

Country: Marshall Islands

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Jan-2023	Feb-2023	Mar-2023				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Majuro (1954-2023)	308.4	241.6	282.4	150.1	281.3	197.2	47/69
Kwajalein (1945-2023)	179.8	33.5	112.5	49.0	119.7	86.8	49/79

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

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Majuro (1954-2023)	832.4	Above normal	495.7	706.9	594.4	53/69
Kwajalein (1945-2023)	325.8	Normal	202.0	369.1	247.8	52/79

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

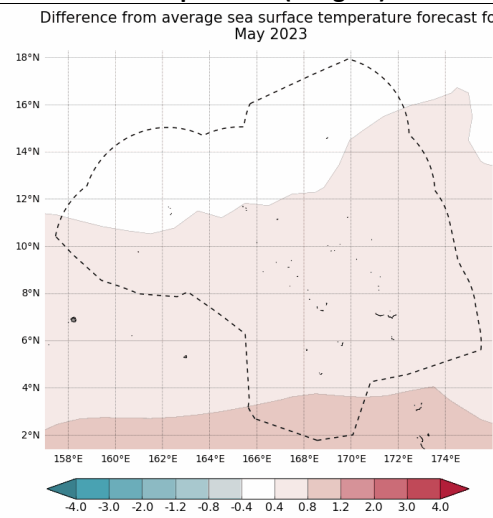
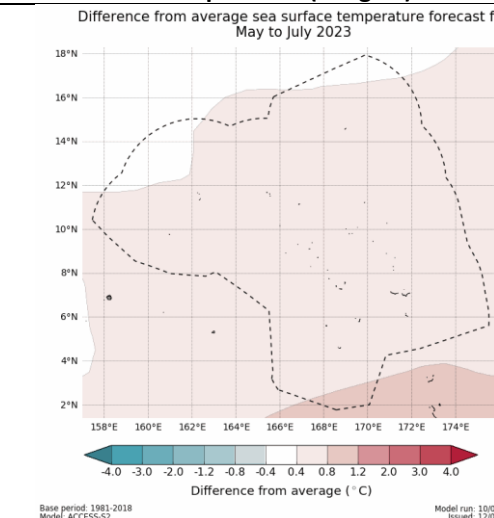
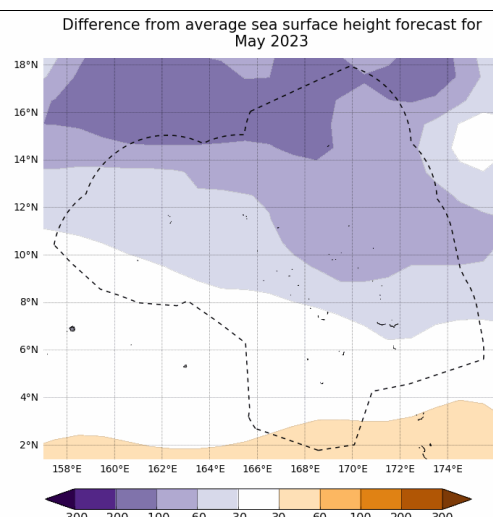
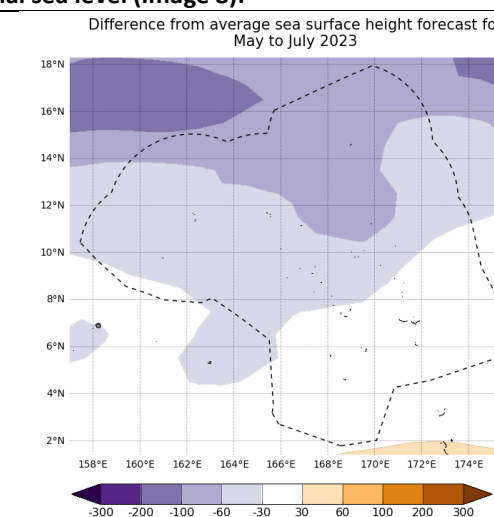
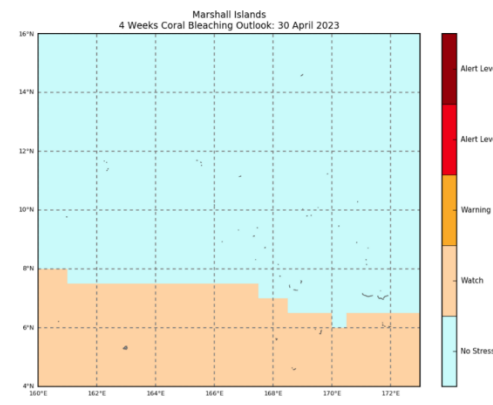
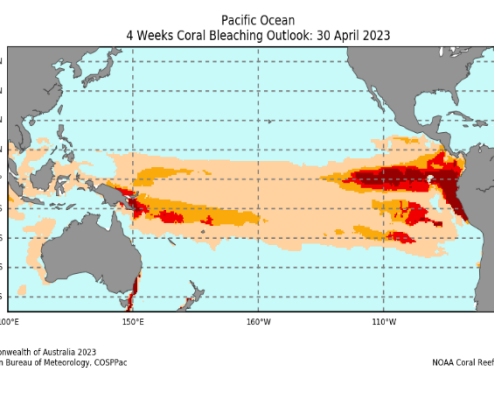
<div>Monthly: May</div> <div>Rainfall (Image 1)</div> <div><p>Tercile rainfall probabilities for May 2023</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.maritimerregions.org/</p><p>Model run: 01/04/2023 Issued: Map not issued</p></div>	<div>Seasonal: May to July</div> <div>Rainfall (Image 2)</div> <div><p>Tercile rainfall probabilities for May to July 2023</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile 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: 01/04/2023 Issued: Map not issued</p></div>
<div>Monthly Maximum temperature (Image 3):</div> <div><p>Tercile maximum temperature probabilities for May 2023</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile 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: 01/04/2023 Issued: Map not issued</p></div>	<div>Seasonal maximum temperature (Image 4):</div> <div><p>Tercile maximum temperature probabilities for May to July 2023</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile 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: 01/04/2023 Issued: Map not issued</p></div>
<div>Monthly minimum temperature (Image 5):</div> <div><p>Tercile minimum temperature probabilities for May 2023</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile 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: 01/04/2023 Issued: Map not issued</p></div>	<div>Seasonal minimum temperature (Image 6):</div> <div><p>Tercile minimum temperature probabilities for May to July 2023</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile 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: 01/04/2023 Issued: Map not issued</p></div>

