

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 157

Country: Cook Islands

TABLE 1: Monthly Rainfall

Station (include data period)	Jul-2020	Aug-2020	Sep-2020				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Penrhyn (1937-2020)	132.6	92.0	56.6	73.8	137.0	111.4	22/82
Rarotonga (1899-2020)	155.3	181.2	90.1	69.2	118.0	88.0	58/122

TABLE 2: Three-month Rainfall for July to September 2020

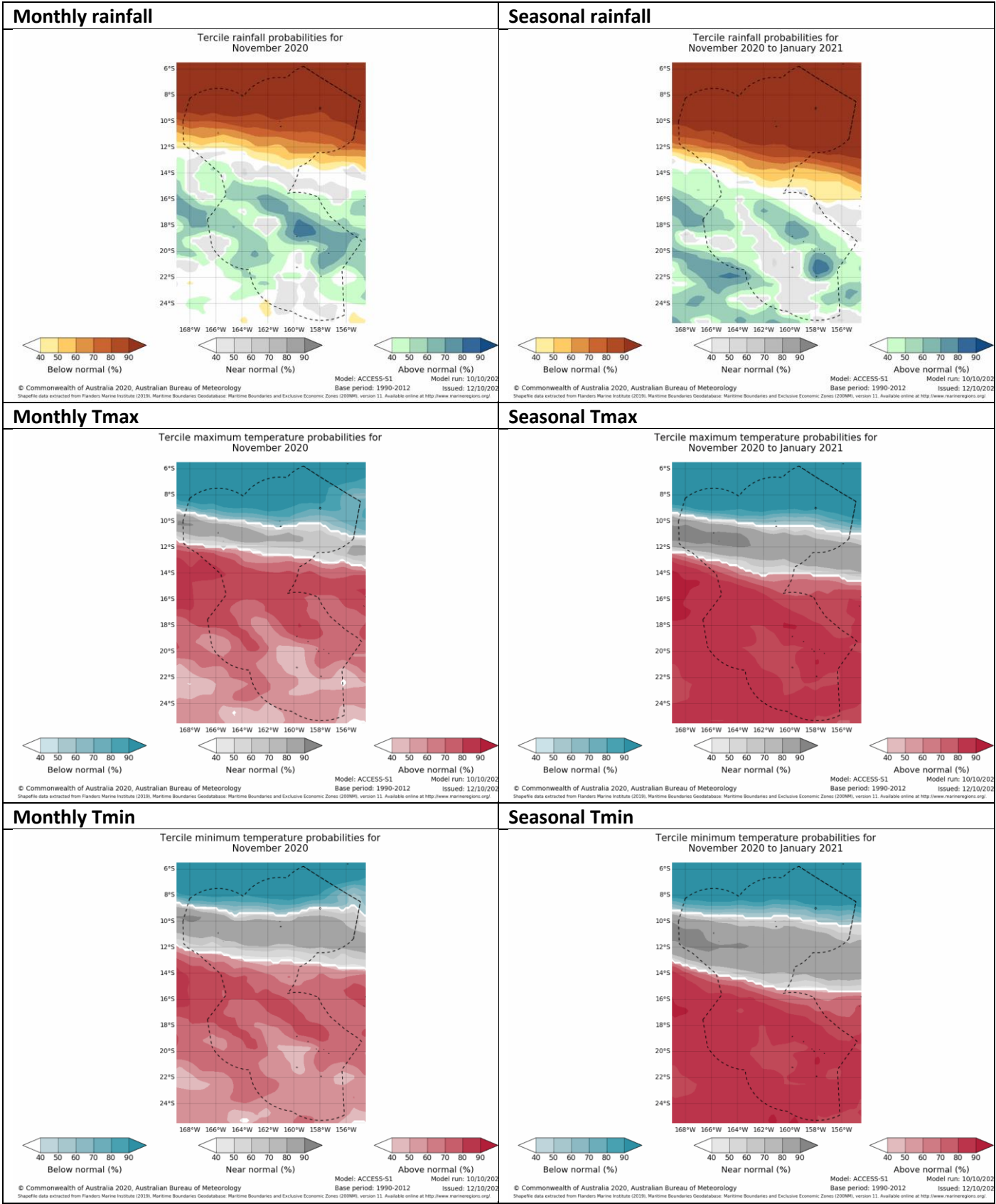
Station	Three-month Total		33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities based on NINO3.4 April-May 2020				Verification: Consistent, Near- consistent, Inconsistent?
	Rainfall (mm)						B-N	N	A-N	LEPS	
Penrhyn (1937-2020)	281.2	Below normal	294.3	439.9	341.0	26/82	28	32	40	9	Inconsistent
Rarotonga (1899-2020)	426.6	Above normal	250.0	348.0	293.0	91/122	35	32	33	-1	Inconsistent

TABLE 3: Seasonal Climate Outlooks using SCOPIC for November 2020 to January 2021
Predictor and Period used: NINO3.4 for August to September 2020

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Penrhyn (1937-2020)	68	592.2	32		20	67
Rarotonga (1899-2020)	40	581.5	60		8	60

Station	Below Normal (prob)	33%ile Rainfall (mm)	Normal (prob)	67%ile Rainfall (mm)	Above Normal (prob)	LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Penrhyn (1937-2020)	48	409.0	38	763.6	14	24	59
Rarotonga (1899-2020)	23	502.0	34	686.6	43	13	46

TABLE 4: Monthly and Seasonal Climate Outlooks using ACCESS-S for November 2020 to January 2021



Summary Statements

Rainfall for September 2020:

Rainfall for September 2020 was below normal for Penrhyn and normal for Rarotonga.

Accumulated rainfall for July to September 2020, including outlook verification:

Accumulated rainfall for the period of July to September 2020 was below normal for Penrhyn and above normal for Rarotonga.

The verification of the outlook issued in June was inconsistent for both stations.

Outlooks for November 2020 to January 2021:

1. SCOPIC:

The rainfall outlook for Penrhyn shows below normal rainfall as the most likely, with normal being the next most likely. Rarotonga's outlook shows above normal rainfall as the most likely outcome and normal rainfall as the next most likely; below normal is the least likely.

Forecast confidence is high for Penrhyn and good skill for Rarotonga.

2. ACCESS-S:

Monthly rainfall:

The November outlook for Penrhyn favours below normal rainfall (90% chance), but at Rarotonga the outlook offers little guidance. Above normal rainfall is the favoured or most likely outcome for the central Cook Islands in November.

Seasonal rainfall:

For the November 2020 – January 2021 period, the outlook favours below normal rainfall over the northern Cook Islands, including Penrhyn, and above normal rainfall over parts of the central and southern Cook Islands region. In other areas of the southern Cook Is, including Rarotonga, the outlook shows near-normal rainfall as the most likely outcome.

Monthly maximum and minimum temperatures:

Over the southern three-quarters of the Cook Islands, including Rarotonga, above normal temperatures are favoured during November, but over northern areas, normal to below normal temperatures are favoured. The outlook for Penrhyn favours below normal maximum temperatures and near-normal minimum temperatures.

Seasonal maximum and minimum temperatures:

The seasonal temperature outlook pattern is very similar to the monthly pattern: below-normal temperatures are favoured for Penrhyn, while Rarotonga sits in a large area where above normal maximum and minimum temperatures are favoured for the coming three months.

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: $X \geq 35$

TABLE 5: Stakeholder Engagement- Evaluations of how effective NMS engage with stakeholders

Product	Date: September 2020	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin					
EAR Watch					
Monthly Climate Briefing					
Ocean Bulletin					
Total					