

Country: Cook Islands

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Jun-2024	Jul-2024	Aug-2024				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Penrhyn (1937-2024)	144.2	91.0	225.0	78.3	137.7	106.7	69/87
Rarotonga (1899-2024)	82.0	58.4	49.4	75.7	124.0	101.6	26/126

TABLE 2: Three-month Total Rainfall for June to August 2024

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Penrhyn (1937-2024)	460.2	Normal	257.0	497.8	347.6	55/86
Rarotonga (1899-2024)	189.8	Below normal	250.7	364.9	315.9	16/126

Part 1i. Monthly and Seasonal Outlooks for October and October to December 2024

Monthly: October	Seasonal: October to December
Rainfall (Image 1)	Rainfall (Image 2)
<div><p>Tercile rainfall probabilities for October 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 02/09/2024 Issued: 05/09/2024</p><p>Below normal (%) Near normal (%) Above normal (%)</p><p>-- EEZ border V11 (Flanders Marine Institute, 2019).</p></div>	<div><p>Tercile rainfall probabilities for October to December 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 02/09/2024 Issued: 05/09/2024</p><p>Below normal (%) Near normal (%) Above normal (%)</p><p>-- EEZ border V11 (Flanders Marine Institute, 2019).</p></div>
Monthly Maximum temperature (Image 3):	Seasonal maximum temperature (Image 4):
<div><p>Tercile maximum temperature probabilities for October 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 02/09/2024 Issued: 05/09/2024</p><p>Below normal (%) Near normal (%) Above normal (%)</p><p>-- EEZ border V11 (Flanders Marine Institute, 2019).</p></div>	<div><p>Tercile maximum temperature probabilities for October to December 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 02/09/2024 Issued: 05/09/2024</p><p>Below normal (%) Near normal (%) Above normal (%)</p><p>-- EEZ border V11 (Flanders Marine Institute, 2019).</p></div>
Monthly minimum temperature (Image 5):	Seasonal minimum temperature (Image 6):
<div><p>Tercile minimum temperature probabilities for October 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 02/09/2024 Issued: 05/09/2024</p><p>Below normal (%) Near normal (%) Above normal (%)</p><p>-- EEZ border V11 (Flanders Marine Institute, 2019).</p></div>	<div><p>Tercile minimum temperature probabilities for October to December 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 02/09/2024 Issued: 05/09/2024</p><p>Below normal (%) Near normal (%) Above normal (%)</p><p>-- EEZ border V11 (Flanders Marine Institute, 2019).</p></div>

Part 2: Recent Ocean Observation

Monthly/Three months: August 2024 and June to August 2024

Monthly: August 2024	Last three months: June to August 2024:
Sea Surface Temperature (Image 1):	Sea Surface Temperature (Image 4):
<div><p>Cook Islands Monthly Average Sea Surface Temperature Anomaly: August 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: June 2024 to August 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: August 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 Daily Coral Bleaching Alert: 31 August 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 October and October to December 2024

Monthly: October	Seasonal: October to December
Monthly sea surface temperature (Image 5):	Seasonal sea surface temperature (Image 6):
<div><p>Difference from average sea surface temperature forecast for October 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 02/09/2024 Issued: 04/09/2024</p><p>© Commonwealth of Australia 2024 Australian Bureau of Meteorology, supported by COSPPac</p><p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p></div>	<div><p>Difference from average sea surface temperature forecast for October to December 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 02/09/2024 Issued: 04/09/2024</p><p>© Commonwealth of Australia 2024 Australian Bureau of Meteorology, supported by COSPPac</p><p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p></div>
Monthly sea level (Image 7):	Seasonal sea level (Image 8):
<div><p>Difference from average sea surface height forecast for October 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 02/09/2024 Issued: 04/09/2024</p><p>© Commonwealth of Australia 2024 Australian Bureau of Meteorology, supported by COSPPac</p><p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p></div>	<div><p>Difference from average sea surface height forecast for October to December 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 Model run: 02/09/2024 Issued: 04/09/2024</p><p>© Commonwealth of Australia 2024 Australian Bureau of Meteorology, supported by COSPPac</p><p>--- EEZ border V11 (Flanders Marine Institute, 2019).</p></div>
4-week Coral Bleaching (Image 9):	
<div><p>Cook Islands 4 Weeks Coral Bleaching Outlook: 29 September 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: August 2024/June to August 2024 statement

The rainfall for August was above normal over Penrhyn and below normal at Rarotonga. Meanwhile, rainfall over the past three months of June to August was near-normal over Penrhyn and below normal over Rarotonga.

Part 1i. Monthly and Seasonal Outlooks for October and October to December 2024

Monthly /Seasonal rainfall and temperature Outlook statements

October rainfall is likely or very likely to be below normal in the north, including Penrhyn, and near-normal in much of the south, including Rarotonga. Above normal October rainfall is likely in the central Cook Islands.

The outlook for October to December is similar, although Rarotonga is included in a small region where above normal rainfall is likely.

Maximum and minimum temperatures during October and averaged over October to December are very likely to be above normal across the Cook Islands.

Part 2: Recent Ocean summary statement

Monthly and last three months: August 2024/June to August 2024

August and June to August Ocean temperatures were 0.5 to 1.0°C above normal around Penrhyn and 0.0 to 0.5°C near normal for Rarotonga, respectively.

August sea levels around both Penrhyn and Rarotonga were 50mm to 100mm above normal.

‘No Stress’ coral bleaching for the Cooks.

Part 2i. Monthly and Seasonal Outlooks for October and October to December 2024

Ocean Variable statement

October ocean temperatures were 0.4 to 0.8°C above normal and -0.4 to 0.4°C near normal around Penrhyn and Rarotonga, respectively. Averaged over October to December, ocean temperatures were -0.4 to 0.4°C near normal and 0.4 to 0.8°C above normal around Penrhyn and Rarotonga, respectively. October and averaged over October to December sea levels around both Penrhyn and Rarotonga are predicted to be -30mm to 30mm near-normal.

IN BRIEF for Teleconference

- Rainfall: Penrhyn - above normal in August and near-normal for June to August. Rarotonga – below normal for August and June to August.
- October to December rainfall is very likely to be below normal at Penrhyn, but it is likely to be above normal at Rarotonga.
- SSTs were near normal to above normal for August and June to August. The outlook shows continued near-normal to above normal SSTs.
- Sea-surface heights (SSHs) were above normal in August. The outlook for the one and next three months shows near normal SSHs
- Coral bleaching levels for Cooks, suggest ‘No Stress’

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

Product	Date: August 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	4	6	?	?	
Ocean Outlook								
Climate data request		Ministry of Marine Resources, Local Newspaper, To Tatou Vai	5	2	3	?	?	
Total			58	6	9	?	?	