

# Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 179

Country: Marshall Islands

## Part 1: Recent climate

**TABLE 1: Monthly Rainfall**

Station (include data period)	May-2022	Jun-2022	Jul-2022				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
	Majuro (1954-2022)	170.7	197.6	271.8	261.7	355.0	
Kwajalein (1945-2022)	334.5	248.4	234.4	221.0	274.2	247.8	34/78

**TABLE 2: Three-month Total Rainfall for May to July 2022**

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Majuro (1954-2022)	640.1	Below normal	786.6	953.4	848.9	5/68
Kwajalein (1945-2022)	817.3	Above normal	575.4	800.7	684.7	59/78

**NB: The X LEPS % score has been categorised as follows:**

Very Low:  $X < 0.0$

Low:  $0 \leq X < 5$

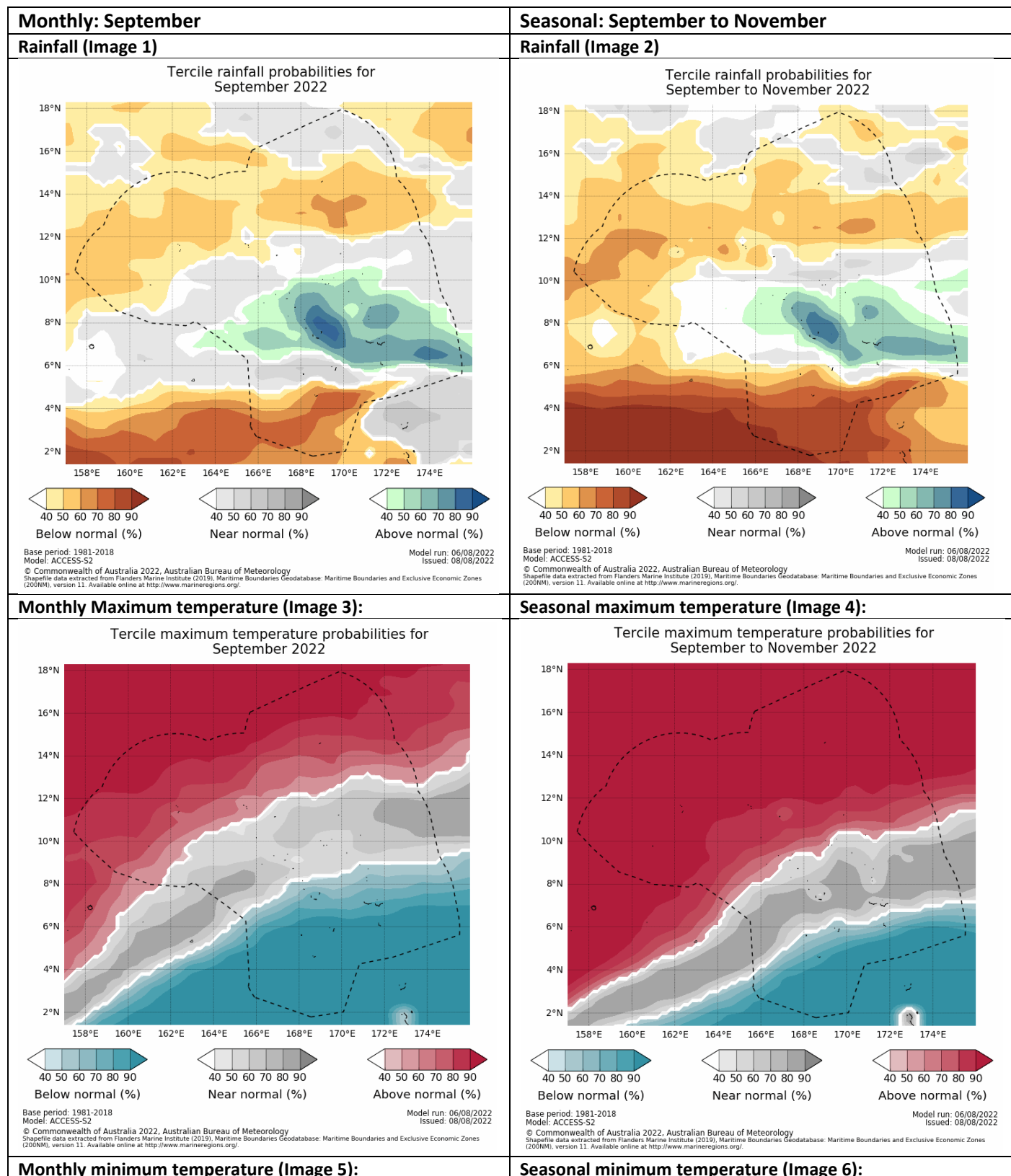
Moderate  $5 \leq X < 10$

Good:  $10 \leq X < 15$

High:  $15 \leq X < 25$

