

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 168

Country: Kiribati

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Jun-2021	Jul-2021	Aug-2021				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
Beru (1932-2021)	65.9	101.7	31.0	47.0	93.0	73.2	16/64
Butaritari (1931-2021)	396.4	553.6	152.0	146.7	259.2	202.0	30/84
Kanton (1937-2021)				38.0	90.4	56.8	
Kiritimati (1921-2021)	13.7	30.4	7.4	6.1	25.7	14.1	34/97
Tarawa (1950-2021)	245.8	133.6	54.3	64.5	166.1	106.2	21/74
Arorae (1950-2021)	48.2	151.1	45.7	75.0	145.7	108.9	12/54

TABLE 2: Three-month Total Rainfall for June to August 2021

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Beru (1932-2021)	198.6	Normal	160.7	319.7	209.5	29/62
Butaritari (1931-2021)	1102.0	Above normal	605.4	843.3	662.0	75/83
Kanton (1937-2021)			190.7	297.0	250.8	
Kiritimati (1921-2021)	51.5	Below normal	89.3	182.1	132.0	21/97
Tarawa (1950-2021)	433.7	Normal	264.5	526.0	361.0	40/74
Arorae (1950-2021)	245.0	Normal	233.7	421.7	307.3	20/54

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

Very Low: $X < 0.0$

Low: $0 \leq X < 5$

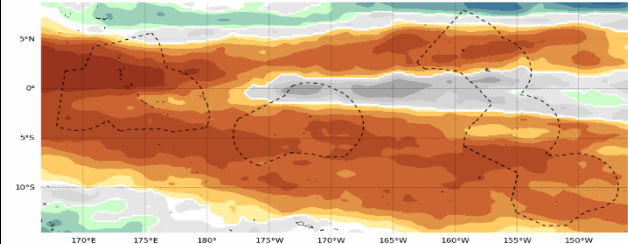
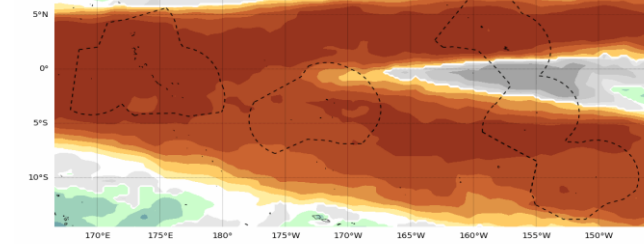
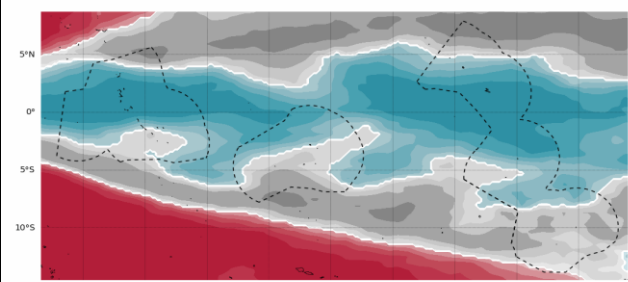
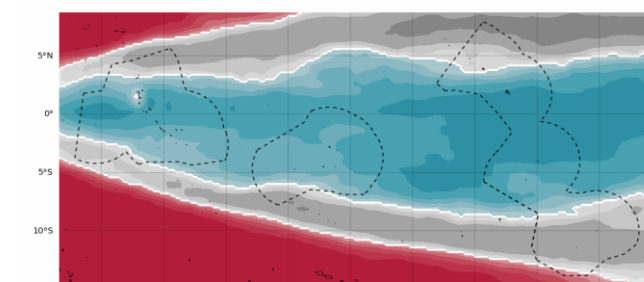
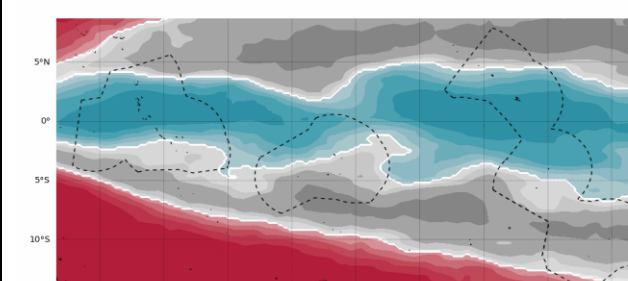
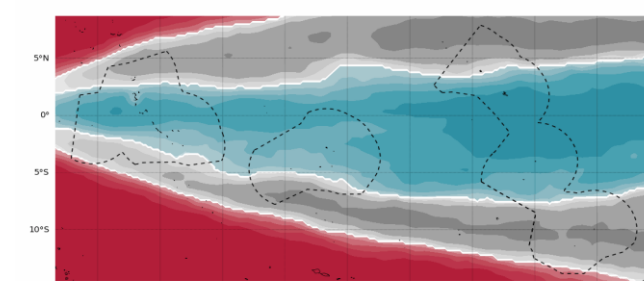
Moderate $5 \leq X < 10$

