

Country: Marshall Islands

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Sep-2023	Oct-2023	Nov-2023				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Majuro (1954-2023)	159.3	278.9	343.2	287.8	381.1	326.3	38/70
Kwajalein (1945-2023)	167.6	291.1	448.3	233.6	326.3	277.4	75/79

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

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Majuro (1954-2023)	781.4	Below normal	924.0	1103.2	995.1	10/70
Kwajalein (1945-2023)	907.0	Normal	804.7	930.8	851.7	48/79

Part 1i. Monthly and Seasonal Outlooks for January and January to March 2024

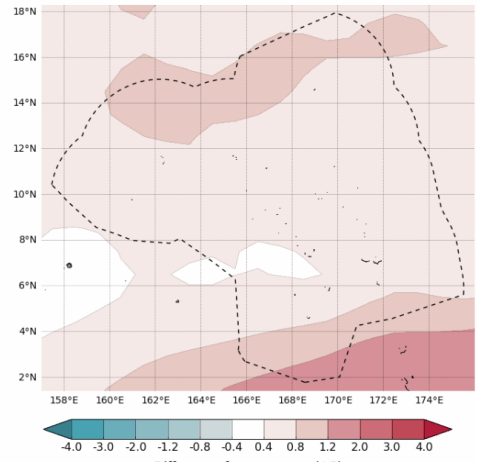
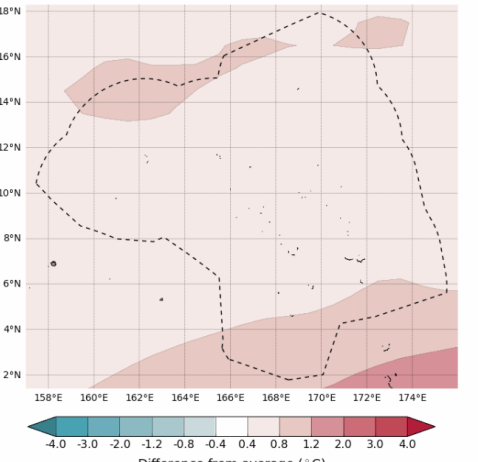
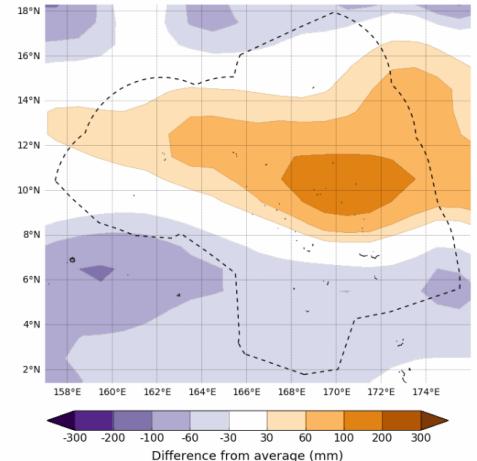
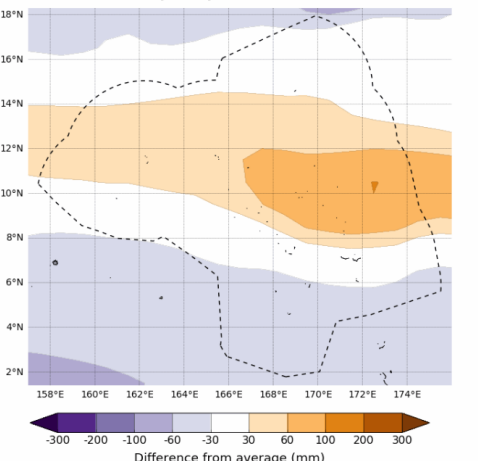
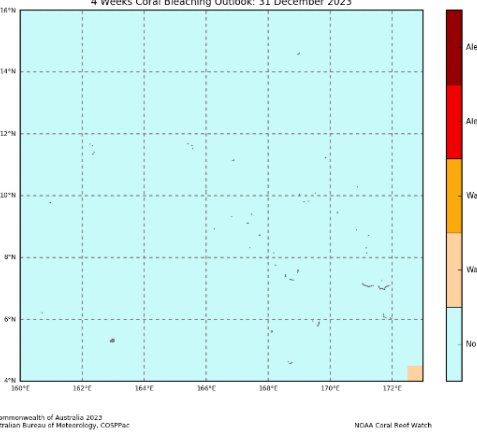
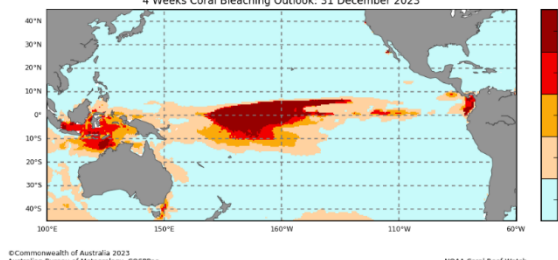
Monthly: January	Seasonal: January to March
<div>Rainfall (Image 1)</div> <div><p>Tercile rainfall probabilities for January 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/ Model run: 02/12/2023 Issued: 04/12/2023</p></div>	<div>Rainfall (Image 2)</div> <div><p>Tercile rainfall probabilities for January to March 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/ Model run: 02/12/2023 Issued: 04/12/2023</p></div>
<div>Monthly Maximum temperature (Image 3):</div> <div><p>Tercile maximum temperature probabilities for January 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/ Model run: 02/12/2023 Issued: 04/12/2023</p></div>	<div>Seasonal maximum temperature (Image 4):</div> <div><p>Tercile maximum temperature probabilities for January to March 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/ Model run: 02/12/2023 Issued: 04/12/2023</p></div>
<div>Monthly minimum temperature (Image 5):</div> <div><p>Tercile minimum temperature probabilities for January 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/ Model run: 02/12/2023 Issued: 04/12/2023</p></div>	<div>Seasonal minimum temperature (Image 6):</div> <div><p>Tercile minimum temperature probabilities for January to March 2024</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/ Model run: 02/12/2023 Issued: 04/12/2023</p></div>