Very High:  $25 \leq X < 35$  Exceptional:  $X \geq 35$

## Part 1i. Monthly and Seasonal Outlooks for September and September to November 2022



**NB: The X LEPS % score has been categorised as follows:**

Very Low:  $X < 0.0$

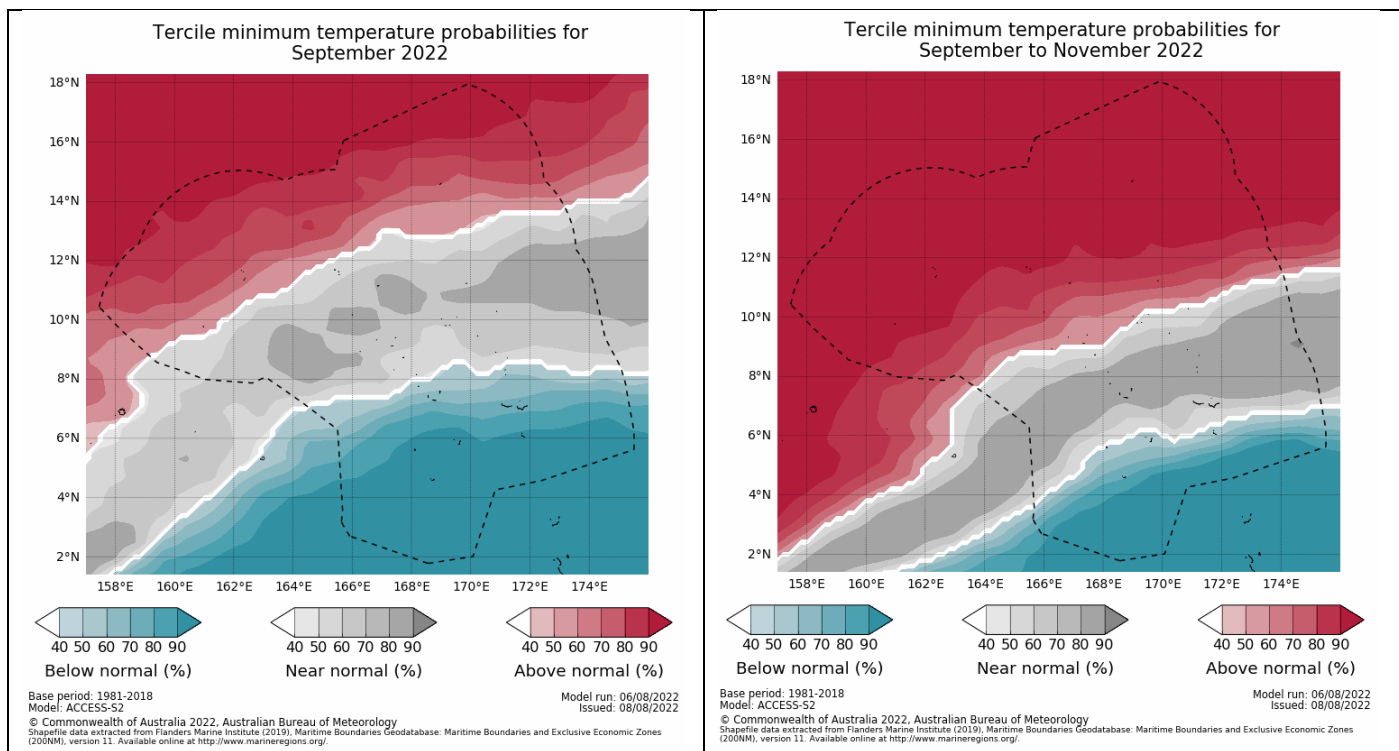
Low:  $0 \leq X < 5$

Moderate  $5 \leq X < 10$

Good:  $10 \leq X < 15$

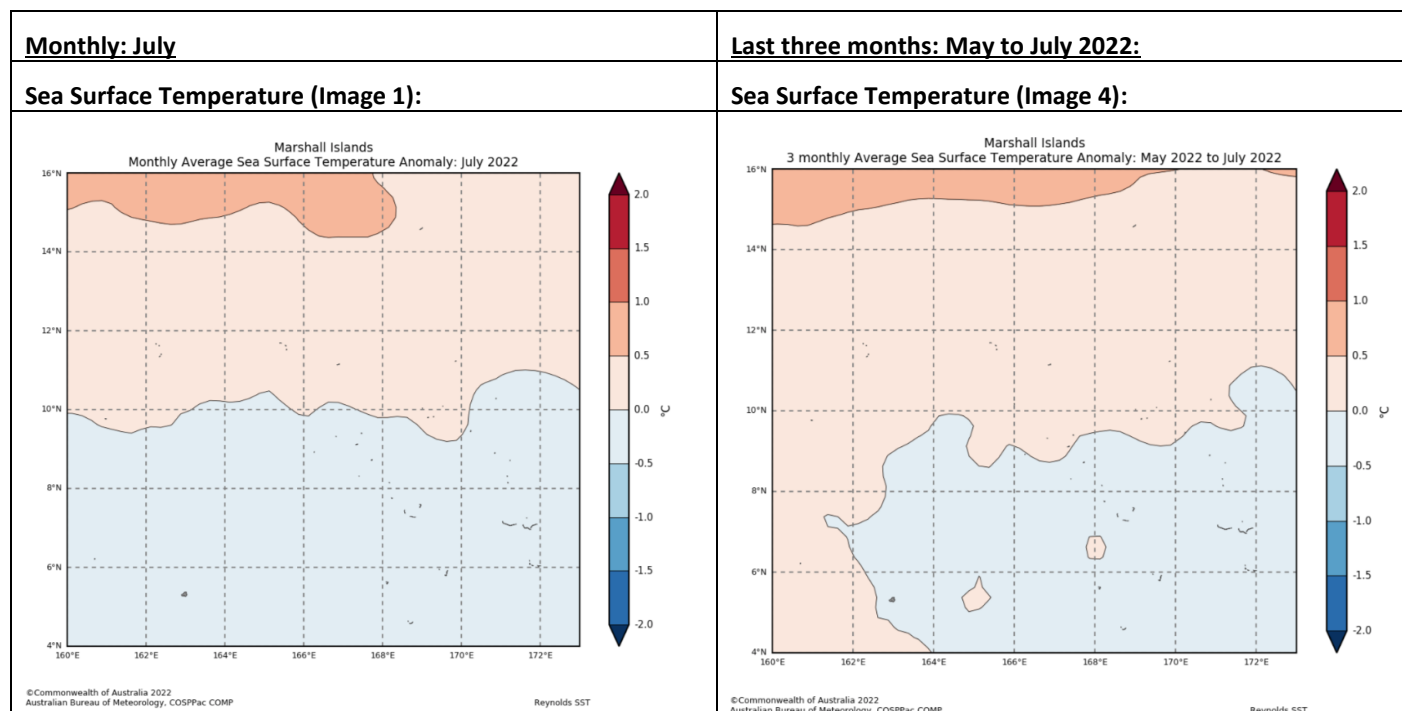
High:  $15 \leq X < 25$

