

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 209

Country: Cook Islands

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Nov-2024	Dec-2024	Jan-2025				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
Penrhyn (1937-2025)	125.8	308.0	127.8	119.8	300.7	181.8	34/87
Rarotonga (1899-2025)	138.3	233.0	192.6	160.8	274.2	220.0	55/127

TABLE 2: Three-month Total Rainfall for November 2024 to January 2025

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Penrhyn (1937-2025)	561.6	Normal	389.1	749.7	582.2	44/87
Rarotonga (1899-2025)	563.9	Normal	494.0	686.1	581.5	59/126

Part 1i. Monthly and Seasonal Outlooks for March and March to May 2025

Monthly: March	Seasonal: March to May
Rainfall (Image 1)	Rainfall (Image 2)
<p style="text-align: center;">Tercile rainfall probabilities for March 2025</p> <p>Base period: 1981-2018 Model run: 03/02/2025 Model: ACCESS-S2 Issued: 05/02/2025</p> <p style="text-align: center;">Below normal (%) Near normal (%) Above normal (%)</p> <p style="text-align: center;">-- -- EEZ border V11 (Flanders Marine Institute, 2019).</p>	<p style="text-align: center;">Tercile rainfall probabilities for March to May 2025</p> <p>Base period: 1981-2018 Model run: 03/02/2025 Model: ACCESS-S2 Issued: 05/02/2025</p> <p style="text-align: center;">Below normal (%) Near normal (%) Above normal (%)</p> <p style="text-align: center;">-- -- EEZ border V11 (Flanders Marine Institute, 2019).</p>
Monthly Maximum temperature (Image 3):	Seasonal maximum temperature (Image 4):
<p style="text-align: center;">Tercile maximum temperature probabilities for March 2025</p> <p>Base period: 1981-2018 Model run: 03/02/2025 Model: ACCESS-S2 Issued: 05/02/2025</p> <p style="text-align: center;">Below normal (%) Near normal (%) Above normal (%)</p> <p style="text-align: center;">-- -- EEZ border V11 (Flanders Marine Institute, 2019).</p>	<p style="text-align: center;">Tercile maximum temperature probabilities for March to May 2025</p> <p>Base period: 1981-2018 Model run: 03/02/2025 Model: ACCESS-S2 Issued: 05/02/2025</p> <p style="text-align: center;">Below normal (%) Near normal (%) Above normal (%)</p> <p style="text-align: center;">-- -- EEZ border V11 (Flanders Marine Institute, 2019).</p>
Monthly minimum temperature (Image 5):	Seasonal minimum temperature (Image 6):
<p style="text-align: center;">Tercile minimum temperature probabilities for March 2025</p> <p>Base period: 1981-2018 Model run: 03/02/2025 Model: ACCESS-S2 Issued: 05/02/2025</p> <p style="text-align: center;">Below normal (%) Near normal (%) Above normal (%)</p> <p style="text-align: center;">-- -- EEZ border V11 (Flanders Marine Institute, 2019).</p>	<p style="text-align: center;">Tercile minimum temperature probabilities for March to May 2025</p> <p>Base period: 1981-2018 Model run: 03/02/2025 Model: ACCESS-S2 Issued: 05/02/2025</p> <p style="text-align: center;">Below normal (%) Near normal (%) Above normal (%)</p> <p style="text-align: center;">-- -- EEZ border V11 (Flanders Marine Institute, 2019).</p>

Part 2: Recent Ocean Observation

Monthly/Three months: January 2025 and November 2024 to January 2025

Monthly: January 2025	Last three months: November 2024 to January 2025:
<p>Sea Surface Temperature Anomaly (Image 1):</p> <p>Cook Islands Monthly Average Sea Surface Temperature Anomaly: December 2024</p> <p>©Commonwealth of Australia 2025 Australian Bureau of Meteorology, COSPPac</p> <p>Reynolds SST</p>	<p>Sea Surface Temperature Anomaly (Image 4):</p> <p>Cook Islands 3 monthly Average Sea Surface Temperature Anomaly: October 2024 to December 2024</p> <p>©Commonwealth of Australia 2025 Australian Bureau of Meteorology, COSPPac</p> <p>Reynolds SST</p>
<p>Sea level anomaly (Image 2):</p> <p>Cook Islands Monthly Near Real Time Sea Level Anomaly: December 2024</p> <p>©Commonwealth of Australia 2025 Australian Bureau of Meteorology, COSPPac</p> <p>AVISO SeaWiFS/SeaWiFS SIA</p>	
<p>Daily coral bleaching alert (Image 3):</p> <p>Cook Islands Daily Coral Bleaching Alert: 11 February 2025</p> <p>©Commonwealth of Australia 2025 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>	<p>Cook Islands Daily Coral Bleaching Alert: 02 February 2025</p> <p>©Commonwealth of Australia 2025 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>

