Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 178

Country: Cook Islands

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Apr-2022	May-2022	Jun-2022				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Penrhyn (1937-2022)	206.2	173.9	252.2	98.3	166.1	128.0	75/84
Rarotonga (1899-2022)	145.0	213.4	64.2	62.3	114.0	88.6	40/124

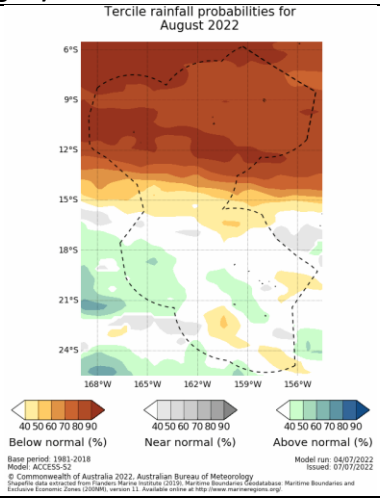
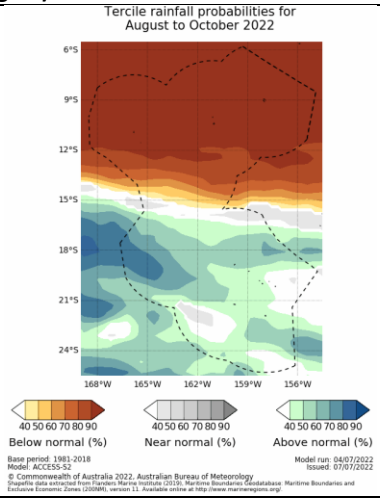
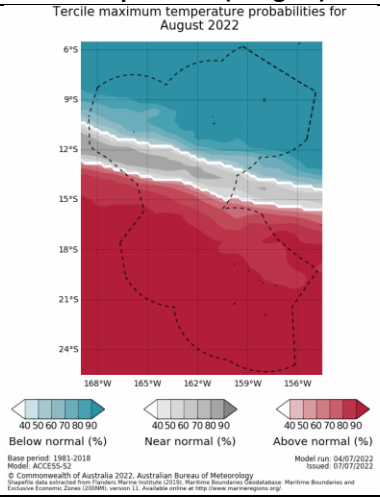
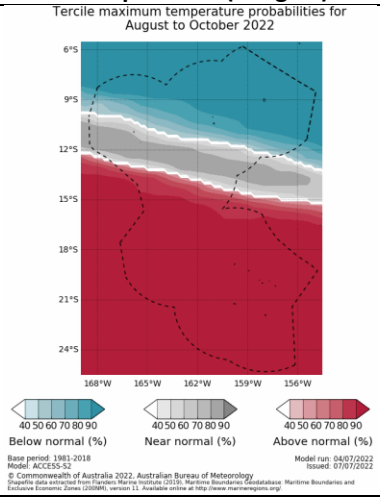
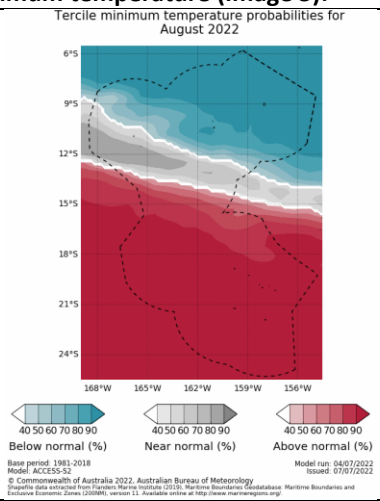
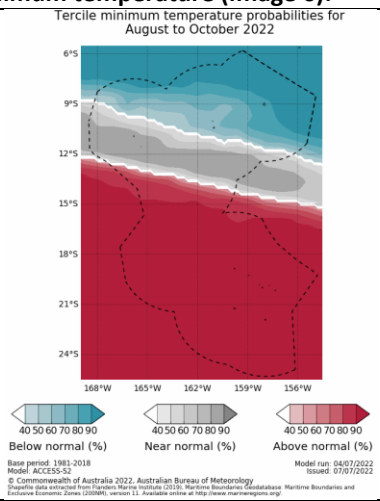
TABLE 2: Three-month Total Rainfall for April to June 2022

