Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 172

Country: Cook Islands

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Oct-2021	Nov-2021	Dec-2021				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Penrhyn (1937-2021)	163.9	205.0	72.0	105.7	243.8	165.0	19/84
Rarotonga (1899-2021)	105.9	114.5	286.1	141.2	252.7	191.5	94/123

TABLE 2: Three-month Total Rainfall for October to December 2021

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Penrhyn (1937-2021)	440.9	Normal	354.0	594.0	473.5	40/83
Rarotonga (1899-2021)	506.5	Normal	403.0	543.3	481.5	66/123

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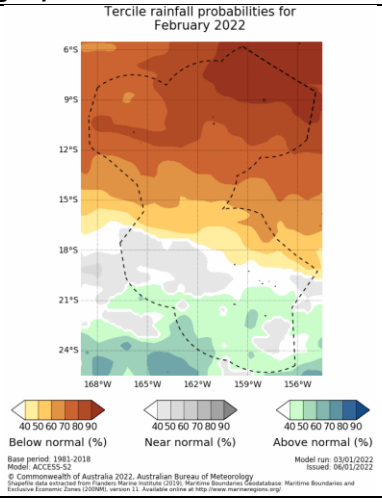
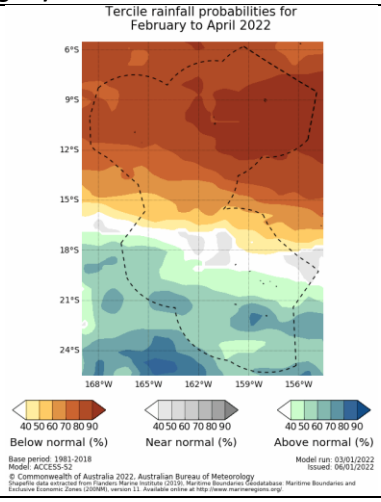
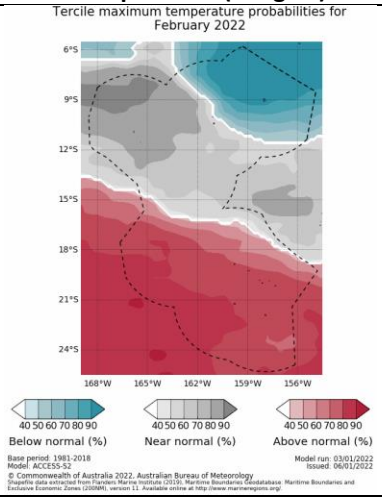
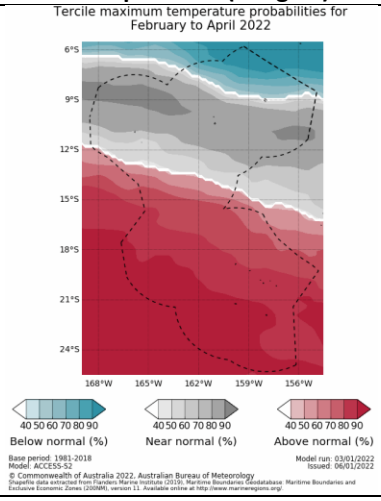
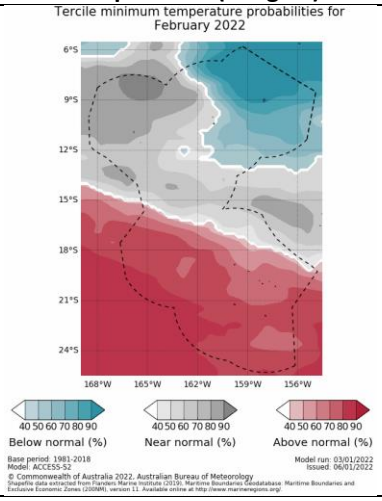
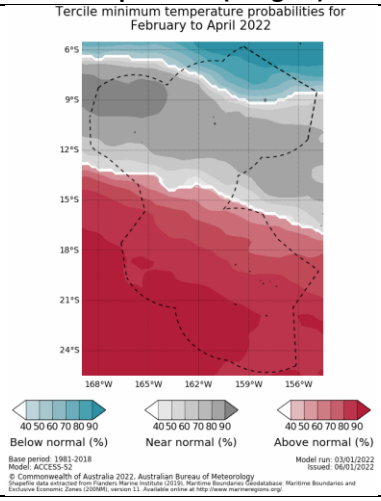
Very High: 25 ≤X < 35 Exceptional: X ≥ 35

