

Country: Cook Islands

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Mar-2024	Apr-2024	May-2024				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Penrhyn (1937-2024)	99.0	224.0	134.4	94.4	173.9	125.0	47/86
Rarotonga (1899-2024)	119.3	220.3	80.6	113.7	201.0	150.0	32/126

TABLE 2: Three-month Total Rainfall for March to May 2024

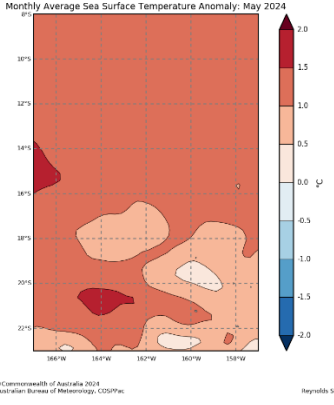
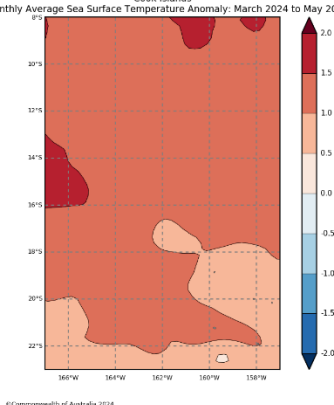
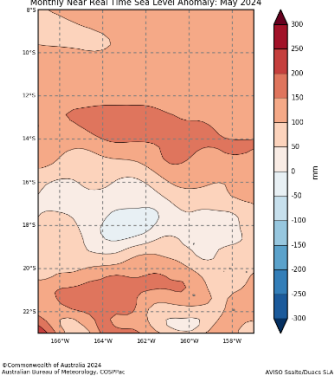
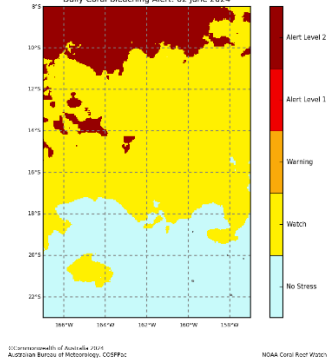
Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Penrhyn (1937-2024)	457.4	Normal	372.7	633.4	486.8	38/84
Rarotonga (1899-2024)	420.2	Below normal	502.7	651.4	578.5	20/126

Part 1i. Monthly and Seasonal Outlooks for July and July to September 2024

Monthly: July	Seasonal: July to September
Rainfall (Image 1)	Rainfall (Image 2)
<div><p>Tercile rainfall probabilities for July 2024</p><p>Below normal (%) Near normal (%) Above normal (%)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapellie data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://www.maritimergions.org/</p><p>Model run: 03/06/2024 Issued: 05/06/2024</p></div>	<div><p>Tercile rainfall probabilities for July to September 2024</p><p>Below normal (%) Near normal (%) Above normal (%)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapellie data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://www.maritimergions.org/</p><p>Model run: 03/06/2024 Issued: 05/06/2024</p></div>
Monthly Maximum temperature (Image 3):	Seasonal maximum temperature (Image 4):
<div><p>Tercile maximum temperature probabilities for July 2024</p><p>Below normal (%) Near normal (%) Above normal (%)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapellie data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://www.maritimergions.org/</p><p>Model run: 03/06/2024 Issued: 05/06/2024</p></div>	<div><p>Tercile maximum temperature probabilities for July to September 2024</p><p>Below normal (%) Near normal (%) Above normal (%)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapellie data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://www.maritimergions.org/</p><p>Model run: 03/06/2024 Issued: 05/06/2024</p></div>
Monthly minimum temperature (Image 5):	Seasonal minimum temperature (Image 6):
<div><p>Tercile minimum temperature probabilities for July 2024</p><p>Below normal (%) Near normal (%) Above normal (%)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapellie data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://www.maritimergions.org/</p><p>Model run: 03/06/2024 Issued: 05/06/2024</p></div>	<div><p>Tercile minimum temperature probabilities for July to September 2024</p><p>Below normal (%) Near normal (%) Above normal (%)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024, Australian Bureau of Meteorology Shapellie data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://www.maritimergions.org/</p><p>Model run: 03/06/2024 Issued: 05/06/2024</p></div>

