

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 98

Country Name: Cook Islands

TABLE 1: Monthly Rainfall

Station (include data period)	October 2015						
	August 2015 Total	September 2015 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Penrhyn (1937-Oct 2015)	22.4	38.8	168.0	98	183	142.5	48/77
Rarotonga (1899-Oct 2015)	52.0	20.1	109.7	62.7	138.3	91	66/117

**TABLE 2: Three-monthly Rainfall
August to October 2015**

[Please note that the data used in this verification should be sourced from table 3 of OCOF #94]

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	229.2	292.7	440.7	359	14/76	7/19/ 74 (12.9%)	Inconsistent
Rarotonga	181.8	274.3	391.3	337.5	14/117	61 /14/25 (2.7%)	Consistent

Period: *below normal/normal/above normal

Predictors and Period used for August to October 2015 Outlooks (refer to OCOF #94):

May-June 2015 NINO3.4 SST Anomalies

* 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
December 2015 to February 2016**

Predictors and Period used: NINO3.4 (Sep-Oct)

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
Penrhyn	3%	628	97%		28.9%	68.3%
Rarotonga	87%	673.5	13%		13.3%	66.2%

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
Penrhyn	0%	366.1	10%	839.5	90%	44.1%	63.5%
Rarotonga	63%	557.7	30%	763.3	7%	8.3%	36.9%

**TABLE 4: Seasonal Climate Outlooks using POAMA2 for
December 2015 to February 2016**

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)		
Penrhyn	5%	608	5%	1027	90%		
Rarotonga	76%	543	9%	719	15%		

Summary Statements

Rainfall for October 2015:

In October, both station recorded normal rainfall for the period.

Accumulated rainfall for August to October 2015, including outlook verification:

Penrhyn and Rarotonga rainfall for the period Aug-Oct was below normal.

SCOPIC outlooks verification for the last three months were inconsistent for Penrhyn (good skill) and consistent for Rarotonga (low skill).

Outlooks for December 2015 to February 2016:

1. SCOPIC: Penrhyn seasonal rainfall outlook for Dec15-Feb16 favours above-normal rainfall, with below-normal the next most likely outcome. At Rarotonga, the outlook favours below-normal rainfall, with normal the next most likely outcome. Confidence in the outlooks during this period is exceptional for Penrhyn and moderate for Rarotonga.

2. POAMA: the most likely rainfall outcome for Penrhyn is above normal and below normal for Rarotonga.

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: $X \geq 35$