

# Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 181

Country: Kiribati

## Part 1: Recent climate

**TABLE 1: Monthly Rainfall**

Station (include data period)	Jul-2022	Aug-2022	Sep-2022				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Beru (1932-2022)	129.0	18.5	14.7	25.7	76.0	47.0	13/66
Butaritari (1931-2022)	306.3	197.8	186.9	111.7	178.7	137.0	61/85
Kanton (1937-2022)				22.2	63.8	42.7	
Kiritimati (1921-2022)	21.6	4.8	4.0	4.0	17.8	8.2	33/97
Tarawa (1950-2022)	156.7	41.6	95.1	58.0	142.4	85.8	41/75
Arorae (1950-2022)	20.9	15.2	16.6	41.0	115.0	73.0	4/56

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

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Beru (1932-2022)	162.2	Normal	134.0	313.7	200.6	28/64
Butaritari (1931-2022)	691.0	Normal	506.8	737.5	625.3	49/85
Kanton (1937-2022)			158.6	240.4	183.0	
Kiritimati (1921-2022)	30.4	Below normal	52.2	113.2	84.2	22/97
Tarawa (1950-2022)	293.4	Normal	198.5	541.2	336.0	33/75
Arorae (1950-2022)	52.7	Below normal	216.3	445.0	328.0	1/54

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

Very Low:  $X < 0.0$

Low:  $0 \leq X < 5$

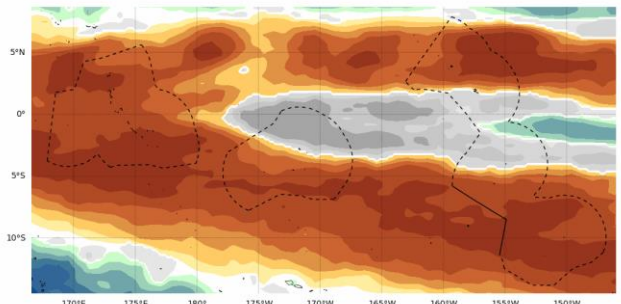
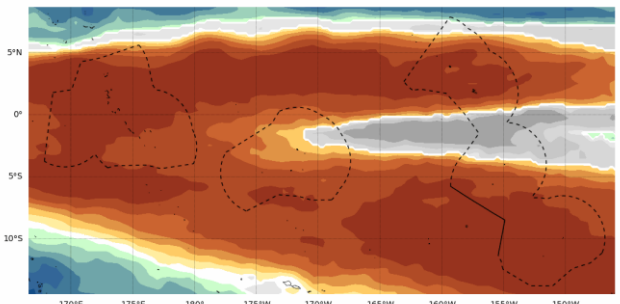
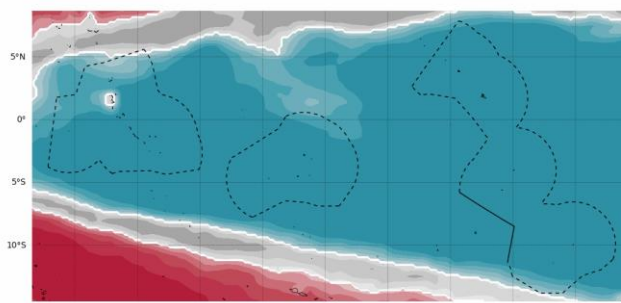
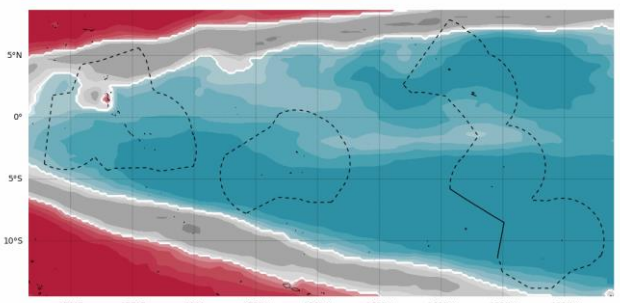
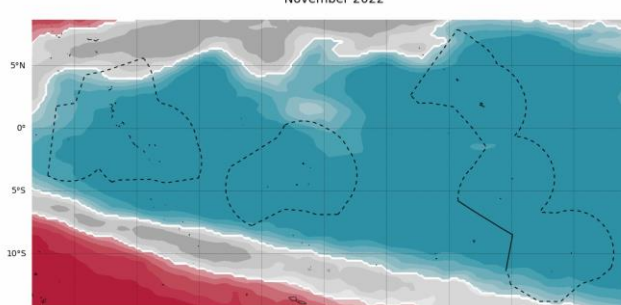
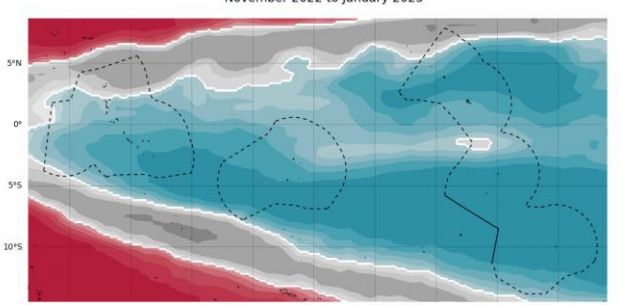
Moderate  $5 \leq X < 10$

