote (1949-2014)        | 50                  | 893.3                | <b>50</b>           |  | 3.5      | 57.8         |
| Kavieng (1916-2014)       | <b>50</b>           | 611.5                | <b>50</b>           |  | -1.8     | 47.3         |
| <b>Southern Region</b>    |                     |                      |                     |  |          |              |
| Misima(1917-2014)         | <b>51</b>           | 470.9                | 49                  |  | 24.8     | 72.1         |
| Port Moresby(1875-2014)   | <b>50</b>           | 65.4                 | <b>50</b>           |  | 0.5      | 51.6         |

| Station                   | Below Normal (prob) | 33%ile rainfall (mm) | Normal (prob) | 66%ile rainfall (mm) | Above Normal (prob) | Leps (%) | Hit-rate (%) |
|---------------------------|---------------------|----------------------|---------------|----------------------|---------------------|----------|--------------|
| <b>Momase Region</b>      |                     |                      |               |                      |                     |          |              |
| Madang (1944-2014)        |                     |                      |               |                      |                     |          |              |
| Nadzab(1973-2014)         | <b>32</b>           | 257.8                | <b>34</b>     | 462.0                | <b>34</b>           | -3.6     | 16.2         |
| Wewak (1894-2014)         | 25                  | 470.2                | <b>40</b>     | 591.6                | 35                  | 24.3     | 56.9         |
| Vanimo (1918-2014)        | <b>33</b>           | 447.1                | <b>34</b>     | 552.5                | <b>33</b>           | -0.5     | 35.4         |
| <b>New Guinea Islands</b> |                     |                      |               |                      |                     |          |              |
| Momote (1949-2014)        | <b>33</b>           | 748.4                | <b>34</b>     | 1047.0               | <b>33</b>           | 1.7      | 21.9         |
| Kavieng (1916-2014)       | <b>34</b>           | 500.9                | <b>33</b>     | 720.7                | <b>33</b>           | -2.1     | 3.6          |
| <b>Southern Region</b>    |                     |                      |               |                      |                     |          |              |
| Misima(1917-2014)         | 31                  | 334.6                | <b>42</b>     | 625.7                | 27                  | 29.1     | 54.1         |
| Port Moresby(1875-2014)   | <b>33</b>           | 41.5                 | <b>33</b>     | 84.7                 | <b>34</b>           | -1.4     | 43.8         |

**TABLE 4: Seasonal Climate Outlooks using POAMA2 for July to September 2014**

| Station                   | Lower Tercile (prob) | 33%ile rainfall (mm) | Middle Tercile (prob) | 66%ile rainfall (mm) | Upper Tercile (prob) |
|---------------------------|----------------------|----------------------|-----------------------|----------------------|----------------------|
| <b>Momase Region</b>      |                      |                      |                       |                      |                      |
| Madang                    | 33                   | 368                  | <b>37</b>             | 505                  | 30                   |
| Wewak                     | 33                   | 514                  | 30                    | 619                  | <b>37</b>            |
| <b>New Guinea Islands</b> |                      |                      |                       |                      |                      |
| Momote                    | 33                   | 813                  | 27                    | 1036                 | <b>40</b>            |
| Kavieng                   | 36                   | 522                  | 15                    | 809                  | <b>49</b>            |
| <b>Southern Region</b>    |                      |                      |                       |                      |                      |
| Misima                    | 27                   | 310                  | <b>49</b>             | 517                  | 24                   |
| Port Moresby              | 42                   | 50                   | 5                     | 101                  | <b>53</b>            |

## Summary Statements:

### Rainfall for May 2014

Most parts of the country received *Below Normal* rainfall except for Misima received *Normal* rainfall.

### Accumulated rainfall for March to May 2014, including outlook verification

Rainfall over period Mar – May 2014 was *Below Normal* to *Normal* across the country except Misima received *Above Normal* rainfall.

The SCOPIC forecasts for the 3 months period were *Near-Consistent* at majority of the stations, *Inconsistent* at Wewak and Momote whilst *Consistent* at Misima. The skills ranged from very low to high.

### Outlook for – July to September 2014:

#### 1. SCOPIC:

The SCOPIC seasonal rainfall outlook for July to September 2014 shows:

- The most likely outcome for Wewak and Misima is *Normal* with the next most likely is *Above Normal* for Wewak and *Below Normal* for Misima.
- There is little guidance for Nadzab, Vanimo, New Guinea Islands region and Port Moresby as the chances of *Above Normal*, *Normal* and *Below Normal* are similar.

#### 2. POAMA:

The POAMA model favours *Above Normal* across the country except Madang and Misima with *Normal*.

**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:  $X \geq 35$