Pacific Islands - Online Climate Outlook Forum (OCOF) No. 107

Country Name: COOK ISLANDS

TABLE 1: Monthly Rainfall

Station (include data period)	May 2016 Total	June 2016 Total	July 2016				
			Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
RAROTONGA	57.0	49.2	**136.2**	58.0	121.0	88.0	86/118
PENRHYN	278.6	478.6	**276.4**	79.0	156.0	116.0	73/80

TABLE 2: Three-monthly Rainfall
May to July 2016
[Please note that the data used in this verification should be sourced from table 3 of OCOF #103]

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	**242.4**	373.0	487.7	424.0	22/118	**86**/10/4 17.4%	Consistent
PENRHYN	**1033.6**	314.0	520.9	381.0	76/77	9/13/**78** 10.9%	Consistent

Period:*below normal/normal/above normal

Predictors and Period used for May to July 2016 Outlooks (refer to OCOF #103):
NINO3.4 SST Anomalies January – March 2016

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* Forecast is <u>consistent</u> when observed and predicted (tercile with the highest probability) categories coincide (are in the same tercile).
Forecast is <u>near-consistent</u> 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 <u>inconsistent</u> 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 September to November 2016

Predictors and Period used: NINO3.4 SST Anomalies May – July 2016

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
RAROTONGA	56%	358.0	44%		1.9%	57.6%
PENRHYN	26%	389.9	74%		35.6%	73.4%

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	66%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
RAROTONGA	41%	298.7	32%	431.7	27%	5.3%	39.4%
PENRHYN	15%	323.0	35%	488.0	50%	31.9%	56.2%

TABLE 4: Seasonal Climate Outlooks using POAMA2 for September to November 2016

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	66%ile rainfall (mm)	Upper Tercile (prob)		
RAROTONGA	52%	297.0	9%	404.0	39%		
PENRHYN	43%	325.0	24%	643.0	33%		

Summary Statements

Rainfall for July 2016:
Both Penrhyn and Rarotonga stations experienced above normal rainfall during the month of July 2016.

Accumulated rainfall for May to July 2016, including outlook verification:
Accumulated rainfall for the months of May through to July 2016 was below normal for Rarotonga, and Penrhyn had above normal rainfall during the same period.

SCOPIC outlook verification for the past three months was consistent for both Penrhyn and Rarotonga. Skill confidence was high for Penrhyn and good for Rarotonga.

Outlooks for September to November 2016:
1. SCOPIC:
Penrhyn forecast is biased towards Above normal rainfall conditions for September through to the end of November, with normal rainfall proving to be the next most likely outcome. Rainfall outlook for Rarotonga is biased towards below normal conditions with normal being the next most likely outcome. The confidence of the models is very high for Penrhyn's outlook and moderate for Rarotonga's outlook.

2. POAMA:

POAMA forecasts favours below normal rainfall conditions in the coming months for both Penrhyn and Rarotonga stations.

NB: The X LEPS % score has been categorised as follows:

Very Low: X < 0.0   Low: 0 ≤ X < 5   Moderate 5 ≤ X < 10   Good: 10 ≤ X < 15   High: 15≤ X < 25

Very High: 25 ≤X < 35   Exceptional: X ≥ 35