Pacific Islands - Online Climate Outlook Forum (OCOF) No. 120

Country Name: COOK ISLANDS

TABLE 1: Monthly Rainfall

Station (include data period)			August 2017				
	June 2017 Total	July 2017 Total	Total	33%tile Rainfall (mm)	67%tile Rainfall (mm)	Median Rainfall (mm)	Ranking
PENRHYN	70.0	42.4	**25.2**	78.3	150.1	117.5	4/80
RAROTONGA	77.7	45.3	**31.6**	70.3	125.0	93.0	10/119

TABLE 2: Three-monthly Rainfall
June to August 2017
[Please note that the data used in this verification should be sourced from table 3 of OCOF #116]

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	**137.6**	261.5	540.7	383.8	8/79	18/36/**46** 13.4%	Inconsistent
RAROTONGA	**154.6**	254.0	365.0	298.5	10/119	34/**36**/32 -1.4%	Near-consistent

Period:*below normal/normal/above normal

Predictors and Period used for June to August 2017 Outlooks (refer to OCOF #116):

NINO3.4 SST Anomalies March – April 2017

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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 October to December 2017

Predictors and Period used: NINO3.4 SST Anomalies July – August 2017

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS	Hit-rate
PENRHYN	50	489.5	50		21.3%	66.7%
RAROTONGA	50	481.5	50		11.6%	67.2%

Station	Below Normal (prob)	33%ile rainfall (mm)	Normal (prob)	67%ile rainfall (mm)	Above Normal (prob)	LEPS	Hit-rate
PENRHYN	26	379	44	627	30	29.9%	56.1%
RAROTONGA	28	405	38	544	34	17.9%	49.3%

TABLE 4: Seasonal Climate Outlooks using POAMA2 for October to December 2017

Station	Lower Tercile (prob)	33%ile rainfall (mm)	Middle Tercile (prob)	67%ile rainfall (mm)	Upper Tercile (prob)		
PENRHYN	49	467	30	766	21		
RAROTONGA	24	304	12	530	64		

Summary Statements

Rainfall for August 2017:

Rainfall for August 2017 was below normal for both Cook Island stations, with this being the 4th driest August in Penrhyn's historical record.

Accumulated rainfall for June to August 2017, including outlook verification:

Accumulated rainfall for the period of June through to the end of August 2017 was also below normal for both Cook Island stations.

SCOPIC outlook verification for the past three months was inconsistent for Penrhyn and near consistent for Rarotonga. Skill/confidence in the forecast was good at Penrhyn but very low for Rarotonga.

Outlooks for October to December 2017:

1. SCOPIC:

Rainfall forecast for Penrhyn for the upcoming months of October to December 2017 indicates normal rainfall as the most likely outcome with above normal being the next most likely to occur. Below normal is the least likely. Rarotonga's outlook offers little guidance as the chance of above normal, normal and below normal are similar.

Confidence in the outlook is very high at Penrhyn.

2. POAMA:

Outlook from POAMA indicates below normal rainfall is the most likely outcome for Penrhyn, while Rarotonga is favouring the polar opposite of above normal rainfall for its outcome.

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