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Penrhyn (1937-2022)	632.3	Above normal	315.0	526.0	394.3	66/82
Rarotonga (1899-2022)	422.6	Normal	386.9	483.7	426.5	60/123

NB: The X LEPS % score has been categorised as follows:

Very Low: X < 0.0 Low: 0 ≤ X < 5 Moderate 5 ≤ X < 10 Good: 10 ≤ X < 15 High: 15≤ X < 25 Very High: 25 ≤X < 35 Exceptional: X ≥ 35

Part 1i. Monthly and Seasonal Outlooks for August and August to October 2022

Monthly: August	Seasonal: August to October
Rainfall (Image 1)	**Rainfall (Image 2)**
	
Monthly Maximum temperature (Image 3):	**Seasonal maximum temperature (Image 4):**
	
Monthly minimum temperature (Image 5):	**Seasonal minimum temperature (Image 6):**
	

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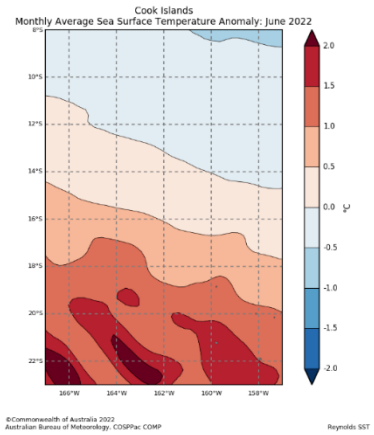
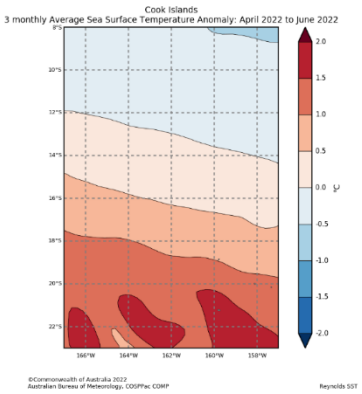
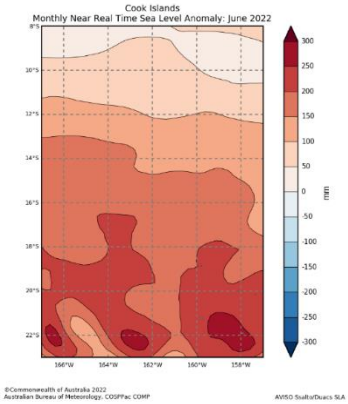
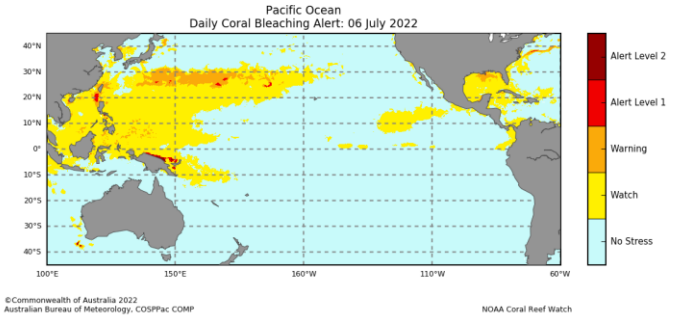
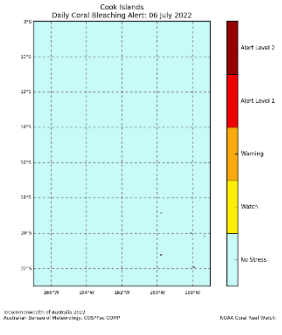
Part 2: Recent Ocean observations

Monthly: June 2022

Monthly: June	Last three months: April to June 2022:
Sea Surface Temperature (Image 1):	**Sea Surface Temperature (Image 4):**
	
Sea level (Image 2):	
	
Daily coral bleaching alert (Image 3):	
	

