

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 185

Country: Marshall Islands

Part 1: Recent climate

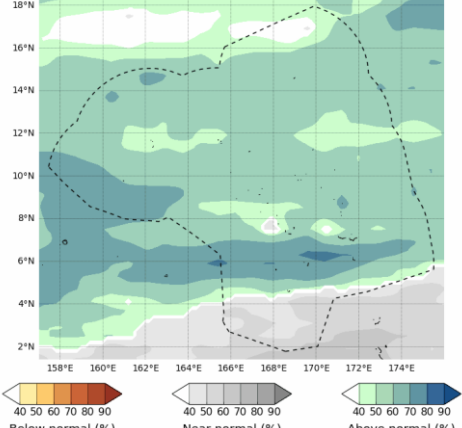
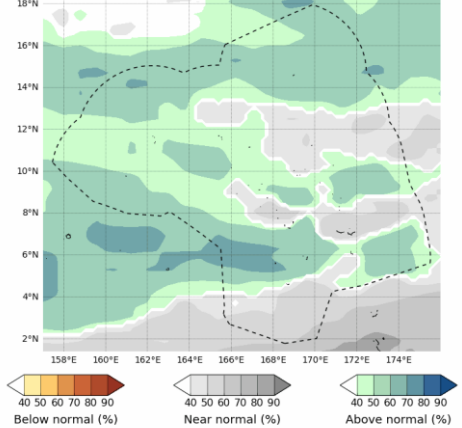
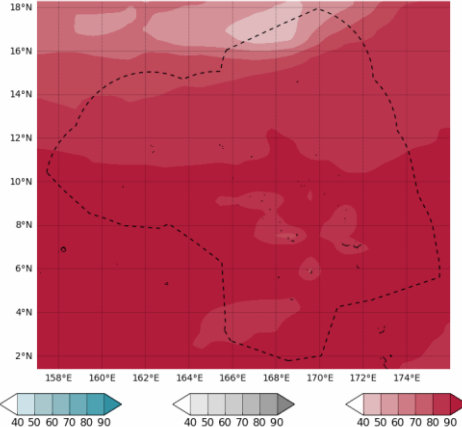
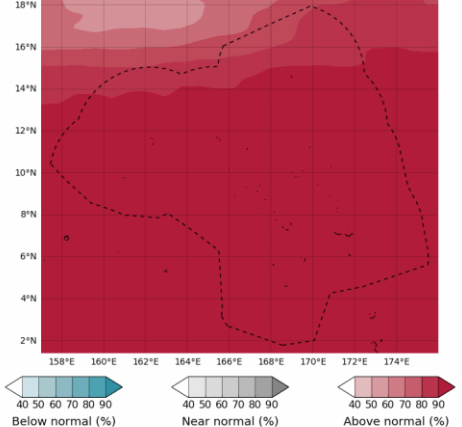
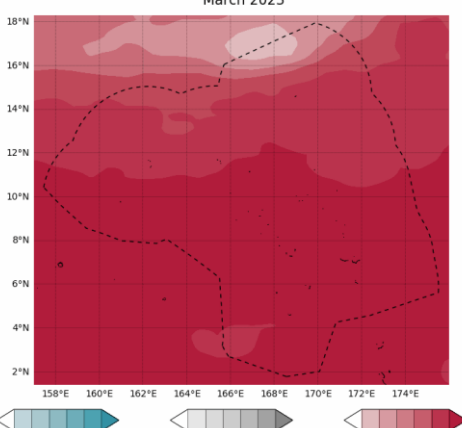
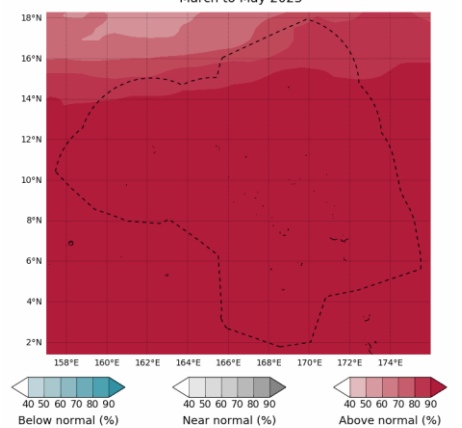
TABLE 1: Monthly Rainfall

Station (include data period)	Nov-2022	Dec-2022	Jan-2023				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
	Majuro (1954-2023)	310.1	261.6	308.4	152.8	234.0	
Kwajalein (1945-2023)	230.9	149.4	179.8	59.2	128.5	89.0	67/79

