Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 175

Country: Cook Islands

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Jan-2022	Feb-2022	Mar-2022				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Penrhyn (1937-2022)	423.0	269.0	153.2	144.0	270.3	205.5	33/84
Rarotonga (1899-2022)	430.4	139.9	291.7	137.0	247.0	195.6	84/124

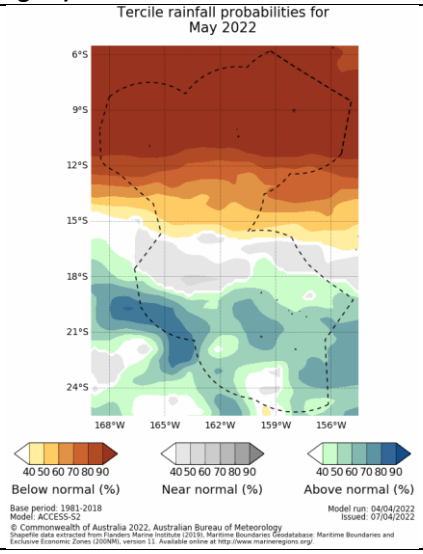
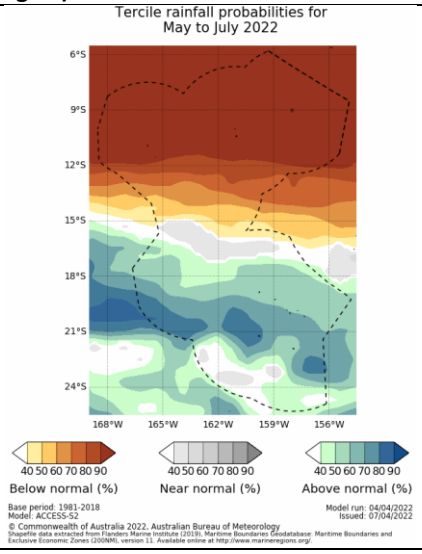
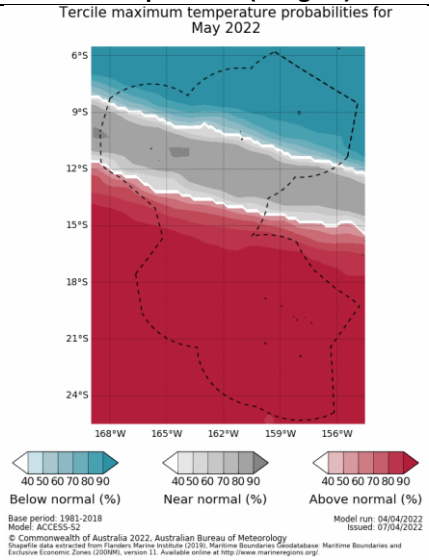
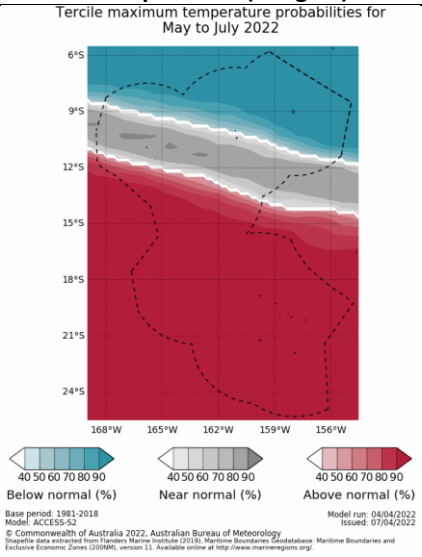
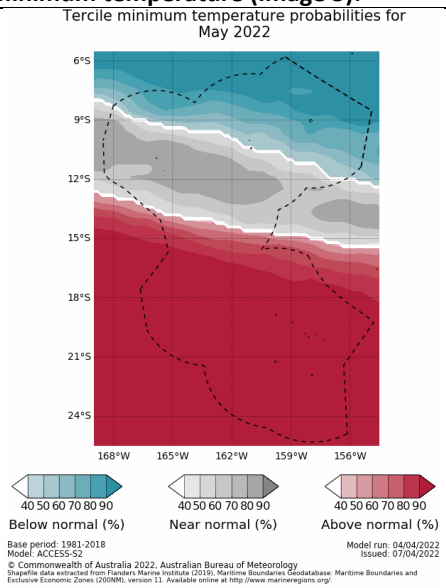
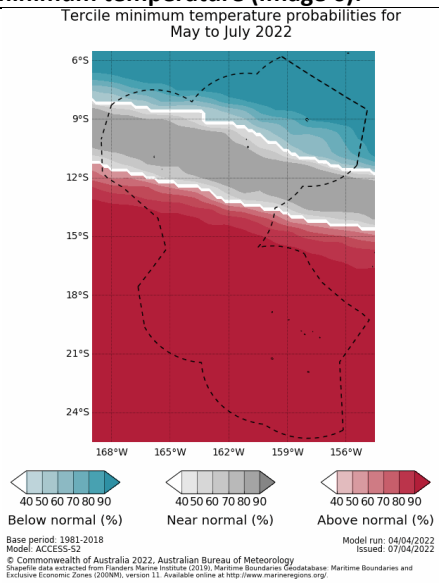
TABLE 2: Three-month Total Rainfall for January to March 2022