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 October and October to December 2021

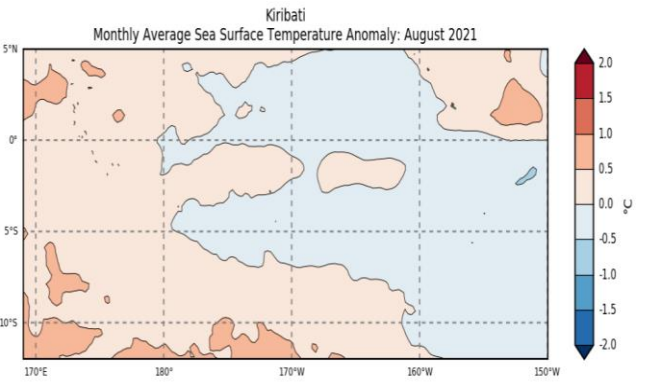
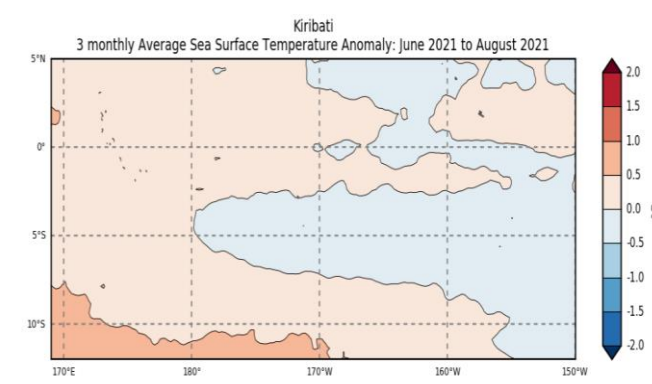
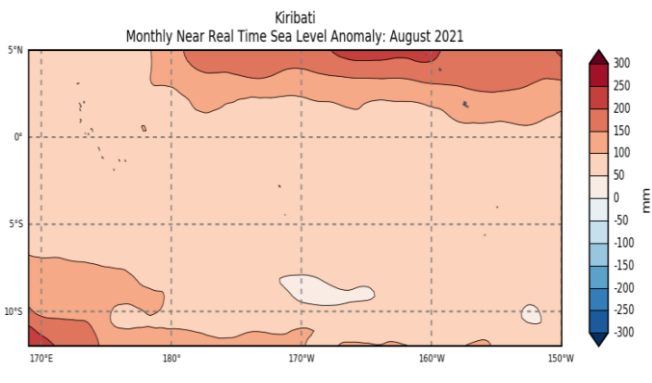
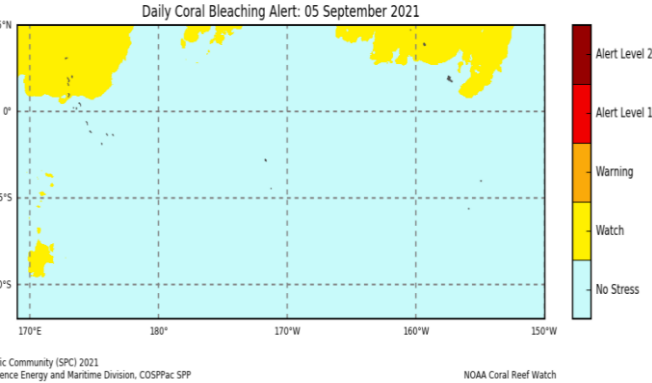
Monthly	Seasonal
<p>Rainfall (Image 1)</p> <p>Tercile rainfall probabilities for October 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology <small>Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008M), version 11. Available online at http://www.marine.gov.au/</small></p> <p>Model: ACCESS-S1 Model run: 30/08/2021 Base period: 1990-2012 Issued: 02/09/2021</p>	<p>Rainfall (Image 2)</p> <p>Tercile rainfall probabilities for October to December 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology <small>Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008M), version 11. Available online at http://www.marine.gov.au/</small></p> <p>Model: ACCESS-S1 Model run: 30/08/2021 Base period: 1990-2012 Issued: 02/09/2021</p>
<p>Monthly Maximum temperature (Image 3):</p> <p>Tercile maximum temperature probabilities for October 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology <small>Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008M), version 11. Available online at http://www.marine.gov.au/</small></p> <p>Model: ACCESS-S1 Model run: 30/08/2021 Base period: 1990-2012 Issued: 02/09/2021</p>	<p>Seasonal maximum temperature (Image 4):</p> <p>Tercile maximum temperature probabilities for October to December 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology <small>Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008M), version 11. Available online at http://www.marine.gov.au/</small></p> <p>Model: ACCESS-S1 Model run: 30/08/2021 Base period: 1990-2012 Issued: 02/09/2021</p>
<p>Monthly minimum temperature (Image 5):</p> <p>Tercile minimum temperature probabilities for October 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology <small>Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008M), version 11. Available online at http://www.marine.gov.au/</small></p> <p>Model: ACCESS-S1 Model run: 30/08/2021 Base period: 1990-2012 Issued: 02/09/2021</p>	<p>Seasonal minimum temperature (Image 6):</p> <p>Tercile minimum temperature probabilities for October to December 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology <small>Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2008M), version 11. Available online at http://www.marine.gov.au/</small></p> <p>Model: ACCESS-S1 Model run: 30/08/2021 Base period: 1990-2012 Issued: 02/09/2021</p>

