

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 97

Country Name: Cook Islands

TABLE 1: Monthly Rainfall

Station (include data period)	September 2015						
	July 2015 Total	August 2015 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
Penrhyn (1937-Sep 2015)	32.5	22.4	38.8	73.3	125.3	94	13/76
Rarotonga (1899-Sep 2015)	10.6	52.0	20.1	74	141	106	6/117

**TABLE 2: Three-monthly Rainfall
July to September 2015**

[Please note that the data used in this verification should be sourced from table 3 of OCOF #93]

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	93.7	294.3	472.7	341	4/76	8/21/ 71 (15.6%)	Inconsistent
Rarotonga	82.7	255.7	363.7	296.5	1/117	44 /24/32 (-1.3%)	Consistent

Period: *below normal/normal/above normal

Predictors and Period used for July to September 2015 Outlooks (refer to OCOF #93):

Nino 3.4 Apr- May

* 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
November 2015 to January 2016**

Predictors and Period used: Nino 3.4 Aug-Sep 2015

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
Penrhyn	4%	575	96%		21.5%	68.3%
Rarotonga	81%	582	19%		6.4%	60%

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
Penrhyn	0%	362	13%	744.3	87%	28.2%	58.7%
Rarotonga	71%	503.7	23%	688.3	6%	10.3%	43.1%

**TABLE 4: Seasonal Climate Outlooks using POAMA2 for
November 2015 to January 2016**

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)		
Penrhyn	9%	530	5%	892	86%		
Rarotonga	94%	451	5%	661	1%		

Summary Statements

Rainfall for September 2015:

In September, both station recorded below normal rainfall for the period.

Accumulated rainfall for July to September 2015, including outlook verification:

Penrhyn and Rarotonga rainfall for the period Jul-Sep was below normal. It was the driest July to September in 117 years of record at Rarotonga, while at Penrhyn it was the fourth driest in 76 years of record.

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

Outlooks for November 2015 to January 2016:

1. SCOPIC: Penrhyn seasonal rainfall outlook for Nov15-Jan16 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 very high for Penrhyn and good 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: $X \geq 35$