Part 1i. Monthly and Seasonal Outlooks for February and February to April 2022

Monthly	Seasonal
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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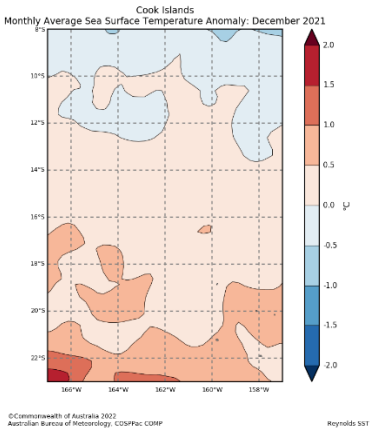
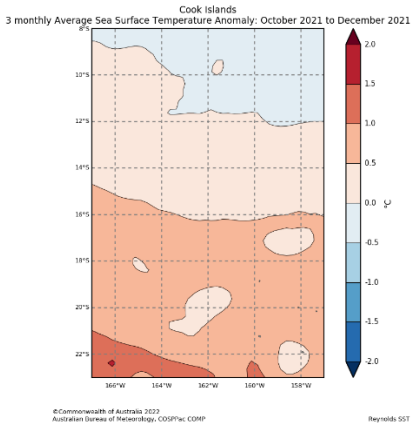
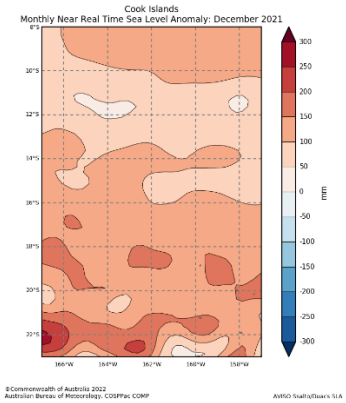
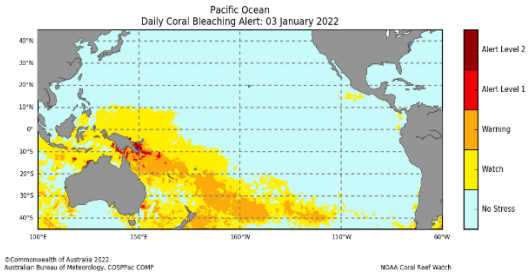
Part 2: Recent Ocean summary statement

Monthly: December 2021

Monthly: December	Last three months: October to December 2021:
Sea Surface Temperature (Image 1):	**Sea Surface Temperature (Image 4):**
	
Sea level (Image 2):	
	
Daily coral bleaching alert (Image 3):	
	

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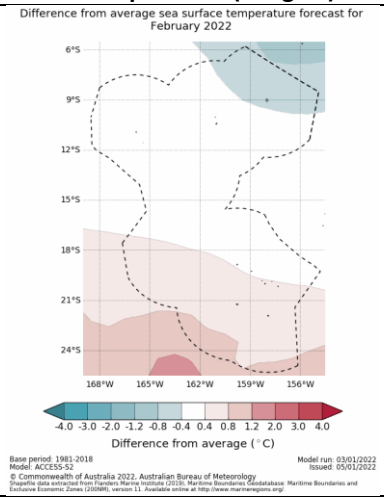
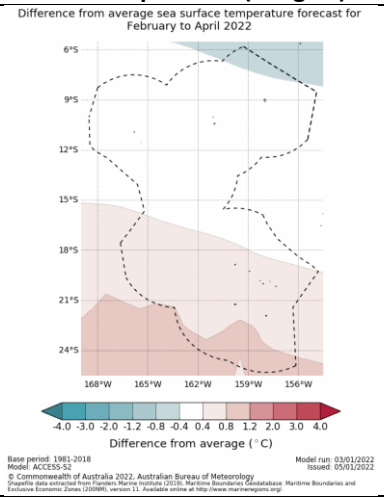
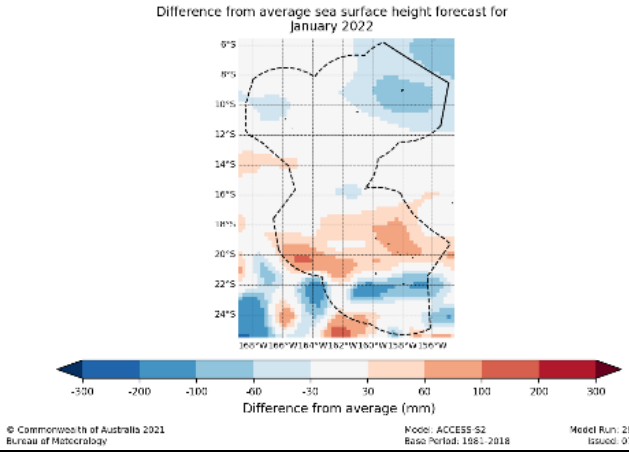
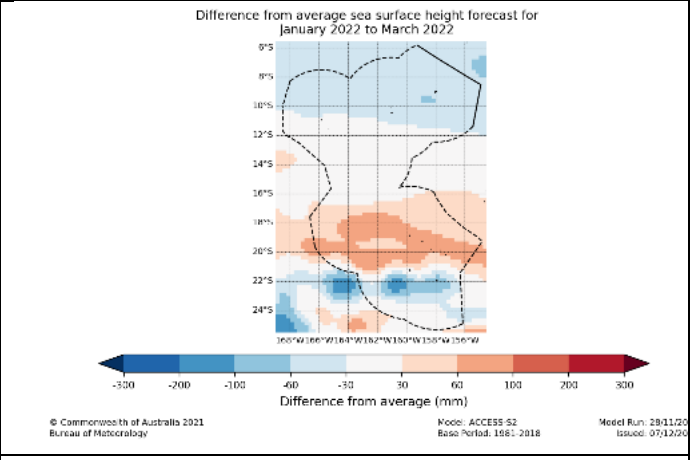
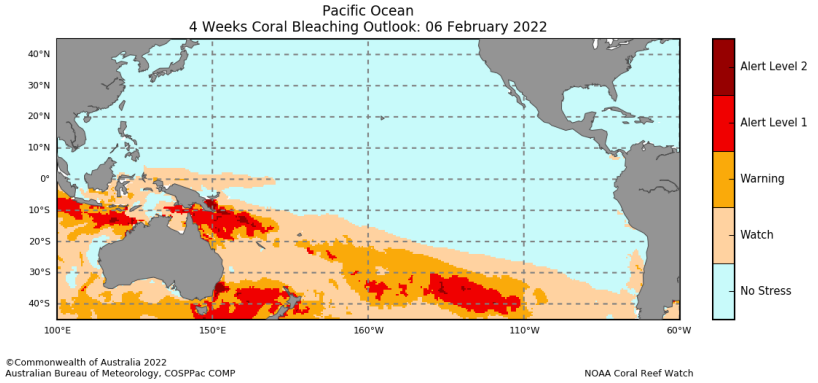
Part 2i. Monthly and Seasonal Outlooks for February and February to April 2022

