

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 108

Country Name: COOK ISLANDS

TABLE 1: Monthly Rainfall

Station (include data period)	August 2016						
	June 2016 Total	July 2016 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
PENRHYN	478.6	276.4	124.6	79.5	152.5	117.5	44/79
RAROTONGA	49.2	136.2	144.8	70.7	124.0	93.0	87/118

TABLE 2: Three-monthly Rainfall June to August 2016

[Please note that the data used in this verification should be sourced from table 3 of OCOF #104]

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	879.6	259.3	538	370.4	71/78	18.4% 2/38/60	Consistent
RAROTONGA	330.2	254	367	298	67/118	-2.9% 43/28/29	Near-consistent

Period: *below normal/normal/above normal

Predictors and Period used for June to August 2016 Outlooks (refer to OCOF #104):
NINO3.4 SST Anomalies February – April 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
October to December 2016**

Predictors and Period used: NINO3.4 SST Anomalies June – August 2016

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
PENRHYN	54	492	46		22.4%	64.6%
RAROTONGA	48	476	52		10.9%	66.7%

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
PENRHYN	30	384.7	43	630	27	31.9%	58.5%
RAROTONGA	26	404	38	544.3	36	16.8%	51.5%

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

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)		
PENRHYN	39.4	467	48.5	766	12.1		
RAROTONGA	15.1	304	30.3	530	54.6		

Summary Statements

Rainfall for August 2016:

Rainfall during the month of August was normal for Penrhyn, and for the first time since 2015 above normal for Rarotonga.

Accumulated rainfall for June to August 2016, including outlook verification:

Accumulated rainfall for the months of June through to the end of August 2016 was normal for Rarotonga, and Penrhyn had above normal rainfall during the same period.

SCOPIC outlook verification for the past three months was consistent for Penrhyn and near-consistent for Rarotonga. Skill or confidence in the forecast was high for Penrhyn but very low for Rarotonga.

Outlooks for October to December 2016:

1. SCOPIC:

The rainfall outlook for the upcoming months of October to December 2016 is biased towards normal rainfall conditions for Penrhyn with below normal the next most likely. There is a near equal chance of normal and above normal rainfall for Rarotonga. There is a very high confidence in the models for Penrhyns outlook and high confidence for Rarotonga.

2. POAMA:

POAMA favours above normal rainfall conditions for Rarotonga and normal rainfall is forecasted for Penrhyn.

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: $X \geq 35$