

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 93

Country Name: Cook Islands

TABLE 1: Monthly Rainfall

| Station (include data period) | May 2015 | | | | | | |
|-------------------------------|------------------|------------------|-------|-----------------------|-----------------------|----------------------|---------|
| | March 2015 Total | April 2015 Total | Total | 33%tile Rainfall (mm) | 67%tile Rainfall (mm) | Median Rainfall (mm) | Ranking |
| Penrhyn (1937-May 2015) | 398.4 | 49.9 | 53.1 | 92.3 | 175.5 | 125.6 | 7/78 |
| Rarotonga (1899-May 2015) | 375.0 | 139.1 | 140.5 | 106.5 | 199.0 | 151.0 | 68/86 |

TABLE 2: Three-monthly Rainfall March to May 2015

[Please note that the data used in this verification should be sourced from table 3 of OCOF #89]

| 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?) |
|-----------|-------------------|-----------------------|-----------------------|----------------------|---------|---------------------------------|--|
| Penrhyn | 501.4 | 381 | 654.2 | 484 | 40/75 | 27/29/44 | Near-consistent |
| Rarotonga | 654.6 | 510 | 652 | 575.5 | 59/87 | 41/35/24 | Inconsistent |

Period: *below normal/normal/above normal

Predictors and Period used for March to May 2015 Outlooks (refer to OCOF #89): Dec-Jan NINO3.4

* 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 July to September 2015

Predictors and Period used: NINO3.4 Apr-May

| Station | Below Median (prob) | Median Rainfall (mm) | Above Median (prob) | | LEPS | Hit-rate |
|-----------|---------------------|----------------------|---------------------|--|------|----------|
| Penrhyn | 13% | 342.0 | 87% | | 18.4 | 68.8 |
| Aitutaki | 56% | 179.7 | 44% | | -1.1 | 51.6 |
| Rarotonga | 54% | 294.0 | 46% | | -1.4 | 50 |

| Station | Below Normal (prob) | 33%ile rainfall (mm) | Normal (prob) | 66%ile rainfall (mm) | Above Normal (prob) | LEPS | Hit-rate |
|-----------|---------------------|----------------------|---------------|----------------------|---------------------|------|----------|
| Penrhyn | 8% | 295 | 21% | 471 | 71% | 15.6 | 51.6 |
| Aitutaki | 33% | 148 | 32% | 254 | 35% | -1.8 | 15.6 |
| Rarotonga | 44% | 255 | 24% | 351 | 32% | -1.3 | 37.5 |

TABLE 4: Seasonal Climate Outlooks using POAMA2 for July to September 2015

| Station | Lower Tercile (prob) | 33%ile rainfall (mm) | Middle Tercile (prob) | 66%ile rainfall (mm) | Upper Tercile (prob) | | |
|-----------|----------------------|----------------------|-----------------------|----------------------|----------------------|--|--|
| Penrhyn | 5% | 254 | 83% | 522 | 12% | | |
| Aitutaki | 5% | | 90% | | 5% | | |
| Rarotonga | 5% | 238 | 89% | 368 | 6% | | |

Summary Statements

Rainfall for May 2015:

In May, Penrhyn recorded below normal and Rarotonga normal rainfall.

Accumulated rainfall for March to May 2015, including outlook verification:

For March to May, Penrhyn recorded near normal rainfall and Rarotonga above normal rainfall.

Outlooks for July to September 2015:

1. SCOPIC:

The Penrhyn outlook favours above normal rainfall with normal the next most likely.

The Aitutaki outlook offers little guidance as the chances of below normal, normal and above normal rainfall are similar. For Rarotonga outlook show the most likely outcome is below normal rainfall with normal the next most likely.

2. POAMA:

The Penrhyn, Aitutaki and Rarotonga outlooks favour 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: $X \geq 35$