

Country: Cook Islands

Part 1: Recent climate

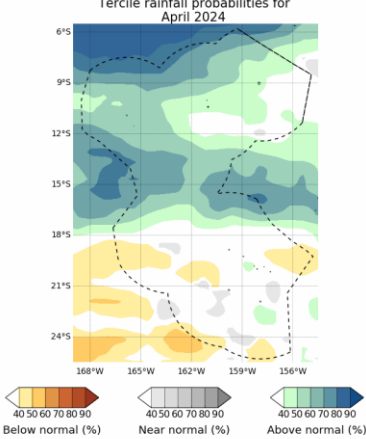
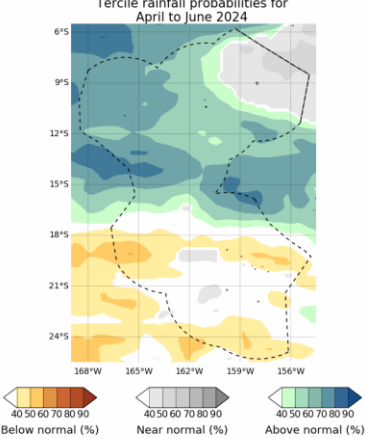
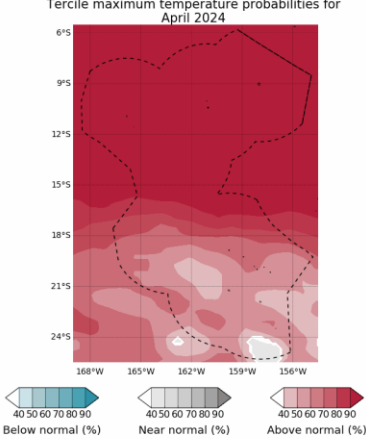
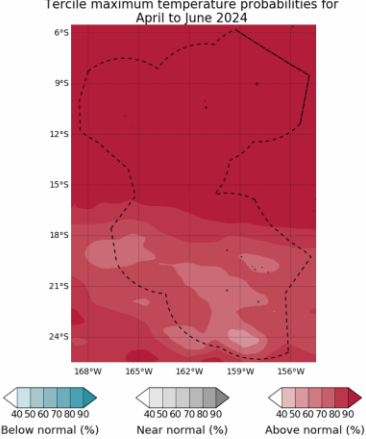
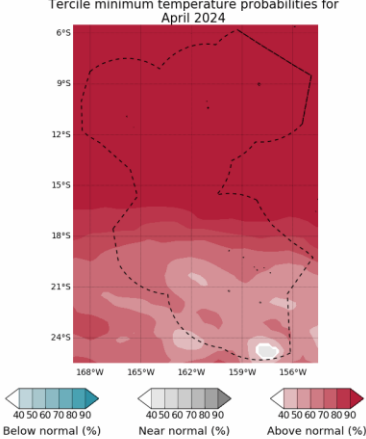
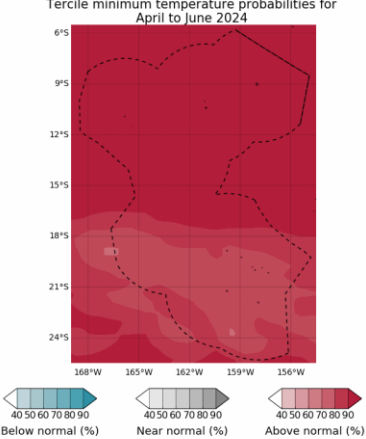
TABLE 1: Monthly Rainfall

Station (include data period)	Dec-2023	Jan-2024	Feb-2024				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Penrhyn (1937-2024)	73.2	148.8	191.2	120.0	293.0	225.0	42/86
Rarotonga (1899-2024)	49.9	81.4	248.0	151.7	240.3	197.0	84/126

TABLE 2: Three-month Total Rainfall for December 2023 to February 2024

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Penrhyn (1937-2024)	413.2	Below normal	521.9	844.0	638.0	29/86
Rarotonga (1899-2024)	379.3	Below normal	559.0	744.0	659.0	17/125