Part 2: Recent Ocean Observation

Monthly/Three months: November and September to November 2023

Monthly: November	Last three months: September to November 2023:
<div>Sea Surface Temperature (Image 1):</div> <div><p>Marshall Islands</p><p>Monthly Average Sea Surface Temperature Anomaly: November 2023</p><p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p><p>Reynolds SST</p></div>	<div>Sea Surface Temperature (Image 4):</div> <div><p>Marshall Islands</p><p>3 monthly Average Sea Surface Temperature Anomaly: September 2023 to November 2023</p><p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p><p>Reynolds SST</p></div>
<div>Sea level (Image 2):</div> <div><p>Marshall Islands</p><p>Monthly Near Real Time Sea Level Anomaly: November 2023</p><p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p><p>AVISO SeaWiFS/QuikSCAT SLA</p></div>	
<div>Daily coral bleaching alert (Image 3):</div> <div><p>Marshall Islands</p><p>Daily Coral Bleaching Alert: 30 November 2023</p><p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p><p>NOAA Coral Reef Watch</p></div>	<div><p>Pacific Ocean</p><p>Daily Coral Bleaching Alert: 30 November 2023</p><p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p><p>NOAA Coral Reef Watch</p></div>

Part 2i. Monthly and Seasonal Outlooks for January and January to March 2024

Monthly: January	Seasonal: January to March
<p>Monthly sea surface temperature (Image 5):</p> <p>Difference from average sea surface temperature forecast for January 2024</p>  <p>Difference from average (°C)</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Seaplane 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: 02/12/2023 Issued: 04/12/2023</p>	<p>Seasonal sea surface temperature (Image 6):</p> <p>Difference from average sea surface temperature forecast for January to March 2024</p>  <p>Difference from average (°C)</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Seaplane 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: 02/12/2023 Issued: 04/12/2023</p>
<p>Monthly sea level (Image 7):</p> <p>Difference from average sea surface height forecast for January 2024</p>  <p>Difference from average (mm)</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Seaplane 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: 02/12/2023 Issued: 04/12/2023</p>	<p>Seasonal sea level (Image 8):</p> <p>Difference from average sea surface height forecast for January to March 2024</p>  <p>Difference from average (mm)</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Seaplane 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: 02/12/2023 Issued: 04/12/2023</p>
<p>4-week Coral Bleaching (Image 9):</p> <p>Marshall Islands 4 Weeks Coral Bleaching Outlook: 31 December 2023</p>  <p>Alert Level 2 Alert Level 1 Warning Watch No Stress</p> <p>© Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>	<p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 31 December 2023</p>  <p>Alert Level 2 Alert Level 1 Warning Watch No Stress</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: November 2023/September to November 2023 statement

The rainfall for November was near-normal for Majuro, while above normal for Kwajalein which had its fifth wettest November on record. For the past three months, rainfall was below normal for Majuro and near-normal for Kwajalein.

Part 1i. Monthly and Seasonal Outlooks for January and January to March 2024

Monthly /Seasonal rainfall and temperature Outlook statements

Rainfall totals for January and January to March are likely or very likely to be below normal over most of the Marshall Islands. One exception is the far north of the EEZ where January rainfall is likely to be above normal, and January to March rainfall is likely to be near-normal. The other exception is the far south of the EEZ where rainfall is very likely to be above normal for both periods.

Maximum and minimum temperatures during January and average over January to March are likely or very likely to be above normal across the RMI.

Part 2: Recent Ocean summary statement

Monthly and last three months: November 2023/September to November 2023

November ocean temperatures around the RMI were above normal with 0.5 to 1.0°C in the south-eastern, north, and north-western parts of the RMI, while 0.0 to 1.0°C were observed in the central RMI.

Averaged over September to November, ocean temperatures around the RMI were 0.5 to 1.0°C above normal while some atolls in the central and northern parts of the RMI observed 0.0 to 1.0°C above normal.

November sea levels around RMI were 50mm to 200mm in the northern parts of the Republic and up to 50mm in the central and southern parts of the RMI.

Coral bleaching alert on WATCH status for 30th November 2023.

Part 2i. Monthly and Seasonal Outlooks for January and January to March 2024

Ocean Variable statement

January and averaged over January to March, ocean temperatures around the RMI are predicted to be 0.4 to 0.8°C above normal.

January and averaged over January to March, sea levels around RMI are predicted to be 30mm to 200mm above normal in the northern and some atolls in the central RMI including Kwajalein, while -30 to -60mm below normal is predicted for the southern atolls. Near-average sea level is predicted for Majuro and some atolls in the central RMI.

The coral bleaching outlook is NO STRESS status across the RMI's EEZ.

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

Product	Date: November 2023	Stakeholder	Total Number of Participants	Number of Male	Number of Female	Comments (If there are comments from you Stakeholders)
Climate Bulletin						
EAR Watch						
Monthly Climate Briefing	Nov. 17	Chief Secretary Office and National Disaster Management Office	5	3	2	
Ocean Outlook						
Climate data request						
Total			5	3	2	