Very High:  $25 \leq X < 35$  Exceptional:  $X \geq 35$



## Part 2: Recent Ocean Observation

### Monthly: July 2022



**NB: The X LEPS % score has been categorised as follows:**

Very Low:  $X < 0.0$

Low:  $0 \leq X < 5$

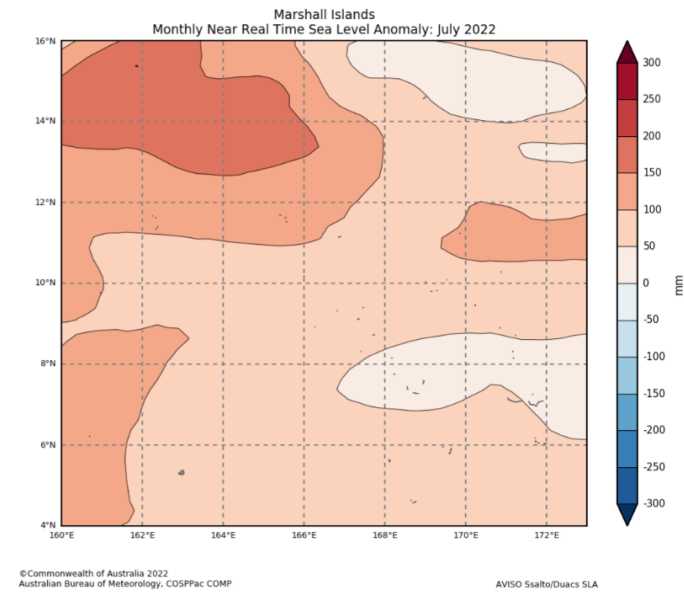
Moderate:  $5 \leq X < 10$

Good:  $10 \leq X < 15$

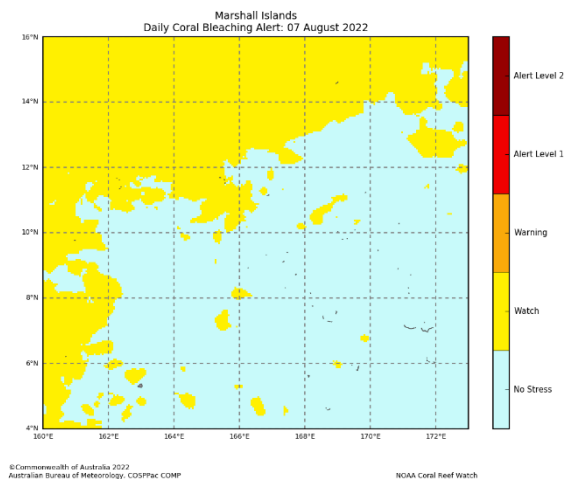
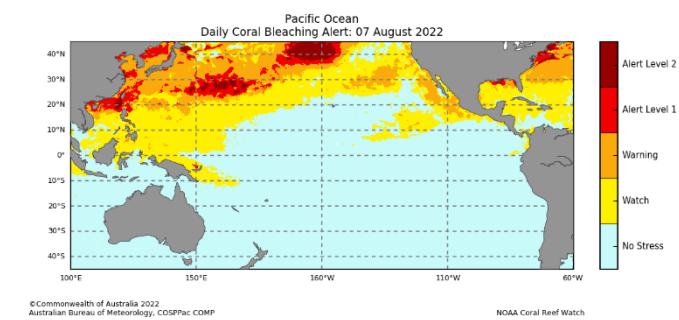
High:  $15 \leq X < 25$