Part 1i. Monthly and Seasonal Outlooks for April and April to June 2024

Monthly: April	Seasonal: April to June
Rainfall (Image 1)	Rainfall (Image 2)
<div><p>Tercile rainfall probabilities for April 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Datafile data extracted from Fisheries Marine Institute (2019), Maritime Boundary Candidates Exclusive Economic Zones (2008), version 1.1. Available online at http://www.marinegaps.org Model run: 04/03/2024 Issued: 06/03/2024</p></div>	<div><p>Tercile rainfall probabilities for April to June 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Datafile data extracted from Fisheries Marine Institute (2019), Maritime Boundary Candidates Exclusive Economic Zones (2008), version 1.1. Available online at http://www.marinegaps.org Model run: 04/03/2024 Issued: 06/03/2024</p></div>
Monthly Maximum temperature (Image 3):	Seasonal maximum temperature (Image 4):
<div><p>Tercile maximum temperature probabilities for April 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Datafile data extracted from Fisheries Marine Institute (2019), Maritime Boundary Candidates Exclusive Economic Zones (2008), version 1.1. Available online at http://www.marinegaps.org Model run: 04/03/2024 Issued: 06/03/2024</p></div>	<div><p>Tercile maximum temperature probabilities for April to June 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Datafile data extracted from Fisheries Marine Institute (2019), Maritime Boundary Candidates Exclusive Economic Zones (2008), version 1.1. Available online at http://www.marinegaps.org Model run: 04/03/2024 Issued: 06/03/2024</p></div>
Monthly minimum temperature (Image 5):	Seasonal minimum temperature (Image 6):
<div><p>Tercile minimum temperature probabilities for April 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Datafile data extracted from Fisheries Marine Institute (2019), Maritime Boundary Candidates Exclusive Economic Zones (2008), version 1.1. Available online at http://www.marinegaps.org Model run: 04/03/2024 Issued: 06/03/2024</p></div>	<div><p>Tercile minimum temperature probabilities for April to June 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Datafile data extracted from Fisheries Marine Institute (2019), Maritime Boundary Candidates Exclusive Economic Zones (2008), version 1.1. Available online at http://www.marinegaps.org Model run: 04/03/2024 Issued: 06/03/2024</p></div>

Part 2: Recent Ocean Observation

Monthly/Three months: February 2024 and December 2023 to February 2024

Monthly: February 2024	Last three months: December 2023 to February 2024:
Sea Surface Temperature (Image 1):	Sea Surface Temperature (Image 4):
<div><p>Cook Islands</p><p>Monthly Average Sea Surface Temperature Anomaly: February 2024</p><p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSPPac</p><p>Reynolds SST</p></div>	<div><p>Cook Islands</p><p>3 monthly Average Sea Surface Temperature Anomaly: December 2023 to February 2024</p><p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSPPac</p><p>Reynolds SST</p></div>
Sea level (Image 2):	
<div><p>Cook Islands</p><p>Monthly Near Real Time Sea Level Anomaly: February 2024</p><p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSPPac</p><p>AVISO SeaWiFS/SeaWiFS SLA</p></div>	
Daily coral bleaching alert (Image 3):	
<div><p>Cook Islands</p><p>Daily Coral Bleaching Alert: 06 March 2024</p><p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSPPac</p><p>NOAA Coral Reef Watch</p></div>	

Part 2i. Monthly and Seasonal Outlooks for April and April to June 2024

Monthly: April	Seasonal: April to June
Monthly sea surface temperature (Image 5):	Seasonal sea surface temperature (Image 6):
<div><p>Difference from average sea surface temperature forecast for April 2024</p><p>Difference from average (°C)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Sea surface data extracted from Slender Man's Institute (2023), Maritime Boundaries Geodatabase, Maritime Boundaries and Exclusive Economic Zones (2000), version 1.1. Available online at http://www.marine.gov.au</p><p>Model run: 04/03/2024 Issued: 06/03/2024</p></div>	<div><p>Difference from average sea surface temperature forecast for April to June 2024</p><p>Difference from average (°C)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Sea surface data extracted from Slender Man's Institute (2023), Maritime Boundaries Geodatabase, Maritime Boundaries and Exclusive Economic Zones (2000), version 1.1. Available online at http://www.marine.gov.au</p><p>Model run: 04/03/2024 Issued: 06/03/2024</p></div>
Monthly sea level (Image 7):	Seasonal sea level (Image 8):
<div><p>Difference from average sea surface height forecast for April 2024</p><p>Difference from average (mm)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Sea surface data extracted from Slender Man's Institute (2023), Maritime Boundaries Geodatabase, Maritime Boundaries and Exclusive Economic Zones (2000), version 1.1. Available online at http://www.marine.gov.au</p><p>Model run: 04/03/2024 Issued: 06/03/2024</p></div>	<div><p>Difference from average sea surface height forecast for April to June 2024</p><p>Difference from average (mm)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Sea surface data extracted from Slender Man's Institute (2023), Maritime Boundaries Geodatabase, Maritime Boundaries and Exclusive Economic Zones (2000), version 1.1. Available online at http://www.marine.gov.au</p><p>Model run: 04/03/2024 Issued: 06/03/2024</p></div>
4-week Coral Bleaching (Image 9):	
<div><p>Cook Islands 4 Weeks Coral Bleaching Outlook: 31 March 2024</p><p>Alert Level 2 Alert Level 1 Warning Watch No Stress</p><p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSPPac</p><p>NOAA Coral Reef Watch</p></div>	