Part 2: Recent Ocean Observation

Monthly/Three months: March and January to March 2023

Monthly: March	Last three months: January to March 2023:
Sea Surface Temperature (Image 1):	Sea Surface Temperature (Image 4):
<div>Marshall Islands Monthly Average Sea Surface Temperature Anomaly: March 2023</div> <div>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</div> <div>Reynolds SST</div>	<div>Marshall Islands 3 monthly Average Sea Surface Temperature Anomaly: January 2023 to March 2023</div> <div>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</div> <div>Reynolds SST</div>
Sea level (Image 2):	
<div>Marshall Islands Monthly Near Real Time Sea Level Anomaly: March 2023</div> <div>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</div> <div>AVISO SeaWiFS SLA</div>	
Daily coral bleaching alert (Image 3):	
<div>Marshall Islands Daily Coral Bleaching Alert: 31 March 2023</div> <div>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</div> <div>NOAA Coral Reef Watch</div>	<div>Pacific Ocean Daily Coral Bleaching Alert: 31 March 2023</div> <div>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</div> <div>NOAA Coral Reef Watch</div>

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

Monthly: May	Seasonal: May to July
<p>Monthly sea surface temperature (Image 5):</p> <p>Difference from average sea surface temperature forecast for May 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile 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: 10/04/2023 Issued: 12/04/2023</p>	<p>Seasonal sea surface temperature (Image 6):</p> <p>Difference from average sea surface temperature forecast for May to July 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile 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: 10/04/2023 Issued: 12/04/2023</p>
<p>Monthly sea level (Image 7):</p> <p>Difference from average sea surface height forecast for May 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile 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: 10/04/2023 Issued: 12/04/2023</p>	<p>Seasonal sea level (Image 8):</p> <p>Difference from average sea surface height forecast for May to July 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile 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: 10/04/2023 Issued: 12/04/2023</p>
<p>4-week Coral Bleaching (Image 9):</p> <p>Marshall Islands 4 Weeks Coral Bleaching Outlook: 30 April 2023</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: 30 April 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: March 2023/January to March 2023 statement

Above normal rainfall was recorded at Majuro, while normal rainfall was recorded at Kwajalein for March and the last three months.

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

Monthly /Seasonal rainfall and temperature Outlook statements

The rainfall for May is likely or very likely to be above normal over the southern atolls in the Marshalls. In most parts of the northern Marshalls, May's rainfall is likely to be near-normal, while below normal rainfall is likely over central areas, including Majuro and Kwajalein plus neighbouring northern atolls as far north as 10° N.

The rainfall for May to July is likely or very likely to be above normal over the southern third of the country, while below normal is likely or very likely over the northeast half of RMI. Separating these two regions is a narrow strip where there is little guidance; it includes both Majuro and Kwajalein.

Maximum and minimum temperatures during May and May to July are likely or very likely to be above normal across the Marshall Islands.

Part 2: Recent Ocean summary statement

Monthly and last three months: March 2023/January to March 2023

March ocean temperatures around the Marshalls were utmost 1.0°C above normal.

Averaged over January to March, ocean temperatures around the Marshall Islands were utmost 1.0°C above normal.

March sea levels across the central and southern RMI were 100mm to 150mm above normal, while 50mm to 100mm above normal in the northern RMI.

Coral bleaching was in No Thermal Status for most of the RMI's water.

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

May ocean temperatures are predicted to be 0.4 to 0.8°C above normal in most part of the Marshall Islands, while 0.8 to 1.2°C above normal in the southern Marshalls.

Averaged over May to July, ocean temperatures around the Marshall Islands are predicted to be 0.4 to 0.8°C above normal.

May sea levels around most parts of the Republic are predicted to be -30mm to -100mm below normal.

Averaged over May to July, sea levels around central and southern RMI are predicted to be -30mm to 30mm near normal, while -300mm to -100mm sea level are predicted for the northern and north-western portion of the RMI.

Coral bleaching outlook is in No Stress Status for most of the Marshall Islands, while a WATCH Status is in place for the southern Marshalls.

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

Product	Date: March 2023	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin					
EAR Watch					
Monthly Climate Briefing	03/17/23	Chief Secretary Office and National Disaster Management Office	6	3	3
Ocean Outlook					
Climate data request					
Total			6	3	3