Monthly: February	Seasonal: February to April
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: December 2021/October to December statement *(Highly significant changes)*

Below normal rainfall was recorded at Penrhyn in December, with Rarotonga station having above normal rainfall. For October to December 2021, both stations recorded normal rainfall.

Part 1i. Monthly and Seasonal Outlooks for February and February to April 2022

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

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

Temperature pattern outlooks is the same for next month and next 3 months which is very likely to be near normal for central and majority of the northern Cooks, Penrhyn is expected to be below normal. Above normal is very likely for southern Cooks and Rarotonga.

Part 2: Recent Ocean summary statement

Monthly and last three months: December/October to December 2021 *(Highly significant changes)*

Sea Surface Temperature statement

Most of the Cooks archipelago experienced above average SST for December 2021 with the northern regions experiencing cooler than normal conditions. Maximum temperature of up to 1.5 degrees was observed in the south.

Sea level statement

Higher than normal sea level was experienced in the Cook Islands for the month of December with the southern Cooks reaching a maximum of 250mm.

Daily bleaching alert statement

Daily coral bleaching alert for 4th January indicates a 'Watch' alert for the Cook Islands.

Last three months Sea Surface Temperature statement

For the October to December 2021 period, similar to the monthly pattern of warmer than average SSTs were experienced in the Cook Islands, with the exception of Penrhyn.

Part 2i. Monthly and Seasonal Outlooks for February and February to April 2022

Ocean Variable statement *(Highly significant changes)*

Monthly sea surface temperature statement

Monthly outlook for the Cook Islands shows a significant temperature difference of -0.8 to 0.8°C for February 2022.

Seasonal Sea Surface Temperature statement

Seasonal outlook similar to the monthly outlook. The outlook for the Cooks archipelago shows SSTs are likely to be close to average for the February to April 2022 period.

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Monthly sea level statement

Outlook across the Cooks shows sea surface heights are likely to be below average for Penrhyn and near normal for Rarotonga in February.

Seasonal sea level statement

Similar patterns to the monthly outlook, sea surface heights are likely to be below average Penrhyn and near normal for Rarotonga for February to April 2022 period.

4-weeks Coral Bleaching statement

The outlook for the Cook Islands shows a watch and warning alert for central and southern cooks, no stress for Penrhyn

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

Product	Date: December 2021	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin		Ministry of Transport	29	17	12
EAR Watch		C.I Govt. Stakeholders Public	?	?	?
Monthly Climate Briefing		Climate Change	8	2	6
Ocean Outlook					
Climate data request					
		Total	**37**	**19**	**18**

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