Summary Statement

Monthly and last three months: February 2024/December 2023 to February 2024 statement

The rainfall for February was normal over Penrhyn and above normal for Rarotonga. For the past three months, rainfall was below normal at both Penrhyn and Rarotonga stations.

Part 1i. Monthly and Seasonal Outlooks for April and April to June 2024

Monthly /Seasonal rainfall and temperature Outlook statements

The rainfall for April is likely to be above normal for Penrhyn and the Northern group, but there is little guidance over Rarotonga and the Southern group.

The rainfall for April to June is likely to be near normal for Penrhyn but above normal for the rest of the Northern group. The Southern group outlook generally follows the same pattern as the monthly outlook, with little guidance in the coming months. At Aitutaki, Manuae, and Mitiaro, however, below normal rainfall is likely for April to June.

Maximum and minimum temperatures during April and the averaged over April to June are very likely to be above normal for all of the Cook Islands.

Part 2: Recent Ocean summary statement

Monthly and last three months: February 2024/December 2023 to February 2024

February ocean temperatures around Penrhyn were 1.0°C to 1.5°C above normal. Around Rarotonga, ocean temperatures were 0.0°C to 0.5°C near normal.

Averaged over December to February, ocean temperatures around Penrhyn were 1 to 1.5°C above normal. Around Rarotonga, ocean temperatures were 0.0°C to -0.5°C below normal.

February sea levels were 150 to 200mm above normal around Penrhyn and 100 to 150mm above normal around Rarotonga.

Part 2i. Monthly and Seasonal Outlooks for April and April to June 2024

Ocean Variable statement

April ocean temperatures are predicted to be 1.2 to 2.0°C above normal around Penrhyn and -0.4°C to 0.4°C near normal around Rarotonga.

Averaged over April to June, ocean temperatures are predicted to be 0.8°C to 1.2°C above normal around Penrhyn and -0.4°C to 0.4°C near normal around Rarotonga.

April and Averaged over April to June sea levels are predicted to be 30 to 60mm above normal around Penrhyn and near normal around Rarotonga.

A four-week coral bleaching outlook shows an “Alert Level 1” and “Watch” for northern and southern Cook Islands, respectively.

IN BRIEF for Teleconference

- Rainfall was near-normal to above normal in April, and below normal in April to June.
- The rainfall outlook generally indicates above normal in the Northern Cooks, but shows little guidance over the Southern Cooks.
- Sea surface temperatures (SSTs) were near-normal to above normal for February and December to February. The outlook shows near-normal to above normal SSTs for the next one and three months.
- Sea-surface heights (SSHs) were above normal for February. Near-normal to above normal SSHs are predicted for April April and AApril to June.
- A four-week Coral bleaching Outlook shows an “Alert Level 1” for the northern Cook Islands

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

Product	Date: February 2024	Stakeholder	Total Number of Participants	Number of Male	Number of Female	Comments (If there are comments from you Stakeholders)
Climate Bulletin						
EAR Watch		Red Cross, Island Council and Executive Officers, To Tatou Vai, etc.....	39	?	?	
Monthly Climate Briefing		Climate Change	8	?	?	
Ocean Outlook						
Climate data request		Ministry of Marine Resources, Local Newspaper	2		2	
Total			49		2	