Very High:  $25 \leq X < 35$  Exceptional:  $X \geq 35$

## Sea level (Image 2):



## Daily coral bleaching alert (Image 3):



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Low:  $0 \leq X < 5$

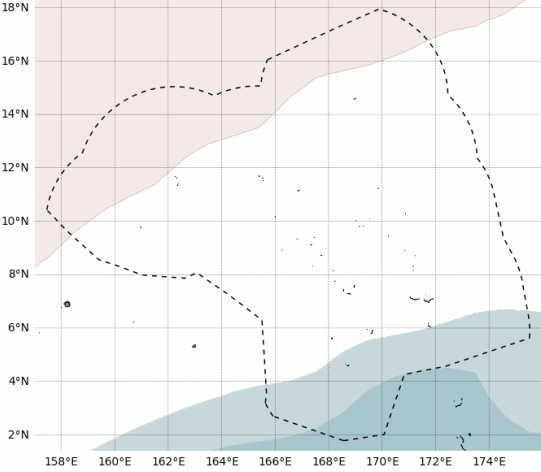
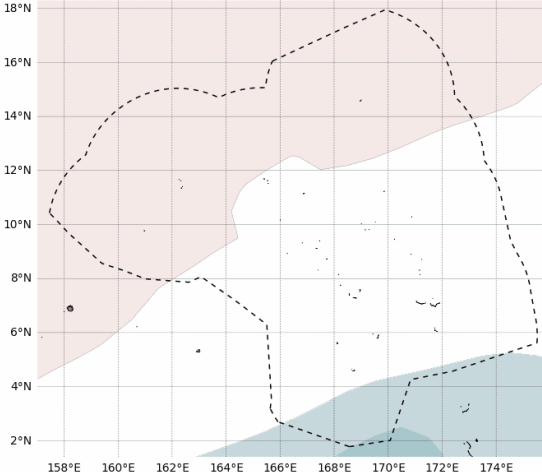
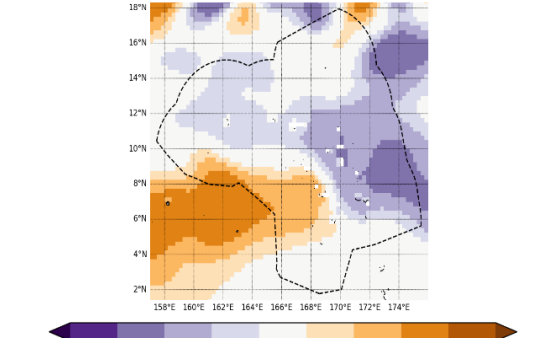
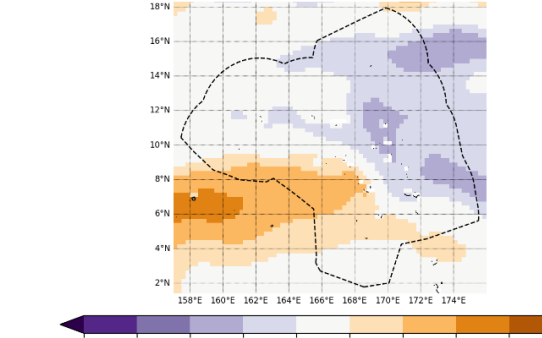
Moderate  $5 \leq X < 10$

Good:  $10 \leq X < 15$

High:  $15 \leq X < 25$

Very High:  $25 \leq X < 35$  Exceptional:  $X \geq 35$

## Part 2i. Monthly and Seasonal Outlooks for September and September to November 2022

Monthly: September	Seasonal: September to November
Monthly sea surface temperature (Image 5):	Seasonal sea surface temperature (Image 6):
<p>Difference from average sea surface temperature forecast for September 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. Australian Bureau of Meteorology Shapellie data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.maritimerregions.org/">http://www.maritimerregions.org/</a></p> <p>Model run: 13/08/2022 Issued: 15/08/2022</p>	<p>Difference from average sea surface temperature forecast for September to November 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. Australian Bureau of Meteorology Shapellie data extracted from Flanders Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.maritimerregions.org/">http://www.maritimerregions.org/</a></p> <p>Model run: 13/08/2022 Issued: 15/08/2022</p>
Monthly sea level (Image 7):	Seasonal sea level (Image 8):
<p>Difference from average sea surface height forecast for September 2022</p>  <p>© Commonwealth of Australia 2022 Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base Period: 1981-2018</p> <p>Model Run: 28/07/2022 Issued: 03/08/2022</p>	<p>Difference from average sea surface height forecast for September 2022 to November 2022</p>  <p>© Commonwealth of Australia 2022 Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base Period: 1981-2018</p> <p>Model Run: 28/07/2022 Issued: 03/08/2022</p>
4-week Coral Bleaching (Image 9):	

