

# Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 203

Country: Cook Islands

Part 1: Recent climate

**TABLE 1: Monthly Rainfall**

Station (include data period)	May-2024	Jun-2024	Jul-2024				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
Penrhyn (1937-2024)	134.4	144.2	91.0	72.2	135.1	108.0	36/88
Rarotonga (1899-2024)	80.6	82.0	58.4	58.0	109.0	88.5	46/126

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

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Penrhyn (1937-2024)	369.6	Normal	282.3	474.0	349.8	48/85
Rarotonga (1899-2024)	221.0	Below normal	305.6	390.3	341.0	13/126

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

Monthly: September	Seasonal: September to November
<p><b>Rainfall (Image 1)</b></p> <p>Tercile rainfall probabilities for September 2024</p> <p>Base period: 1981-2018 Model run: 05/08/2024 Model: ACCESS-S2 Issued: 07/08/2024</p> <p>165°W 162°W 159°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p>	<p><b>Rainfall (Image 2)</b></p> <p>Tercile rainfall probabilities for September to November 2024</p> <p>Base period: 1981-2018 Model run: 05/08/2024 Model: ACCESS-S2 Issued: 07/08/2024</p> <p>165°W 162°W 159°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p>
<p><b>Monthly Maximum temperature (Image 3):</b></p>	<p><b>Seasonal maximum temperature (Image 4):</b></p>
<p>Tercile maximum temperature probabilities for September 2024</p> <p>Base period: 1981-2018 Model run: 05/08/2024 Model: ACCESS-S2 Issued: 07/08/2024</p> <p>165°W 162°W 159°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p>	<p>Tercile maximum temperature probabilities for September to November 2024</p> <p>Base period: 1981-2018 Model run: 05/08/2024 Model: ACCESS-S2 Issued: 07/08/2024</p> <p>165°W 162°W 159°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p>
<p><b>Monthly minimum temperature (Image 5):</b></p>	<p><b>Seasonal minimum temperature (Image 6):</b></p>
<p>Tercile minimum temperature probabilities for September 2024</p> <p>Base period: 1981-2018 Model run: 05/08/2024 Model: ACCESS-S2 Issued: 07/08/2024</p> <p>165°W 162°W 159°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p>	<p>Tercile minimum temperature probabilities for September to November 2024</p> <p>Base period: 1981-2018 Model run: 05/08/2024 Model: ACCESS-S2 Issued: 07/08/2024</p> <p>165°W 162°W 159°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p>

# Part 2: Recent Ocean Observation

## Monthly/Three months: July 2024 and May to July 2024

Monthly: July 2024	Last three months: May to July 2024:
<p><b>Sea Surface Temperature (Image 1):</b></p> <p>Cook Islands Monthly Average Sea Surface Temperature Anomaly: July 2024</p> <p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSPPac</p> <p>Reynolds SST</p>	<p><b>Sea Surface Temperature (Image 4):</b></p> <p>Cook Islands 3 monthly Average Sea Surface Temperature Anomaly: May 2024 to July 2024</p> <p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSPPac</p> <p>Reynolds SST</p>
<p><b>Sea level (Image 2):</b></p> <p>Cook Islands Monthly Near Real Time Sea Level Anomaly: July 2024</p> <p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSPPac</p> <p>AVISO Ssalto/Duacs SLA</p>	<p><b>Daily coral bleaching alert (Image 3):</b></p> <p>Cook Islands Daily Coral Bleaching Alert: 04 August 2024</p> <p>©Commonwealth of Australia 2024 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>

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

Monthly: September	Seasonal: September to November
<p><b>Monthly sea surface temperature (Image 5):</b></p> <p>Difference from average sea surface temperature forecast for September 2024</p> <p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 05/08/2024 Issued: 07/08/2024</p> <p>© Commonwealth of Australia 2024. Bureau of Meteorology, supported by COSPPac. Flanders Marine Institute, 2019.</p>	<p><b>Seasonal sea surface temperature (Image 6):</b></p> <p>Difference from average sea surface temperature forecast for September to November 2024</p> <p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 05/08/2024 Issued: 07/08/2024</p> <p>© Commonwealth of Australia 2024. Bureau of Meteorology, supported by COSPPac. Flanders Marine Institute, 2019.</p>
<p><b>Monthly sea level (Image 7):</b></p> <p>Difference from average sea surface height forecast for September 2024</p> <p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 05/08/2024 Issued: 07/08/2024</p> <p>© Commonwealth of Australia 2024. Bureau of Meteorology, supported by COSPPac. Flanders Marine Institute, 2019.</p>	<p><b>Seasonal sea level (Image 8):</b></p> <p>Difference from average sea surface height forecast for September to November 2024</p> <p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 05/08/2024 Issued: 07/08/2024</p> <p>© Commonwealth of Australia 2024. Bureau of Meteorology, supported by COSPPac. Flanders Marine Institute, 2019.</p>
<p><b>4-week Coral Bleaching (Image 9):</b></p> <p>Cook Islands 4 Weeks Coral Bleaching Outlook: 11 August 2024</p> <p>Alert Level 2 Alert Level 1 Warning Watch No Stress</p> <p>© Commonwealth of Australia 2024. Australian Bureau of Meteorology, COSPPac. NOAA Coral Reef Watch.</p>	

## Summary Statement

### Monthly and last three months: July 2024/May to July 2024 statement

The rainfall for July was near normal over both Penrhyn and Rarotonga stations. Meanwhile, rainfall over the past three months of May to July was near normal over Penrhyn and below normal over Rarotonga.

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

### Monthly /Seasonal rainfall and temperature Outlook statements

The rainfall for September offers little guidance over Penrhyn, and Rarotonga station.

The rainfall for September to November shows below normal is most likely for Penrhyn and little guidance for Rarotonga.

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

## Part 2: Recent Ocean summary statement

### Monthly and last three months: July 2024/May to July 2024

July and May to July Ocean temperatures around Penrhyn were 1.0 to 1.5°C above normal and 0.5 to 1.0°C above normal for Rarotonga.

July sea levels around both Penrhyn and Rarotonga were 100mm to 150mm above normal.

'No Stress' coral bleaching for the Cooks.

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

### Ocean Variable statement

September and averaged over September to November ocean temperatures around both Penrhyn and Rarotonga is predicted to be around 0.4 to 0.8°C above normal.

September and averaged over September to November sea levels around both Penrhyn and Rarotonga are predicted to be -30mm to 30mm normal.

### IN BRIEF for Teleconference

- Rainfall: near normal for both Penrhyn and Rarotonga.
- The rainfall outlook generally offers little guidance for next month.
- SSTs were above normal for July and May to July. The outlook shows continued warming SST.
- Sea-surface heights (SSH) showing above normal.
- Coral bleaching levels for Cooks, suggest 'No Stress'.

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

Product	Date: July 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								
EAR Watch		Red Cross, Island Council and Executive Officers, To Tatou Vai, etc.....	43	?	?			
Monthly Climate Briefing		Climate Change	10	?	?			
Ocean Outlook								
Climate data request		Ministry of Marine Resources, Local Newspaper	2		2			
<b>Total</b>			<b>55</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	