Pacific Islands - Online Climate Outlook Forum (OCOF) No. 166

Country: Cook Islands

TABLE 1: Monthly Rainfall

Station (include data period)	Apr-2021	May-2021	Jun-2021				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Penrhyn (1937-2021)	83.8	22.8	85.6	101.0	167.8	129.2	24/83
Rarotonga (1899-2021)	276.1	345.7	266.3	61.7	113.7	87.2	**119/123**

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

Station	Three-month Total		33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities based on NINO3.4 January - February 2021				Verification: Consistent, Near-consistent, Inconsistent?
	Rainfall (mm)						B-N	N	A-N	LEPS	
Penrhyn (1937-2021)	192.2	Below normal	318.1	529.3	400.7	**8/81**	**48**	37	15	12	Consistent
Rarotonga (1899-2021)	888.1	Above normal	384.8	482.0	424.0	**121/123**	21	37	**42**	5	Consistent

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

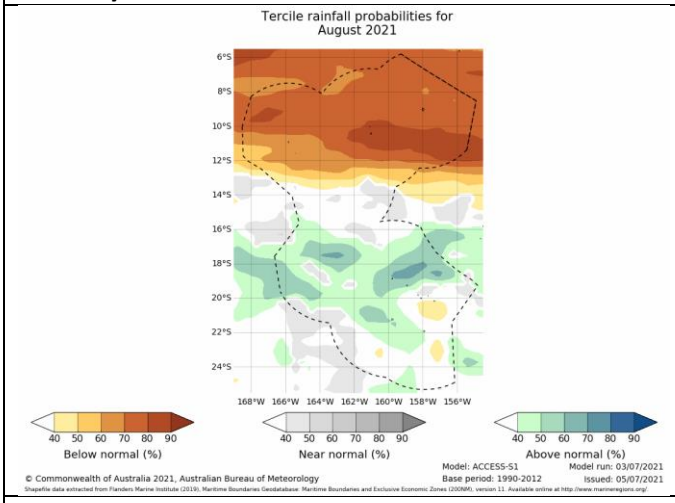
Predictor and Period used: NINO3.4 for May to June 2021

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Penrhyn (1937-2021)	54	335.0	46		9	65
Rarotonga (1899-2021)	42	315.1	58		3	58

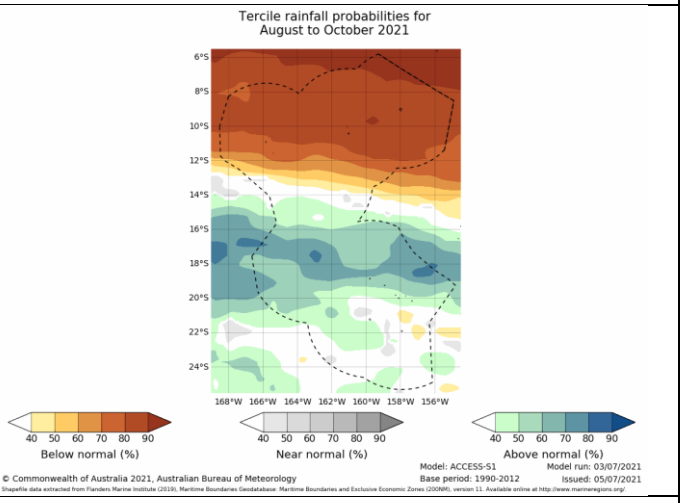
Station	Below Normal (prob)	33%ile Rainfall (mm)	Normal (prob)	67%ile Rainfall (mm)	Above Normal (prob)	LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Penrhyn (1937-2021)	36	291.3	36	422.7	28	6	29
Rarotonga (1899-2021)	29	253.0	36	373.7	35	3	39