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Penrhyn (1937-2022)	845.2	Above normal	486.0	807.7	643.6	58/84
Rarotonga (1899-2022)	862.0	Above normal	539.7	733.8	659.0	96/124

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 May and May to July 2022

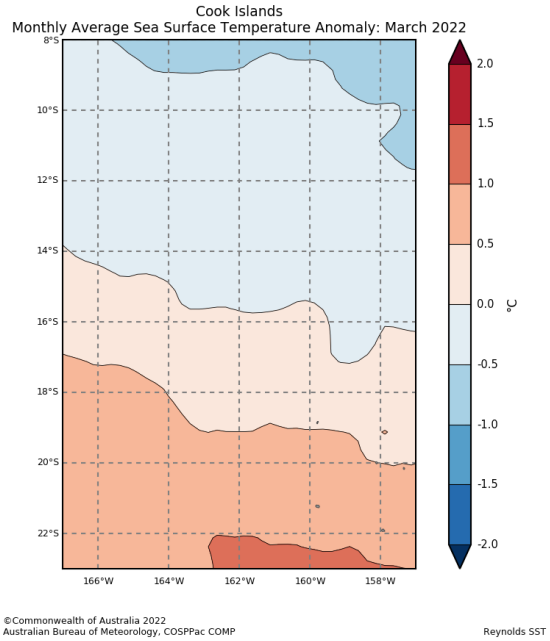
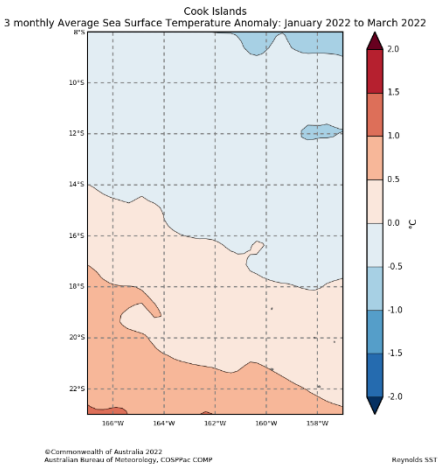
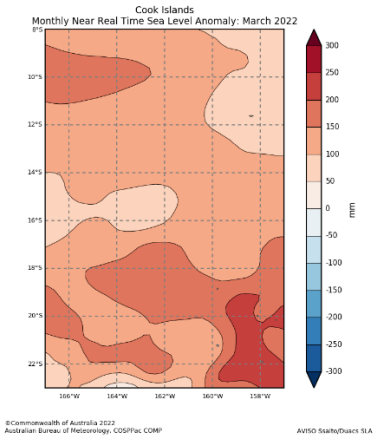
Monthly: May	Seasonal: May to July
Rainfall (Image 1)	**Rainfall (Image 2)**
	
Monthly Maximum temperature (Image 3):	**Seasonal maximum temperature (Image 4):**
	
Monthly minimum temperature (Image 5):	**Seasonal minimum temperature (Image 6):**
	