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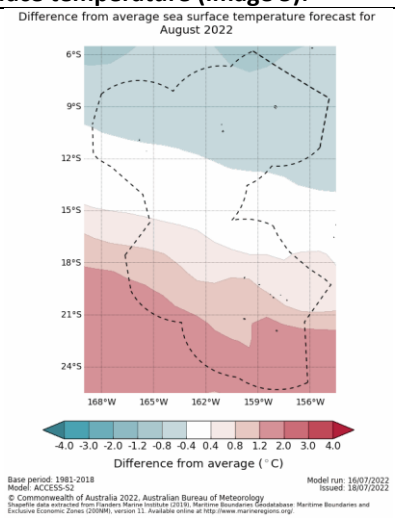
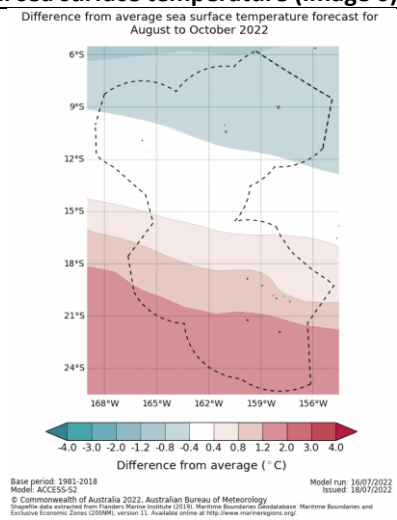
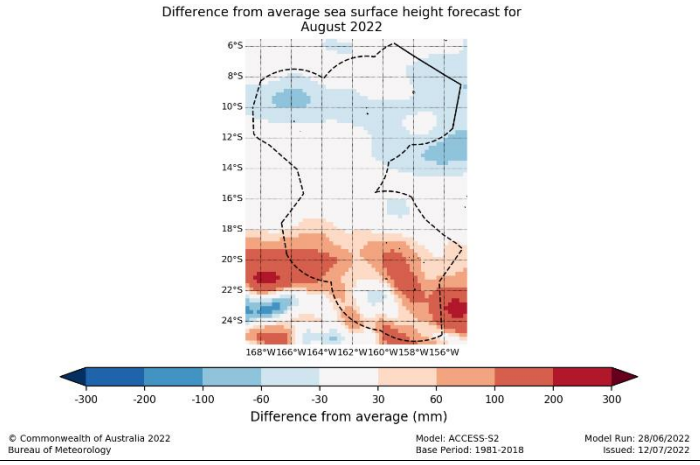
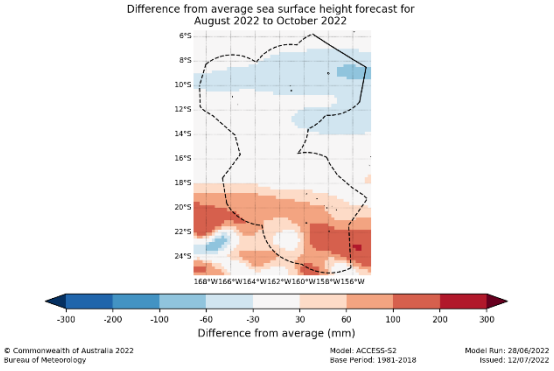
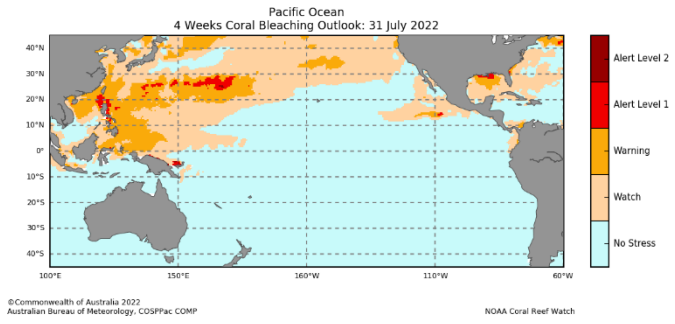
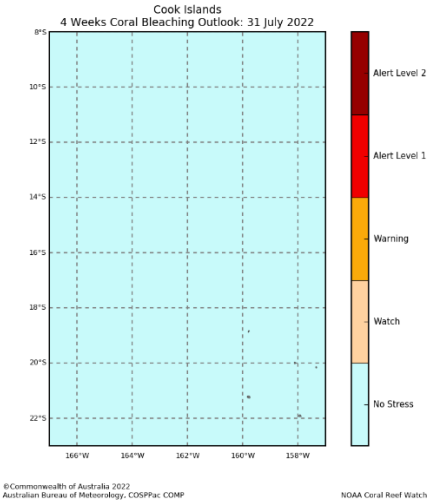
Part 2i. Monthly and Seasonal Outlooks for August and August to October 2022