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 November and November to January 2023

Monthly: November	Seasonal: November to January
Rainfall (Image 1)	Rainfall (Image 2)
<p>Tercile rainfall probabilities for November 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at <a href="http://www.maritimeregions.org/">http://www.maritimeregions.org/</a></p>	<p>Tercile rainfall probabilities for November 2022 to January 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at <a href="http://www.maritimeregions.org/">http://www.maritimeregions.org/</a></p>
Monthly Maximum temperature (Image 3):	Seasonal maximum temperature (Image 4):
<p>Tercile maximum temperature probabilities for November 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at <a href="http://www.maritimeregions.org/">http://www.maritimeregions.org/</a></p>	<p>Tercile maximum temperature probabilities for November 2022 to January 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at <a href="http://www.maritimeregions.org/">http://www.maritimeregions.org/</a></p>
Monthly minimum temperature (Image 5):	Seasonal minimum temperature (Image 6):
<p>Tercile minimum temperature probabilities for November 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at <a href="http://www.maritimeregions.org/">http://www.maritimeregions.org/</a></p>	<p>Tercile minimum temperature probabilities for November 2022 to January 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapfile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008), version 11. Available online at <a href="http://www.maritimeregions.org/">http://www.maritimeregions.org/</a></p>

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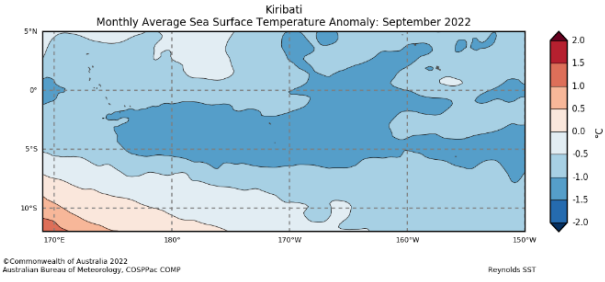
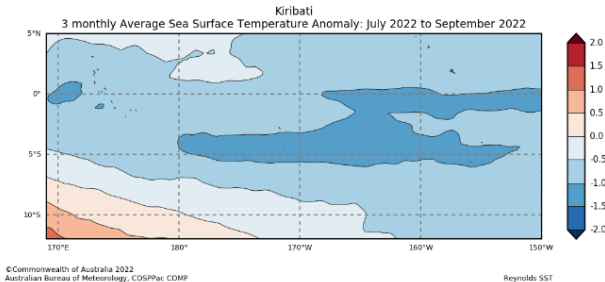
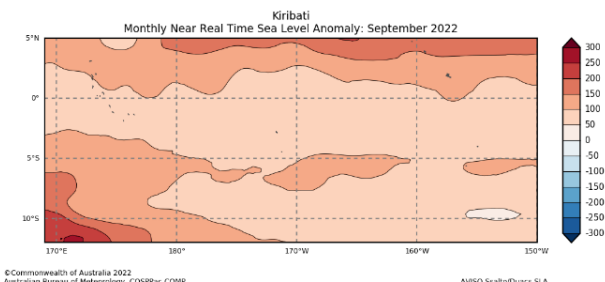
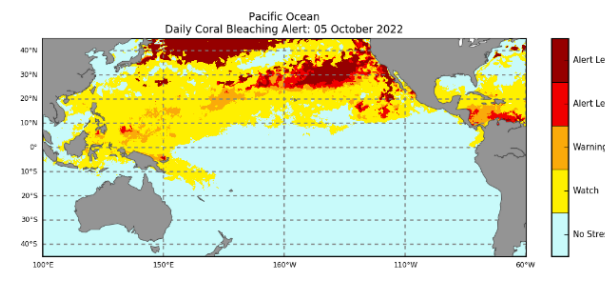
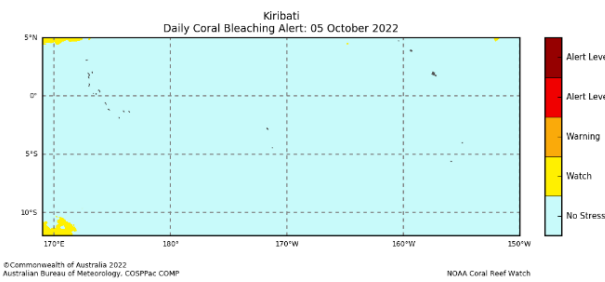
Good:  $10 \leq X < 15$

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## Part 2: Recent Ocean Observation

### Monthly/Three months: September 2022 and July to September 2022

Monthly: September	Last three months: July to September 2022:
Sea Surface Temperature (Image 1):	Sea Surface Temperature (Image 4):
 <p>Monthly Average Sea Surface Temperature Anomaly: September 2022</p> <p>Kiribati</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>Reynolds SST</p>	 <p>3 monthly Average Sea Surface Temperature Anomaly: July 2022 to September 2022</p> <p>Kiribati</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>Reynolds SST</p>
Sea level (Image 2):	
 <p>Monthly Near Real Time Sea Level Anomaly: September 2022</p> <p>Kiribati</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>AVISO SeaLands/Quercus SLA</p>	
Daily coral bleaching alert (Image 3):	
 <p>Pacific Ocean Daily Coral Bleaching Alert: 05 October 2022</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>NOAA Coral Reef Watch</p>	 <p>Kiribati Daily Coral Bleaching Alert: 05 October 2022</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>NOAA Coral Reef Watch</p>

