

## Pacific Islands - Online Climate Outlook Forum (OCOF) No. 112

**Country Name:** COOK ISLANDS

**TABLE 1: Monthly Rainfall**

Station (include data period)	December 2016						
	October 2016 Total	November 2016 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
<b>PENRHYN</b>	96.2	60.2	<b>150.6</b>	108.3	245.8	177	35/79
<b>RAROTONGA</b>	66.1	191.4	<b>250.9</b>	139.7	254.3	190	76/118

**TABLE 2: Three-monthly Rainfall  
October to December 2016**

[Please note that the data used in this verification should be sourced from table 3 of OCOF #108]

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?)
<b>PENRHYN</b>	<b>307</b>	384.7	630	492	20/78	31.9% 30/43/27	Near-consistent
<b>RAROTONGA</b>	<b>508.4</b>	404	544.3	476	65/118	16.8% 26/38/36	Consistent

Period: \*below normal/normal/above normal

Predictors and Period used for October to December 2016 Outlooks (refer to OCOF #108):

### NINO3.4 SST Anomalies June – August 2016

\* 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  
February to April 2017**

**Predictors and Period used: NINO3.4 SST Anomalies October to December 2016**

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
PENRHYN	67	581.7	33		20.2%	72.3%
RAROTONGA	42	663	58		5.8%	59.1%

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
PENRHYN	44	443	32	726	24	16.1%	44.6%
RAROTONGA	25	572	36	726	39	5.8%	43.9%

NOTE: Table 4 has been removed from this document as POAMA rainfall outlooks for the Pacific are currently unavailable.

## **Summary Statements**

### **Rainfall for December 2016:**

During the month of December, rainfall was normal for both the Penrhyn and Rarotonga stations of the Cook Islands.

### **Accumulated rainfall for October to December 2016, including outlook verification:**

Accumulated rainfall for the period of October to December of 2016 was below normal for Penrhyn station and normal at Rarotonga.

SCOPIC outlook verification for the past three months was inconsistent for Penrhyn station and consistent for Rarotonga stations. Skill or confidence in the forecast was very high for Penrhyn and high for Rarotonga.

### **Outlooks for February to April 2017:**

#### **1. SCOPIC:**

Rainfall forecast for the upcoming months of February to April 2017 is biased towards below normal rainfall conditions with normal rainfall conditions being the next most likely for Penrhyn. Meanwhile Rarotonga is forecasted to have above normal for the upcoming months with normal rainfall being the next most likely to occur for Rarotonga.

There is a high confidence in the outlook from the models for Penrhyn, while the confidence in Rarotonga's outlook is moderate.

**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:  $X \geq 35$