

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 163

Country: Cook Islands

TABLE 1: Monthly Rainfall

Station (include data period)	Jan-2021	Feb-2021	Mar-2021				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
Penrhyn (1937-2021)	83.4	85.8	81.0	145.3	270.9	210.0	13/83
Rarotonga (1899-2021)	58.2	551.7	95.4	140.0	248.0	196.0	21/123

TABLE 2: Three-month Rainfall for January to March 2021

Station	Three-month Total		33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities based on NINO3.4 October-November 2020				Verification: Consistent, Near-consistent, Inconsistent?
	Rainfall (mm)						B-N	N	A-N	LEPS	
Penrhyn (1937-2021)	250.2	Below normal	497.5	830.8	654.0	4/83	71	22	7	31	Consistent
Rarotonga (1899-2021)	705.3	Normal	536.3	741.4	649.0	62/123	19	39	42	5	Near-consistent

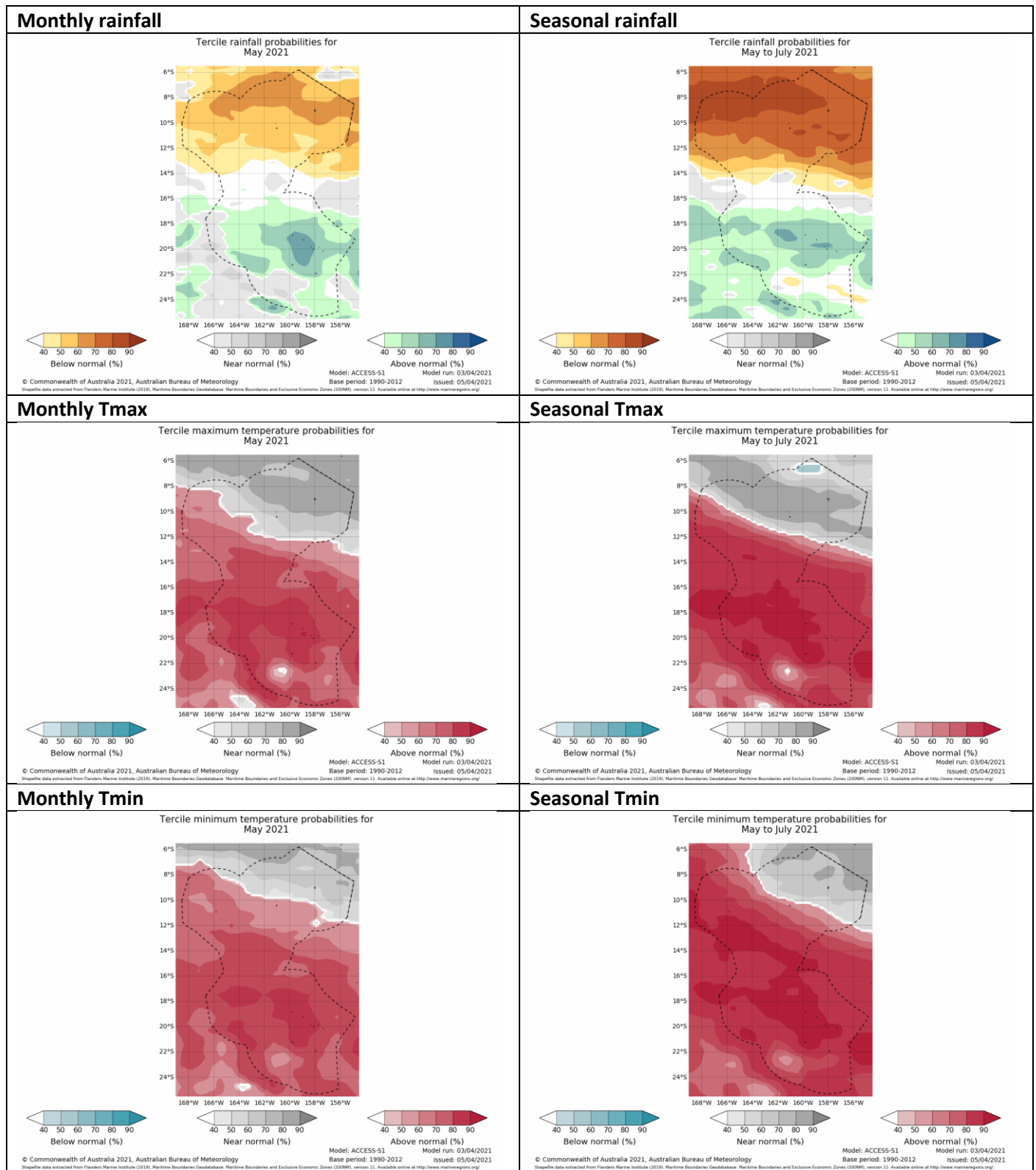
TABLE 3: Seasonal Climate Outlooks using SCOPIC for May to July 2021

Predictor and Period used: NINO3.4 for February to March 2021

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Penrhyn (1937-2021)	69	350.4	31		13	67
Rarotonga (1899-2021)	42	340.0	58		1	55

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 (1937-2021)	54	290.0	32	486.4	14	16	50
Rarotonga (1899-2021)	24	303.0	29	390.3	47	5	35

TABLE 4: Monthly and Seasonal Climate Outlooks using ACCESS-S for May to July 2021



Summary Statements

Rainfall for March 2021:

Rainfall for March was below normal for both Penrhyn and Rarotonga stations.

Accumulated rainfall for January to March 2021, including outlook verification:

Accumulated rainfall for this period was significantly below normal for Penrhyn, and normal for Rarotonga. It was the fourth driest Jan – Mar period in Penrhyn's 83 years of record.

The verification of the outlook issued in December was consistent for Penrhyn and near-consistent for Rarotonga.

Outlooks for May to July 2021:

1. SCOPIC:

The rainfall outlook for Penrhyn favours below normal rainfall. For Rarotonga, the outlook shows above normal rainfall as the most likely outcome, with normal the next most likely. Below normal is the least likely.

Forecast confidence is high for Penrhyn and moderate for Rarotonga.

2. ACCESS-S:

Monthly rainfall:

The May outlook for the Cook Islands favours below normal across most of the northern part of the country, including Penrhyn. Over the remaining southern part of the country, the outlook shows a mix of areas where above normal or near-normal is the most likely. Rarotonga is situated in an above normal area.

Seasonal rainfall:

For the May - July 2021 period, the outlook also favours below normal rainfall over the northern Cook Islands, including Penrhyn, while above normal rainfall is favoured across most of the southern half of the country, including Rarotonga.

Monthly maximum and minimum temperatures:

Over the central and southern Cook Islands, including Rarotonga, above normal maximum and minimum temperatures are favoured during May, but over the far northern Cook Islands, including at Penrhyn, near-normal temperatures are favoured.

Seasonal maximum and minimum temperatures:

The seasonal temperature outlook pattern is very similar to the monthly pattern: near-normal temperatures are favoured over the far northern part of the country, including 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: March 2021	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin		Ministry of Transport	28	18	10
EAR Watch		C.I Govt and NGO's (Red Cross Cook Islands)			
Monthly Climate Briefing					
Ocean Bulletin					
Total			28	18	10