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Part 2i. Monthly and Seasonal Outlooks for November and November to January 2023

Monthly: November	Seasonal: November to January
Monthly sea surface temperature (Image 5):	Seasonal sea surface temperature (Image 6):
<div><p>Difference from average sea surface temperature forecast for November 2022</p><p>Difference from average (°C)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, 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 <a href="http://www.maritimeregions.org/">http://www.maritimeregions.org/</a></p><p>Model run: 10/10/2022 Issued: 12/10/2022</p></div>	<div><p>Difference from average sea surface temperature forecast for November 2022 to January 2023</p><p>Difference from average (°C)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, 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 <a href="http://www.maritimeregions.org/">http://www.maritimeregions.org/</a></p><p>Model run: 10/10/2022 Issued: 12/10/2022</p></div>
Monthly sea level (Image 7):	Seasonal sea level (Image 8):
<div><p>Difference from average sea surface height forecast for November 2022</p><p>Difference from average (mm)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, 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 <a href="http://www.maritimeregions.org/">http://www.maritimeregions.org/</a></p><p>Model run: 10/10/2022 Issued: 12/10/2022</p></div>	<div><p>Difference from average sea surface height forecast for November 2022 to January 2023</p><p>Difference from average (mm)</p><p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, 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 <a href="http://www.maritimeregions.org/">http://www.maritimeregions.org/</a></p><p>Model run: 10/10/2022 Issued: 12/10/2022</p></div>
4-week Coral Bleaching (Image 9):	
<div><p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 30 October 2022</p><p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac: COMP</p><p>NOAA Coral Reef Watch</p></div>	<div><p>Kiribati 4 Weeks Coral Bleaching Outlook: 30 October 2022</p><p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac: COMP</p><p>NOAA Coral Reef Watch</p></div>

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## Summary Statement

### Monthly and last three months: September 2022/July to September 2022 statement

*Below normal rainfall was recorded at Beru and Arorae. Normal rainfall was received in Kiritimati and Tarawa while Butaritari received above normal rainfall for the month of September 2022. This was the fourth driest September on record at Arorae.*

*For the three-month period, below normal rainfall was received at Arorae and Kiritimati, while Beru, Butaritari and Tarawa received normal rainfall. Arorae recorded its driest July to September on record.*

*Kanton rainfall data is not available.*

## Part 1i. Monthly and Seasonal Outlooks for November and November to January 2023

### Monthly /Seasonal rainfall and temperature Outlook statements

The rainfall for November is very likely to be below normal over most parts of the Kiribati region. However, the Northern Phoenix and Central Line groups are likely to have near-normal rainfall

Rainfall for November to January is very likely to be below normal for Kiribati, except for central parts of the Line group where rainfall is likely to be near-normal.

Maximum and minimum temperatures during November are very likely to be below normal for the whole country.

Maximum and minimum temperatures averaged over November to January are very likely to be below normal over the Kiribati region, apart from the northernmost islands in the Gilbert group where temperatures are likely to be near-normal.

## Part 2: Recent Ocean summary statement

### Monthly and last three months: September/July to September 2022

The sea surface temperature for September and the last three months, July to September, was below normal ranging from -0.5 to -1.5 degrees for the Kiribati region. The sea level for September was above normal for Kiribati ranging from 50 to 150mm.

Coral bleaching alerts reveals no thermal stress.

## Part 2i. Monthly and Seasonal Outlooks for September and September to January 2023

### Ocean Variable statement

The monthly outlook for November predicts below normal temperatures of utmost -2.0 degrees for the whole country.

The seasonal SST outlook for November to January also predicts a below normal temperatures of utmost -2.0 degrees however, the northernmost islands in the Gilbert and Line groups anticipating a near-normal temperature.

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The monthly and seasonal sea level anomaly outlook for November, and November 2022 to January 2023, reveals above normal sea level height differences of utmost 100mm over the Gilbert Islands. Southern Line Islands reveal below normal differences of utmost –60mm. The remaining islands are forecasted to have normal conditions.

Coral bleaching outlook for the next four weeks reveals no thermal stress over the Kiribati groups.

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

Product	Date: September 2022	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin	9 <sup>th</sup>	Government and Non-Government Organisations and public subscribed to the products	118	45	73
Ocean Outlook	9 <sup>th</sup>	Government and Non-Government Organisations and public subscribed to the products	118	45	73
Media release	9 <sup>th</sup>	National Media and KMS staff	53	23	30
ACCESS-S and EAR Watch virtual training led by COSSPac team	8 <sup>th</sup> , 12 <sup>th</sup>	KMS staff	9	3	6
<b>Total</b>			<b>180</b>	<b>71</b>	<b>109</b>

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