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

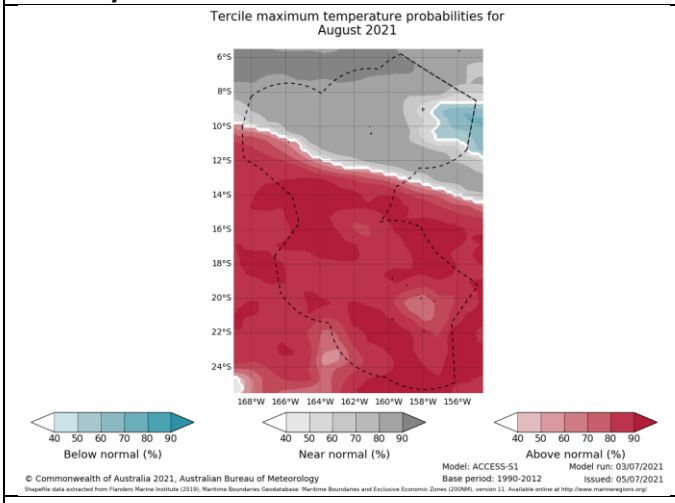
Monthly rainfall



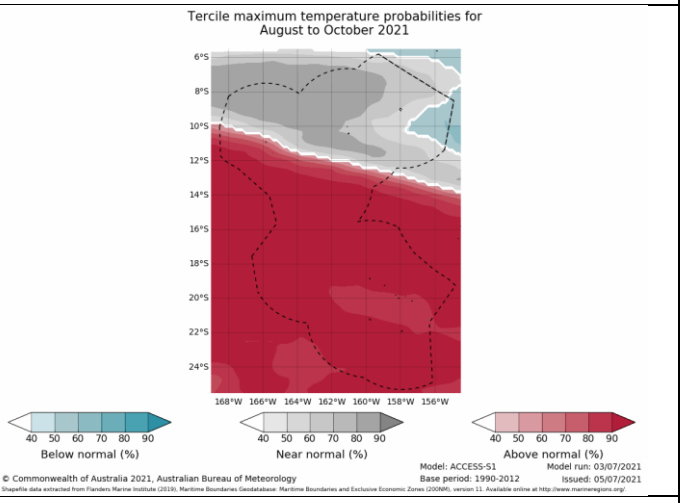
Seasonal rainfall



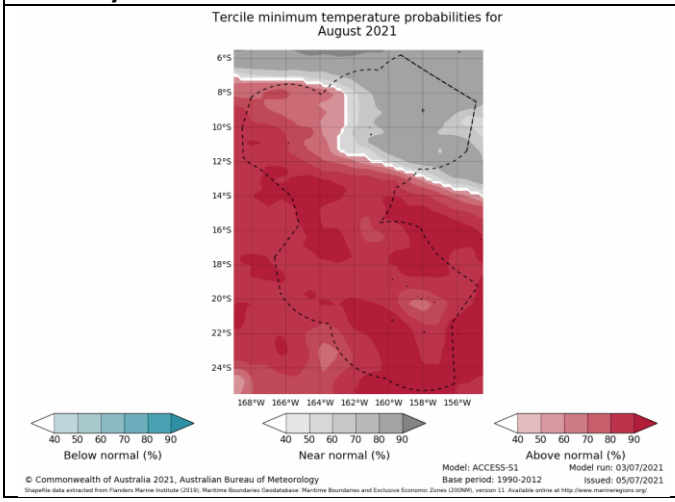
Monthly Tmax



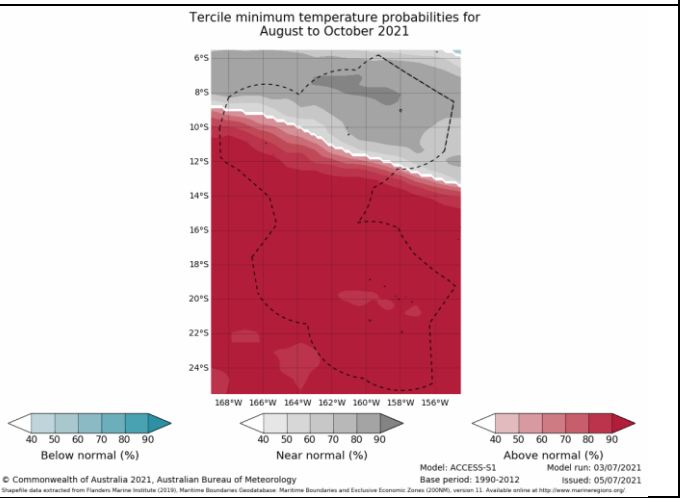
Seasonal Tmax



Monthly Tmin



Seasonal Tmin



Summary Statements

Rainfall for June 2021:

Rainfall for June was below normal for Penrhyn and above normal for Rarotonga.This was the fifth wettest June on record for Rarotonga.

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

Accumulated rainfall for this period was significantly below normal for Penrhyn, and above normal for Rarotonga. This was the third wettest April to June period on record and eight driest for Penrhyn.

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

Outlooks for August to October 2021:

1. SCOPIC:

The rainfall outlook for Penrhyn offers little guidance as the chances of above normal, normal and below normal are similar. This is also true for Rarotonga's outlook.

Forecast confidence is moderate for Penrhyn and low for Rarotonga.

2. ACCESS-S:

Monthly rainfall:

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

Seasonal maximum and minimum temperatures:

The seasonal temperature outlook pattern is very similar to the monthly pattern: 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: June 2021	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin		Ministry of Transport	30	12	18
EAR Watch		C.I Govt. Public (Website & Social media)	?	?	?
Monthly Climate Briefing		Climate change	10	6	4
Ocean Bulletin					
		Total	**40**	**18**	**22**