Monthly: August	Seasonal: August to October
Monthly sea surface temperature (Image 5):	**Seasonal sea surface temperature (Image 6):**
	
Monthly sea level (Image 7):	**Seasonal sea level (Image 8):**
	
4-week Coral Bleaching (Image 9):	
	

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Summary Statement

Monthly and last three months: June 2022/April to June 2022 statement *(Highly significant changes)*

Above normal rainfall was recorded at Penrhyn in June and April to June, while Rarotonga recorded normal rainfall for both periods.

Part 1i. Monthly and Seasonal Outlooks for August and August to October 2022

Monthly /Seasonal rainfall and temperature Outlook statements *(Highly significant changes)*

The rainfall outlook for the next month and three months shows rainfall is very likely to be below normal over the northern Cook Islands, including Penrhyn.

Across the southern Cooks, the ACCESS August outlook is mixed, with large areas of "no clear signal" as well as patches showing both above and below normal falls as most likely. Rarotongais in a region where above normal is most likely. For August to October, the outlook shows that above normal rainfall is likely to very likely over the southern half of the Cook Islands.

The temperature outlook patterns are similar for August and August to October, with below normal maximum and minimum temperatures very likely over the northern Cook Islands, including Penrhyn, and above normal very likely for all Southern Cooks, including Rarotonga. A narrow zone where normal is most likely separates the two main regions.

Part 2: Recent Ocean summary statement

Monthly and last three months: June/April to June 2022 *(Highly significant changes)*

Sea Surface Temperature statement

In June and April to June, the northern Cook Islands recorded near normal SSTs , while southern Cook Islands experienced significant SST differences of up to 2.0°C above normal..

Sea level statement

Sea level was above normal for all Cook Islands waters in June 2022, grading from about 50 mm above normal in the north to around 250 mm above in the south.

Daily bleaching alert statement

'No stress' coral bleaching alert status was seen for all of Cooks for June 2022.

Part 2i. Monthly and Seasonal Outlooks for August and August to October 2022

Ocean Variable statement *(Highly significant changes)*

Monthly and seasonal sea surface temperature statement

Cook Island SSTs for August and August to October are predicted to be 0.4 to 0.8°C below normal in the north, but 0.4 to 2.0°C above normal in the south, where the anomalies become increasingly positive from central to far southern areas. A narrow region where temperatures are predicted to be within about 0.4 degrees of normal, separate the negative anomalies in the north from the positive anomalies in the south.

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Monthly and seasonal sea level statement

August and August to October sea levels are predicted to be 30 to 60 mm below average in the northern Cook Islands, within 30 mm of average in central regions, and 30 to 200 mm above average over most of the southern Cook Islands.

Coral bleaching outlook statement

No thermal stress for coral bleaching in the next four weeks till 31 July 2022.

TABLE 3: Stakeholder Engagement- Evaluations of how effective NMS engage with stakeholders

Product	Date: June 2022	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin		MoT (Ministry of Transport)	29	17	12
EAR Watch		C.I Govt. Stakeholders and Public	?	?	?
Monthly Climate Briefing		Climate Change	8	2	6
Ocean Outlook					
Climate data request		MMR (Ministry of Marine Resources)	1		1
		Total	**38**	**19**	**19**

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