

## 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	<b>168.0</b>	98	183	142.5	48/77
Rarotonga (1899-Oct 2015)	52.0	20.1	<b>109.7</b>	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	<b>229.2</b>	292.7	440.7	359	14/76	7/19/ <b>74</b> (12.9%)	Inconsistent
Rarotonga	<b>181.8</b>	274.3	391.3	337.5	14/117	<b>61</b> /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:  $X \geq 35$