TABLE 2: Three-month Total Rainfall for November 2022 to January 2023

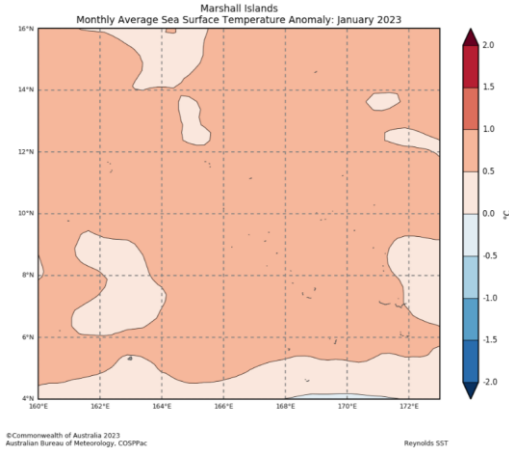
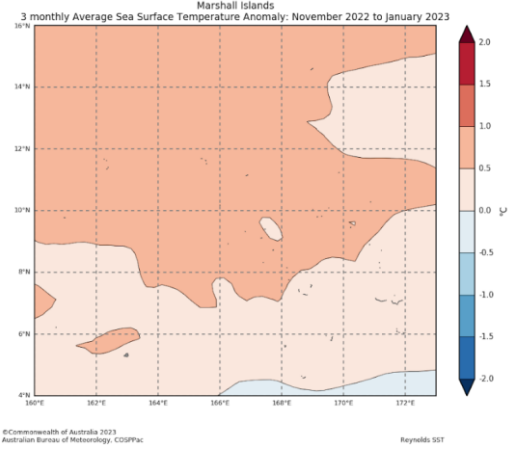
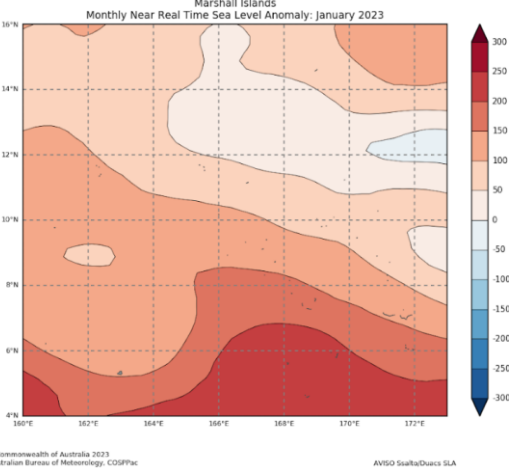
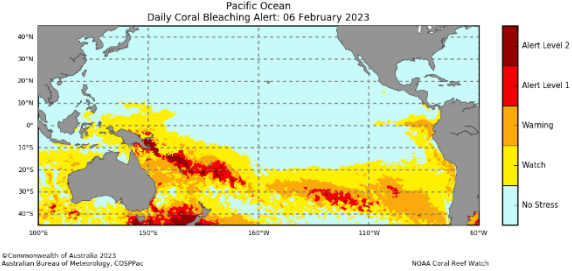
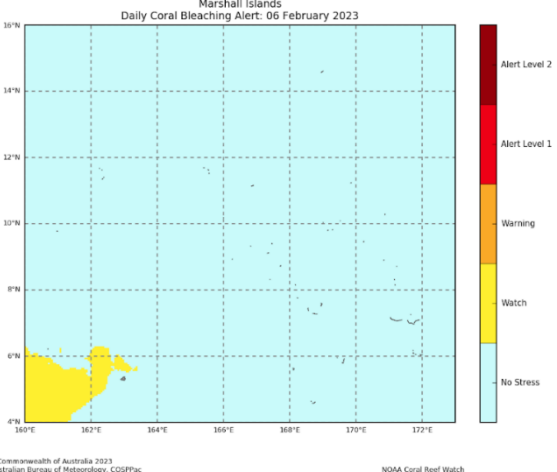
Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Majuro (1954-2023)	880.1	Normal	738.2	918.0	837.0	40/69
Kwajalein (1945-2023)	560.1	Normal	521.2	650.1	583.8	33/77