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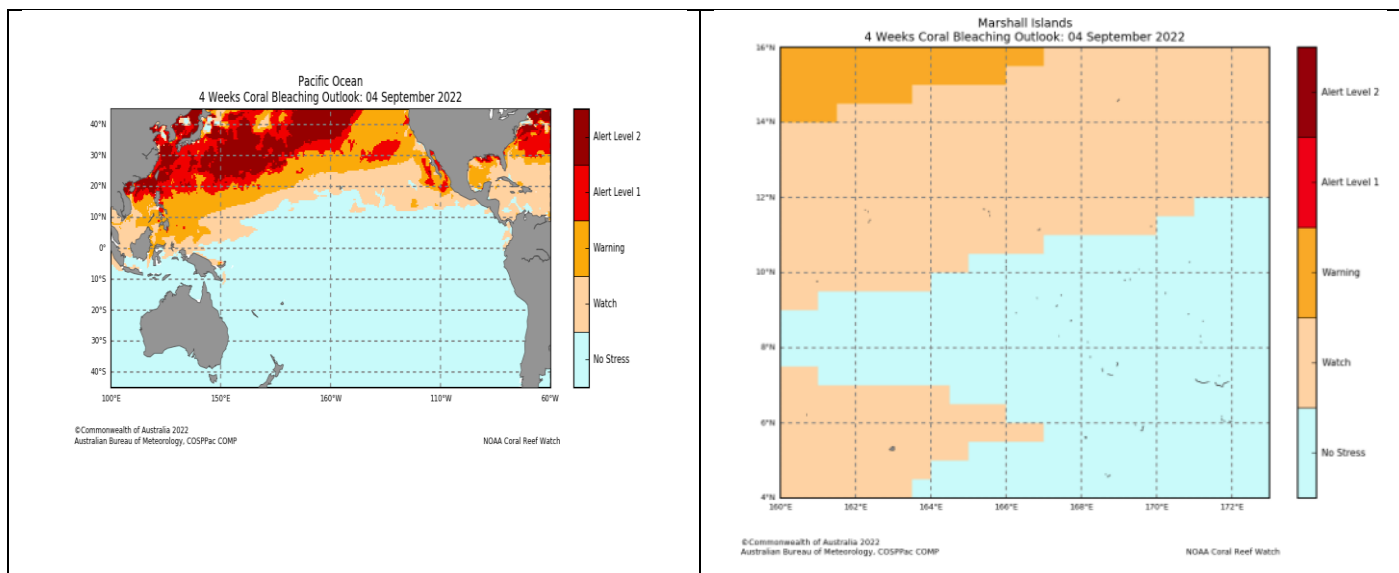
Low:  $0 \leq X < 5$

Moderate:  $5 \leq X < 10$

Good:  $10 \leq X < 15$

High:  $15 \leq X < 25$

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## Summary Statement

### Monthly and last three months: July 2022/May to July 2022 statement (Highly significant changes)

Normal rainfall was recorded at both Majuro and Kwajalein for the month of July. For May to July, below normal was recorded at Majuro and ranked the 5<sup>th</sup> driest period. Kwajalein recorded above normal for the period.

## Part 1i. Monthly and Seasonal Outlooks for September and September to November 2022

### Monthly /Seasonal rainfall and temperature Outlook statements (Highly significant changes)

The outlooks for September and September to November show rainfall is likely to be above normal at Majuro and Kwajalein. Below normal is likely at the islands further north of Kwajalein, including Bikini and Enewetak atolls, as well as the islands south of 5°N.

September maximum and minimum temperatures are likely to be near-normal for the central part of the Marshall Islands, including Kwajalein, but below normal further south, including Majuro. For the northern islands, including Bikini and Enewetak, the maximum and minimum temperatures are likely to be above normal. At the islands south of 5°N, temperatures are likely to be below normal.

Maximum temperatures averaged over Sep-Nov are likely to be near-normal at Majuro and above normal at Kwajalein, while minimum temperatures are likely to be near-normal at both sites.

## Part 2: Recent Ocean summary statement

### Monthly and last three months: July/May to July 2022 (Highly significant changes)

For July and May to July, SSTs were cooler than normal for southern islands of the Marshall Islands including Majuro. For the northern part of the region, SSTs were near normal.

July sea levels were ranging from 50 to 100 mm above average across the most part of the Marshall Islands, except for Bikini and Enewetak experiencing significant sea level anomalies ranging from 100 mm to 200 mm above normal.

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Very High:  $25 \leq X < 35$       Exceptional:  $X \geq 35$

The northern Marshall Islands was placed on WATCH status for coral bleaching. However, for the southern part, NO STRESS status for coral bleaching was in place.

## Part 2i. Monthly and Seasonal Outlooks for September and September to November 2022

### Ocean Variable statement *(Highly significant changes)*

The monthly and seasonal outlooks show near-normal SSTs for most of the Marshall Islands during September and September to November.

The monthly and seasonal outlooks both indicate below average sea levels of -30 to -200 mm across most of the Marshall Islands, with exception of the Ralik Chain forecasted to experience normal or above normal sea level anomalies ranging from 30 to 100mm.

*Coral bleaching outlook is on watch status for the islands located on the farthest northern part of the Marshall Islands, but for the southern part, no thermal stress status.*

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

Product	Date: July 2022	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin					
EAR Watch					
Monthly Climate Briefing	7/20/2022	Office of the Chief Secretary and the NDMO	6	4	2
Ocean Outlook					
Climate data request					
<b>Total</b>			6	4	2

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