

## Pacific Islands - Online Climate Outlook Forum (OCOF) No. 114

**Country Name: COOK ISLANDS**

**TABLE 1: Monthly Rainfall**

Station (include data period)			February 2017				
	December 2016 Total	January 2017 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
<b>PENRHYN</b>	150.6	139.6	<b>300.8</b>	101.1	290.2	193.4	55/79
<b>RAROTONGA</b>	250.9	104.3	<b>286.3</b>	160.0	243.0	212.0	89/119

**TABLE 2: Three-monthly Rainfall  
December 2016 to February 2017**

[Please note that the data used in this verification should be sourced from table 3 of OCOF #110]

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>591.0</b>	425.3	855.7	647.5	35/79	<b>49/37/14</b> 40.6%	Near Consistent
<b>RAROTONGA</b>	<b>641.5</b>	556.7	760.0	673	53/118	<b>24/34/42</b> 9.5%	Near Consistent

Period: \*below normal/normal/above normal

Predictors and Period used for December 2016 to February 2017 Outlooks (refer to OCOF #110): **NINO3.4 SST Anomalies August – October 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 April to June 2017**

**Predictors and Period used: NINO3.4 SST Anomalies Dec 2016 – Feb 2017**

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
PENRHYN	57	383.0	43		14.3%	69.2%
RAROTONGA	44	423.5	56		9.5%	57.6%

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
PENRHYN	38	315	37	526	25	13.8%	47.7%
RAROTONGA	28	373	35	485	37	6.4%	39.4%

**TABLE 4: Seasonal Climate Outlooks using POAMA2 for April to June 2017**

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)		
PENRHYN	21	370	21	576	58		
RAROTONGA	76	403	19	475	5		

## **Summary Statements**

### **Rainfall for February 2017:**

Rainfall for the month of February 2017 was above normal for both Penrhyn and Rarotonga stations.

### **Accumulated rainfall for December 2016 to February 2017, including outlook verification:**

Accumulated rainfall for the period of December 2016 through to the end of February of 2017 was normal at both Penrhyn and Rarotonga stations.

Outlook verification for the past three months was near consistent for both Penrhyn station and Rarotonga station. Penrhyn had exceptional confidence in the forecast and Rarotonga was moderate.

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

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

The rainfall outlook for Penrhyn shows a near-equal likelihood of below-normal or normal, with above-normal the least likely. Meanwhile the Rarotonga outlook offers little guidance for the coming season as the chances of above-normal, normal and below-normal rainfall are similar.

Penrhyn has a good confidence in the outlook from the models and Rarotonga has moderate confidence in the outlook.

#### **2. POAMA:**

Outlook from Poama indicates Above normal rainfall conditions for Penrhyn station, and below normal rainfall forecasted for Rarotonga station.

**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:  $X \geq 35$