

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 106

Country Name: COOK ISLANDS

TABLE 1: Monthly Rainfall

Station (include data period)	June 2016						
	April 2016 Total	May 2016 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
RAROTONGA	52.3	57.0	49.2	68.0	118.1	96.0	28/118
PENRHYN	125.4	278.6	478.6	97.3	166.1	128.0	77/78

TABLE 2: Three-monthly Rainfall April to June 2016

[Please note that the data used in this verification should be sourced from table 3 of OCOF #102]

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?)
RAROTONGA	158.5	373.0	487.7	424.0	6/118	86 /10/4 (17.4%)	Consistent
PENRHYN	882.6	314.0	520.9	381.0	72/78	9/13/ 78 (10.9%)	Consistent

Period: *below normal/normal/above normal

Predictors and Period used for April to June 2016 Outlooks (refer to OCOF #102):

NINO3.4 SST Anomalies December 2015 – February 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 August to October 2016

Predictors and Period used: NINO3.4 (April - June)

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
RAROTONGA	54.9%	337.0	45.1%		-1.2%	56.1%
PENRHYN	17.4%	357.2	82.6%		16.6%	64.1%

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
RAROTONGA	51.9%	270.7	16.7%	388.7	31.4%	1.5%	50.0%
PENRHYN	12.8%	293.0	19.5%	440.0	67.6%	11.7%	46.9%

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

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)		
RAROTONGA	75.8%	251	15.2%	372	9.0%		
PENRHYN	24.2%	308	21.2%	473	54.6%		

Summary Statements

Rainfall for June 2016:

Above normal rainfall was recorded for Penrhyn, and Rarotonga had below normal rainfall.

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

Penrhyn had above normal rainfall for the period of April to June 2016, and Rarotonga had accumulated well below normal rainfalls for the same period.

SCOPIC outlook for the last three months was consistent for both Cook Island stations with Low skill level for Rarotonga and Good skill for Penrhyn.

Outlooks for August to October 2016:

1. SCOPIC:

Penrhyn forecast is biased towards Above normal rainfall conditions for August through to the end of October, with normal rainfall proving to be the next most likely outcome. Rainfall outlook for Rarotonga is biased towards below normal conditions and above normal is the next most likely outcome. There is a good confidence for Penrhyn outlook, and low skill for Rarotonga.

2. POAMA:

Penrhyn favours above normal rainfall conditions and Rarotonga favours below normal rainfall.

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: $X \geq 35$