Part 1i. Monthly and Seasonal Outlooks for March and March to May 2023

Monthly: March	Seasonal: March to May
Rainfall (Image 1)	Rainfall (Image 2)
<p>Tercile rainfall probabilities for March 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapfile data extracted from Flinders Marine Institute (2018), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marinegovernance.org/</p> <p>Model run: 30/01/2023 Issued: 02/02/2023</p>	<p>Tercile rainfall probabilities for March to May 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapfile data extracted from Flinders Marine Institute (2018), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marinegovernance.org/</p> <p>Model run: 30/01/2023 Issued: 02/02/2023</p>
Monthly Maximum temperature (Image 3):	Seasonal maximum temperature (Image 4):
<p>Tercile maximum temperature probabilities for March 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapfile data extracted from Flinders Marine Institute (2018), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marinegovernance.org/</p> <p>Model run: 30/01/2023 Issued: 02/02/2023</p>	<p>Tercile maximum temperature probabilities for March to May 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapfile data extracted from Flinders Marine Institute (2018), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marinegovernance.org/</p> <p>Model run: 30/01/2023 Issued: 02/02/2023</p>
Monthly minimum temperature (Image 5):	Seasonal minimum temperature (Image 6):
<p>Tercile minimum temperature probabilities for March 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapfile data extracted from Flinders Marine Institute (2018), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marinegovernance.org/</p> <p>Model run: 30/01/2023 Issued: 02/02/2023</p>	<p>Tercile minimum temperature probabilities for March to May 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapfile data extracted from Flinders Marine Institute (2018), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marinegovernance.org/</p> <p>Model run: 30/01/2023 Issued: 02/02/2023</p>

Part 2: Recent Ocean Observation

Monthly/Three months: January 2023 and November 2022 to January 2023

<p>Monthly: January</p> <p>Sea Surface Temperature (Image 1):</p> 	<p>Last three months: November 2022 to January 2023:</p> <p>Sea Surface Temperature (Image 4):</p> 
<p>Sea level (Image 2):</p> 	
<p>Daily coral bleaching alert (Image 3):</p> 	

Part 2i. Monthly and Seasonal Outlooks for March and March to May 2023

Monthly: March	Seasonal: March to May
<p>Monthly sea surface temperature (Image 5):</p> <p>Difference from average sea surface temperature forecast for March 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.maritimerregions.org/</p> <p>Model run: 11/02/2023 Issued: 13/02/2023</p>	<p>Seasonal sea surface temperature (Image 6):</p> <p>Difference from average sea surface temperature forecast for March to May 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.maritimerregions.org/</p> <p>Model run: 11/02/2023 Issued: 13/02/2023</p>
<p>Monthly sea level (Image 7):</p> <p>Difference from average sea surface height forecast for March 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.maritimerregions.org/</p> <p>Model run: 11/02/2023 Issued: 13/02/2023</p>	<p>Seasonal sea level (Image 8):</p> <p>Difference from average sea surface height forecast for March to May 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.maritimerregions.org/</p> <p>Model run: 11/02/2023 Issued: 13/02/2023</p>
<p>4-week Coral Bleaching (Image 9):</p> <p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 05 March 2023</p> <p>© Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>	<p>Marshall Islands 4 Weeks Coral Bleaching Outlook: 05 March 2023</p> <p>© Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>

Summary Statement

Monthly and last three months: January 2023/November 2022 to January 2023 statement

Above normal rainfall was recorded at both stations in January. For the last three months, near-normal rainfall was recorded at both Majuro and Kwajalein.

Part 1i. Monthly and Seasonal Outlooks for March and March to May 2023

Monthly /Seasonal rainfall and temperature Outlook statements

The rainfall for March is likely or very likely to be above normal in most part of the Marshall Islands. In the southernmost part of the Republic, rainfall is likely to be near-normal.

March to May rainfall is likely to be above normal in most atolls in the western part of the Republic. For some atolls in the central, northern, and southernmost part of the region, including Majuro and Kwajalein, rainfall is likely to be near-normal.

Maximum and minimum temperatures during March and averaged over March to May are very likely to be above normal over the entire Marshall Islands.

Part 2: Recent Ocean summary statement

Monthly and last three months: January 2023/November 2022 to January 2023

January ocean temperatures across the Marshall were up to 1.0°C above normal.

Averaged over November to January, ocean temperatures were up to 1.0°C in most part of the Marshall Islands. Exceptions were a region in the southeast and southern part of the Marshalls where temperatures were between 0.0°C to 0.5°C near normal.

January sea levels around the central Marshall were 100mm to 150mm above normal, but further down south they were higher, reaching 200mm to 250mm above normal.

Coral bleaching alert reveals no thermal stress for most of the Republic.

Part 2i. Monthly and Seasonal Outlooks for March and March to May 2023

Ocean Variable statement

March and averaged March to May ocean temperatures across the Marshall Islands are predicted to be 0.4 to 0.8°C above normal.

March and averaged March to May sea levels around central Marshalls including Majuro and Kwajalein, and northern atolls are predicted to be -30mm to -60mm below normal. In the southern Marshalls, the prediction is for near-normal sea levels.

The coral bleaching outlook predicts no thermal stress across the Marshall Islands.

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

Product	Date: January 2023	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin					
EAR Watch					
Monthly Climate Briefing	01/20/23	Office of the Chief Secretary and National Disaster Management Office.	6	3	3
Ocean Outlook					
Climate data request					
Total			6	3	3