

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 164

Country: Cook Islands

TABLE 1: Monthly Rainfall

Station (include data period)	Feb-2021	Mar-2021	Apr-2021				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
Penrhyn (1937-2021)	85.8	81.0	83.8	104.1	184.7	130.0	24/82
Rarotonga (1899-2021)	551.7	95.4	276.1	142.0	243.3	195.0	98/123

TABLE 2: Three-month Rainfall for February to April 2021

Station	Three-month Total		33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities based on NINO3.4 November-December 2020				Verification: Consistent, Near- consistent, Inconsistent?
	Rainfall (mm)						B-N	N	A-N	LEPS	
Penrhyn (1937-2021)	250.6	Below normal	467.2	726.7	584.4	7/81	58	22	20	15	Consistent
Rarotonga (1899-2021)	923.2	Above normal	540.3	691.2	630.0	113/123	20	39	41	5	Consistent

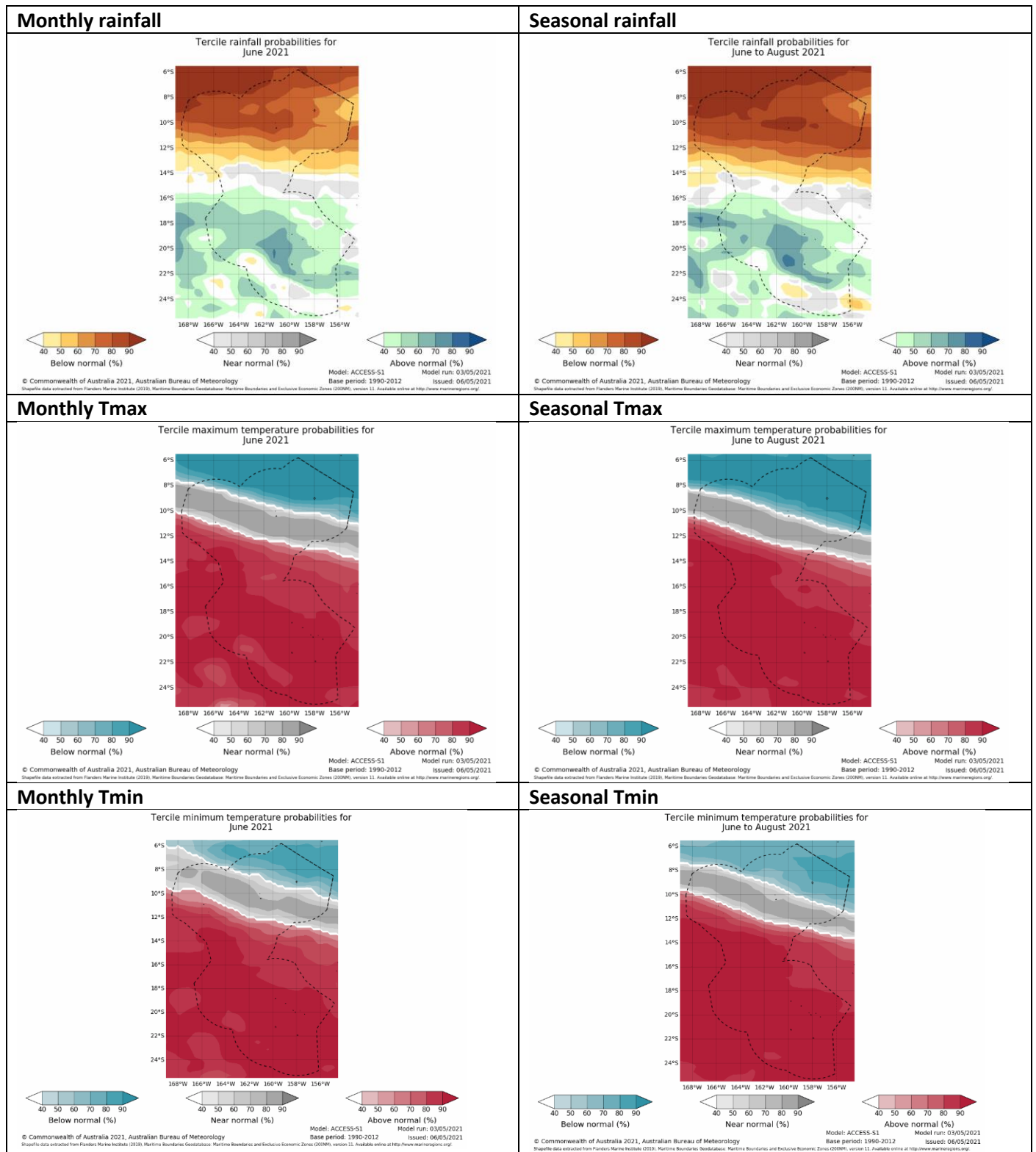
TABLE 3: Seasonal Climate Outlooks using SCOPIC for June to August 2021

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

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Penrhyn (1937-2021)	72	360.3	28		16	67
Rarotonga (1899-2021)	45	300.0	55		0	54

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)	52	257.0	30	530.0	18	13	40
Rarotonga (1899-2021)	31	247.0	31	364.5	38	0	34

TABLE 4: Monthly and Seasonal Climate Outlooks using ACCESS-S for June to August 2021



Summary Statements

Rainfall for April 2021:

Rainfall for April was below normal for Penrhyn and above normal for Rarotonga.

Accumulated rainfall for February to April 2021, including outlook verification:

Accumulated rainfall for this period was significantly below normal for Penrhyn, and above normal for Rarotonga. Penrhyn had its seventh driest February to April period on record, while Rarotonga had its eleventh wettest.

The verification of the outlook issued in January was consistent for both Penrhyn and Rarotonga.

Outlooks for June to August 2021:

1. SCOPIC:

The rainfall outlook for Penrhyn favours below normal rainfall. The outlook for Rarotonga offers little guidance as the chances of above-normal, normal and below-normal are similar.

Forecast confidence is good for Penrhyn and very low for Rarotonga.

2. ACCESS-S:

Monthly rainfall:

The **June** 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 **June - August** 2021 period, the outlook also favours below normal rainfall over the northern Cook Islands, including Penrhyn, while above normal rainfall is favoured across 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 June, but over the far northern Cook Islands, including at Penrhyn, below normal temperatures are favoured.

Seasonal maximum and minimum temperatures:

The seasonal temperature outlook pattern is very similar to the monthly pattern: below 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: April 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	18