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

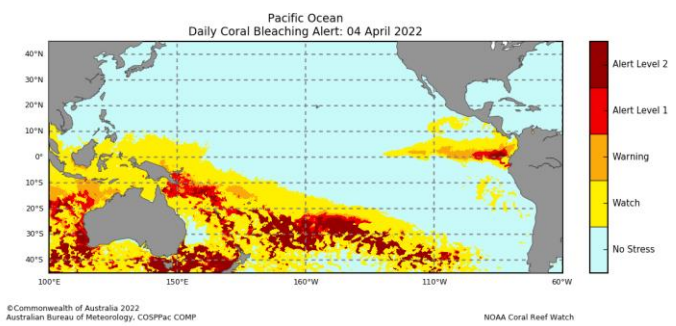
Part 2: Recent Ocean summary statement

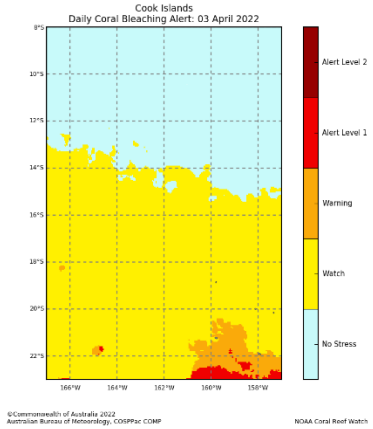
Monthly: March 2022

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

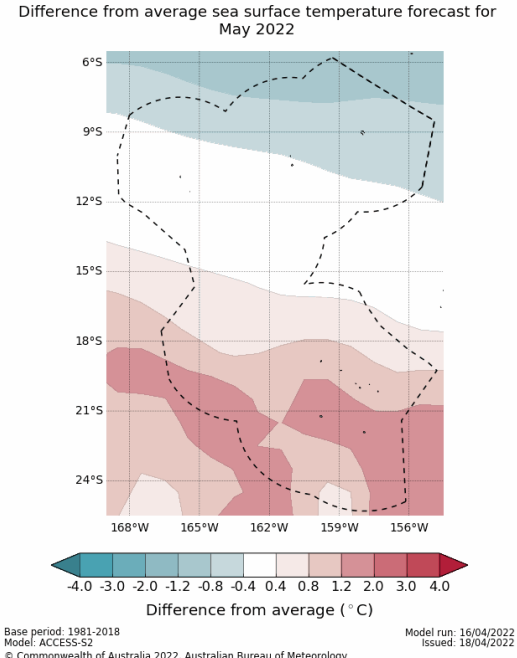
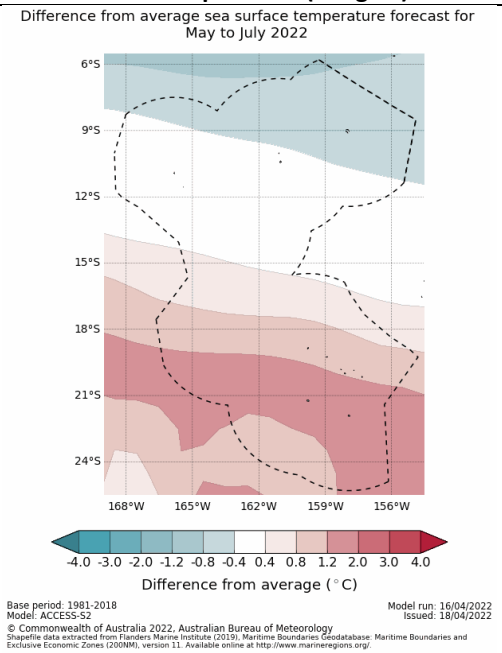
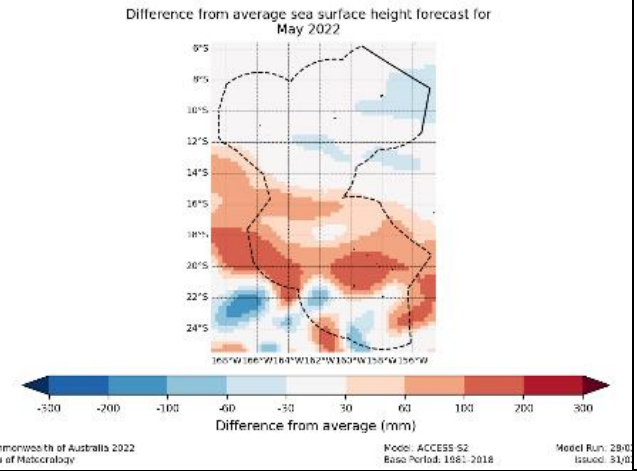
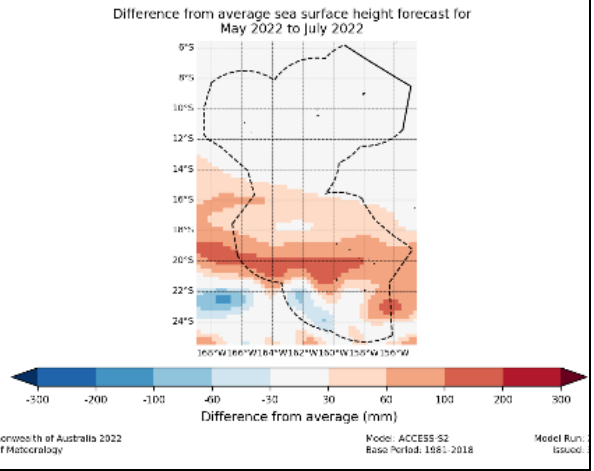
NB: The X LEPS % score has been categorised as follows:

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



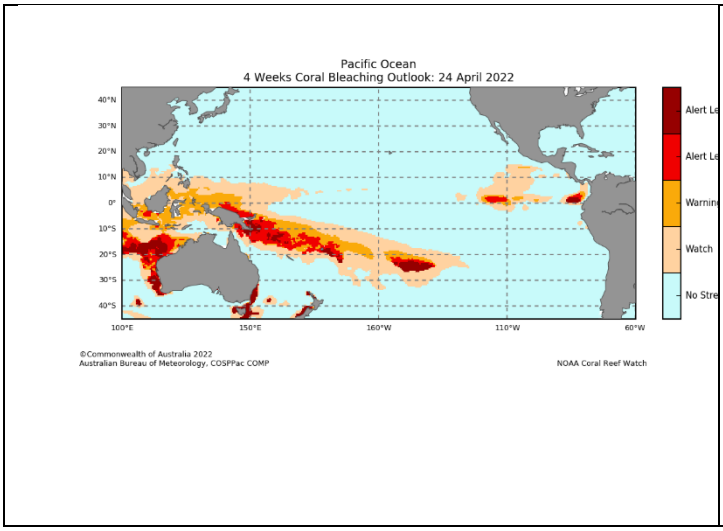


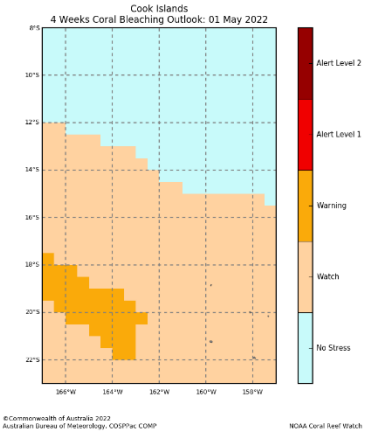
Part 2i. Monthly and Seasonal Outlooks for May and May to July 2022

Monthly: May	**Seasonal: May to July**
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):	

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





Summary Statement

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

Normal rainfall was recorded at Penrhyn station for March and Rarotonga recorded above normal rainfall. For January to March 2022, accumulated rainfall was above normal for both Penrhyn and Rarotonga.

Part 1i. Monthly and Seasonal Outlooks for May and May to July 2022

Rainfall outlook for next month and three months is very likely to be below normal for Penrhyn and above normal for Rarotonga.

Temperature outlook patterns is similar for next month and next three months which is very likely to be near normal for central Cooks, Penrhyn is very likely to be below normal. Above normal is very likely for all Southern Cooks including Rarotonga.

Part 2: Recent Ocean summary statement

Monthly and last three months: March/January to March 2022 *(Highly significant changes)*

Sea Surface Temperature statement

For March 2022, the SST were normal except for Rarotonga and Mangaia experiencing above normal SST anomaly of 0.5 - 1 degree Celsius. The last three months of January to March revealed similar SST with only Rarotonga experiencing the 0.5-1 degree Celsius anomaly.

Sea level statement

March 2022 sea level anomaly is above normal across all Cook Islands, with significant sea level difference of 200-250mm for parts of the southern Cook Islands.

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

Daily bleaching alert statement

A 'watch alert' status was seen for the central and Southern Cooks and 'no stress' coral bleaching alert status was seen for the Northern Cooks for March 2022.

Part 2i. Monthly and Seasonal Outlooks for May and May to July 2022

Ocean Variable statement *(Highly significant changes)*

Monthly sea surface temperature statement

Monthly outlook shows below average for Penrhyn and above average for Southern Cooks including Rarotonga with a significant temperature difference of 0.8 to 2.0°C for May 2022 outlook.

Seasonal Sea Surface Temperature statement

Seasonal outlook similar to the monthly outlook.

Monthly sea level statement

Outlooks are likely to be below average for Penrhyn and above normal for Rarotonga in May 2022.

Seasonal sea level statement

Near normal for Penrhyn and above normal for Rarotonga May to July 2022 period.

4-weeks Coral Bleaching statement

The outlook for the Cook Islands shows a 'watch alert' for central and Southern Cooks, including Rarotonga. 'No stress' alert for Penrhyn.

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

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

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

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