

## Pacific Islands - Online Climate Outlook Forum (OCOF) No. 162

Country: Cook Islands

**TABLE 1: Monthly Rainfall**

Station (include data period)	Dec-2020	Jan-2021	Feb-2021				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Penrhyn (1937-2021)	13.0	83.4	85.8	122.0	298.2	234.8	20/83
Rarotonga (1899-2021)	76.8	58.2	551.7	153.7	240.3	207.0	123/123

TABLE 2: Three-month Rainfall for December 2020 to February 2021

Station	Three-month Total		33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities based on NINO3.4 September-October 2020				Verification: Consistent, Near- consistent, Inconsistent?
	Rainfall (mm)						B-N	N	A-N	LEPS	
Penrhyn (1937-2021)	182.2	Below normal	528.0	879.0	647.5	5/83	65	26	9	31	Consistent
Rarotonga (1899-2021)	686.7	Normal	553.0	744.0	653.0	64/123	20	32	48	10	Near-consistent

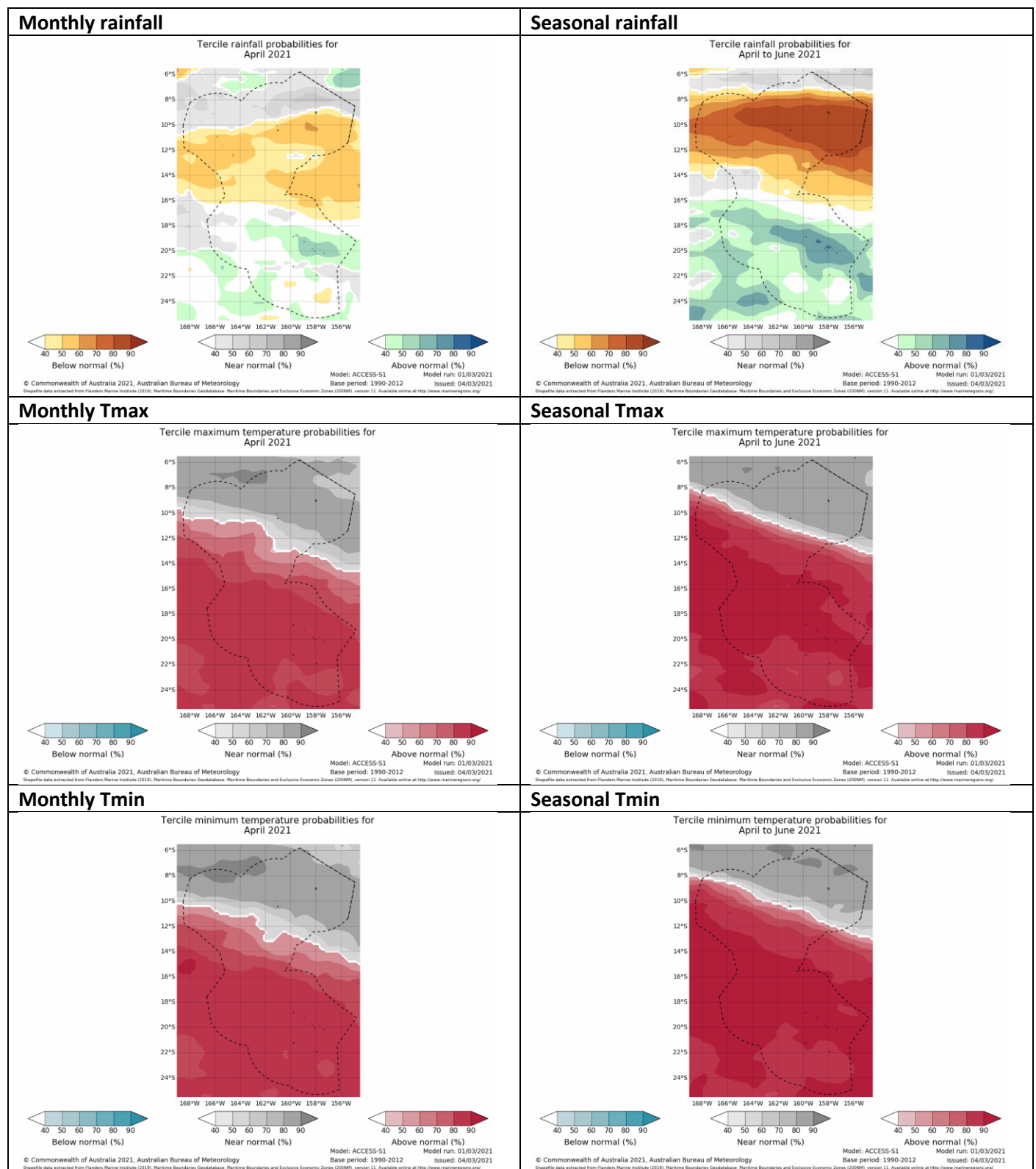
**TABLE 3: Seasonal Climate Outlooks using SCOPIC for April to June 2021**

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

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Penrhyn (1937-2021)	72	400.7	28		16	68
Rarotonga (1899-2021)	36	424.0	64		7	58

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)	48	318.1	37	529.3	15	12	46
Rarotonga (1899-2021)	21	384.8	37	482.0	42	5	42

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



## **Summary Statements**

### **Rainfall for February 2021:**

Rainfall for February was below normal for Penrhyn and above normal for Rarotonga. This was the wettest February at Rarotonga in 123 years of record. The previous record was 509mm in 1934.

### **Accumulated rainfall for December 2020 to February 2021, including outlook verification:**

Accumulated rainfall for this period was significantly below normal for Penrhyn, and normal for Rarotonga. It was the fifth driest Dec – Feb period on record at Penrhyn (83 years of record).

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

### **Outlooks for April to June 2021:**

#### **1. SCOPIC:**

The rainfall outlook for Penrhyn shows below normal rainfall as most likely outcome, with normal the next most likely. Above normal is the least likely. The reverse is true for Rarotonga where 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 good for Penrhyn and low for Rarotonga.

#### **2. ACCESS-S:**

### **Monthly rainfall:**

The April 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 little guidance is the most likely. Rarotonga is situated in a little guidance area.

### **Seasonal rainfall:**

For the April - June 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 April, 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**

<b>Product</b>	<b>Date: February 2021</b>	<b>Stakeholder</b>	<b>Total Number of Participants</b>	<b>Number of male</b>	<b>Number of female</b>
Climate Bulletin		Ministry of Transport	30	20	10
EAR Watch		Cook Island Govt.	?	?	?
Monthly Climate Briefing					
Ocean Bulletin					
<b>Total</b>			<b>30</b>	<b>20</b>	<b>10</b>