Part 2: Recent Ocean Observation

Monthly/Three months: May 2024 and March to May 2024

Monthly: May 2024	Last three months: March to May 2024:
Sea Surface Temperature (Image 1):	Sea Surface Temperature (Image 4):
<div><p>Cook Islands Monthly Average Sea Surface Temperature Anomaly: May 2024</p><p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSPPac</p><p>Reynolds SST</p></div>	<div><p>Cook Islands 3 monthly Average Sea Surface Temperature Anomaly: March 2024 to May 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 Monthly Near Real Time Sea Level Anomaly: May 2024</p><p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSPPac</p><p>AVISO SeaWiFS/SLA</p></div>	
Daily coral bleaching alert (Image 3):	
<div><p>Cook Islands Daily Coral Bleaching Alert: 02 June 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 July and July to September 2024

Monthly: July	Seasonal: July to September
Monthly sea surface temperature (Image 5):	Seasonal sea surface temperature (Image 6):
<div><p>Difference from average sea surface temperature forecast for July 2024</p><p>Difference from average (°C)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024. Australian Bureau of Meteorology Insipiente data extracted from Roper's Marine Institute (2019). Maritime Boundary: Geobase Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://www.maritime.gov.au</p></div>	<div><p>Difference from average sea surface temperature forecast for July to September 2024</p><p>Difference from average (°C)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024. Australian Bureau of Meteorology Insipiente data extracted from Roper's Marine Institute (2019). Maritime Boundary: Geobase Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://www.maritime.gov.au</p></div>
Monthly sea level (Image 7):	Seasonal sea level (Image 8):
<div><p>Difference from average sea surface height forecast for July 2024</p><p>Difference from average (mm)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024. Australian Bureau of Meteorology Insipiente data extracted from Roper's Marine Institute (2019). Maritime Boundary: Geobase Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://www.maritime.gov.au</p></div>	<div><p>Difference from average sea surface height forecast for July to September 2024</p><p>Difference from average (mm)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2024. Australian Bureau of Meteorology Insipiente data extracted from Roper's Marine Institute (2019). Maritime Boundary: Geobase Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at http://www.maritime.gov.au</p></div>
4-week Coral Bleaching (Image 9):	
<div><p>Cook Islands 4 Weeks Coral Bleaching Outlook: 30 June 2024</p><p>Alert Level 2 Alert Level 1 Warning Watch No Stress</p><p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, CSIRO NOAA Coral Reef Watch</p></div>	

Summary Statement

Monthly and last three months: May 2024/March to May 2024 statement

The rainfall for May as well as the past three months of March to May was near-normal over Penrhyn and below normal over Rarotonga.

Part 1i. Monthly and Seasonal Outlooks for July and July to September 2024

Monthly /Seasonal rainfall and temperature Outlook statements

The rainfall for July is very likely to be above normal over the northern Cook Islands, including Penrhyn. Rainfall is likely to be above normal at some southern islands, but the outlook for Rarotonga offers little guidance.

The rainfall for July to September shows above normal is most likely for most of the Cook Islands, including Penrhyn and Rarotonga.

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

Part 2: Recent Ocean summary statement

Monthly and last three months: May 2024/March to May 2024

May and March to May Ocean temperatures around Penrhyn and Rarotonga were 1.0 to 1.5°C above normal.

May sea levels were near normal around Atutaki and 100mm to 150mm above normal for both Penrhyn and Rarotonga.

Daily coral bleaching alert shows 'Alert level 2' for part of northern Cook Islands

Part 2i. Monthly and Seasonal Outlooks for July and July to September 2024

Ocean Variable statement

July and averaged over July to September, ocean temperatures around Penrhyn are predicted to be 0.8 to 1.2°C above normal, and 0.4 to 0.8°C above normal around Rarotonga.

July and averaged July to September, sea levels around both Penrhyn and Rarotonga are predicted to be -30mm to 30mm near-normal. Part of the central Cook Islands are predicted to be 30 to 60mm below normal.

IN BRIEF for Teleconference

- Rainfall: Near-normal over Penrhyn and below normal for Rarotonga for both May and March to May.
- Rainfall for July and July to September is very likely to be above normal in the north, and likely to be above normal over much of the south.
- SSTs were above normal for May and March to May. The outlook shows continued warming SSTs for the next one and three months.
- Sea-surface heights (SSHs) were near-normal to above normal in May. SSHs are predicted to be near-normal in most places in the region.
- Alert Level 2 coral bleaching for Penrhyn, outlook suggest Watch.

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

Product	Date: May 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.....	43	?	?	
Monthly Climate Briefing		Climate Change	8	?	?	
Ocean Outlook						
Climate data request		Ministry of Marine Resources, Local Newspaper	2		2	
Total			53	?	?	