Part 2i. Monthly and Seasonal Outlooks for March and March to May 2025

Monthly: March	Seasonal: March to May
<p>Monthly sea surface temperature anomaly (Image 5):</p> <p>Difference from average sea surface temperature forecast for March 2025</p> <p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 03/02/2025 Issued: 05/02/2025</p> <p>© Commonwealth of Australia 2025 Australian Bureau of Meteorology, supported by COSPPac</p> <p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p>	<p>Seasonal sea surface temperature anomaly (Image 6):</p> <p>Difference from average sea surface temperature forecast for March to May 2025</p> <p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 03/02/2025 Issued: 05/02/2025</p> <p>© Commonwealth of Australia 2025 Australian Bureau of Meteorology, supported by COSPPac</p> <p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p>
<p>Monthly sea level anomaly (Image 7):</p> <p>Difference from average sea surface height forecast for March 2025</p> <p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 03/02/2025 Issued: 05/02/2025</p> <p>© Commonwealth of Australia 2025 Australian Bureau of Meteorology, supported by COSPPac</p> <p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p>	<p>Seasonal sea level anomaly (Image 8):</p> <p>Difference from average sea surface height forecast for March to May 2025</p> <p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 03/02/2025 Issued: 05/02/2025</p> <p>© Commonwealth of Australia 2025 Australian Bureau of Meteorology, supported by COSPPac</p> <p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p>
<p>4-week Coral Bleaching (Image 9):</p> <p>Cook Islands 4 Weeks Coral Bleaching Outlook: 09 March 2025</p> <p>© Commonwealth of Australia 2025 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>	<p>Pacific Ocean</p> <p>4 Weeks Coral Bleaching Outlook: 02 March 2025</p> <p>© Commonwealth of Australia 2025 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>

Summary Statement

Monthly and last three months: January 2025/November 2024 to January 2025 statement

The rainfall for January 2025 and November 2024 to January 2025 period was normal over both Penrhyn and Rarotonga stations.

Part 1i. Monthly and Seasonal Outlooks for March and March to May 2025

Monthly /Seasonal rainfall and temperature Outlook statements

The rainfall for March 2025 over the Northern Cook Islands, including Penrhyn is likely to be below normal and near normal amounts is likely over Rarotonga station.

The rainfall for March to May 2025 for Penrhyn is likely to be below normal and above normal rainfall is likely for Rarotonga and the rest of the Southern Cook Islands.

Maximum and minimum temperatures during March 2025 and averaged over March to May 2025 are very likely to be above normal for both Penrhyn and for all of the Cook Islands.

Part 2: Recent Ocean summary statement

Monthly and last three months: January 2025/November 2024 to January 2025

January 2025 and November 2024 to January 2025 sea surface temperatures were near normal (-0.5 to 0.5 °C) for Penrhyn and Rarotonga.

January sea levels around Penrhyn were 150mm to 200mm above normal, and were 00mm to 50mm near normal for Rarotonga.

A coral bleaching “Warning” status is currently in effect for Rarotonga as of 11th February 2025, “Watch” for Penrhyn.

Part 2i. Monthly and Seasonal Outlooks for March and March to May 2025

Ocean Variable statement

March and averaged over March to May 2025, sea surface temperatures around both Penrhyn and Rarotonga are predicted to be 0.4 to 0.8°C above normal.

March and averaged over March to May 2025 sea levels around both Penrhyn and Rarotonga are predicted to be 30 to 60mm below normal.

A coral bleaching “Watch” for Rarotonga and ‘No Stress’ coral bleaching for Penrhyn status for the next 4 weeks.

In brief for Teleconference

- Rainfall was normal for January and November 2024 to January 2025, for both Penrhyn and Rarotonga.
- The rainfall outlook for Penrhyn and northern Cook Islands in March and March to May is likely to be below. The outlook is generally likely to be above normal for the southern Cook Islands.
- SSTs were near normal in January and November to January for Penrhyn and Rarotonga. The outlook shows above normal SSTs for the next one and three months.

- Sea levels were near normal to above normal for January. Below-normal sea levels are predicted for March and March to May 2025.
- ‘Watch Alert’ coral bleaching for Rarotonga and ‘No Stress’ for Penrhyn.

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

Product	Date: January 2024	Stakeholder	Total Number of Participants	Number of Male	Number of Female	Disability	Age group	Comments (If there are comments from you Stakeholders)
Climate Bulletin		Climate Change, Red Cross, Island Council and Executive Officers, To Tatou Vai, etc.	53	?	?	?	?	
EAR Watch		Climate Change, Red Cross, Island Council and Executive Officers, To Tatou Vai, etc	53	?	?	?	?	
Monthly Climate Briefing								
Ocean Outlook		Climate Change, Red Cross, Island Council and Executive Officers, To Tatou Vai, etc.....	53	?	?	?	?	
Climate data request		Climate Change, Red Cross, Island Council and Executive Officers, To Tatou Vai, etc.....	5	2	3			
Total			58	2	3			