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 summary statement

Monthly: August 2021

Monthly: August	Last three months: June to August 2021:
<p>Sea Surface Temperature (Image 1):</p>  <p>©Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, COSPPac SPP Reynolds SST</p>	<p>Sea Surface Temperature (Image 4):</p>  <p>©Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, COSPPac SPP Reynolds SST</p>
<p>Sea level (Image 2):</p>  <p>©Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, COSPPac SPP AVISO Ssalto/Duacs SLA</p>	
<p>Daily coral bleaching alert (Image 3):</p>  <p>©Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, COSPPac SPP NOAA Coral Reef Watch</p>	

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Part 2i. Monthly and Seasonal Outlooks for October and October to December 2021

<p>Monthly: October</p>	<p>Seasonal: October to December</p>
<p>Monthly sea surface temperature (Image 5):</p>	<p>Seasonal sea surface temperature (Image 6):</p>
<p>Difference from average sea surface temperature forecast for October 2021</p> <p>Difference from average (°C)</p> <p>Model: ACCESS-S1 Base period: 1990-2012 Model run: 04/09/2021 Issued: 06/09/2021</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology Geospatial data extracted from Australian Marine Authority (2018), Australian Geospatial Data Infrastructure, Maritime Standards and Certification Executive Order (2008), version 11. Available online at http://www.marine.gov.au</p>	<p>Difference from average sea surface temperature forecast for December 2021</p> <p>Difference from average (°C)</p> <p>Model: ACCESS-S1 Base period: 1990-2012 Model run: 04/09/2021 Issued: 06/09/2021</p> <p>© Commonwealth of Australia 2021, Australian Bureau of Meteorology Geospatial data extracted from Australian Marine Authority (2018), Australian Geospatial Data Infrastructure, Maritime Standards and Certification Executive Order (2008), version 11. Available online at http://www.marine.gov.au</p>
<p>Monthly sea level (Image 7):</p>	<p>Seasonal sea level (Image 8):</p>
<p>Difference from average sea surface height forecast for October 2021</p> <p>Difference from average (mm)</p> <p>Model: ACCESS-S1 Base Period: 1990-2012 Model Run: 27/08/2021 Issued: Map not issued</p> <p>© Commonwealth of Australia 2021 Bureau of Meteorology</p>	<p>Difference from average sea surface height forecast for October 2021 to December 2021</p> <p>Difference from average (mm)</p> <p>Model: ACCESS-S1 Base Period: 1990-2012 Model Run: 27/08/2021 Issued: Map not issued</p> <p>© Commonwealth of Australia 2021 Bureau of Meteorology</p>
<p>4-week Coral Bleaching (Image 9):</p>	
<p>Kiribati 4 Weeks Coral Bleaching Outlook: 26 September 2021</p> <p>Alert Level 2 Alert Level 1 Warning Watch No Stress</p> <p>©Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, COSPPac SFP NOAA Coral Reef Watch</p>	

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Summary Statement

Monthly and last three months: August 2021/June to August statement

In August 2021, below normal rainfall was recorded at Beru, Tarawa and Arorae, while Butaritari and Kiritimati recorded near normal rainfall.

For June to August 2021, Kiritimati received below normal rainfall while Beru, Tarawa and Aorae recorded normal rainfall. Above normal rainfall was received at Butaritari station. This was the ninth wettest June to August on record at Butaritari.

Rainfall data is not available for Kanton.

Part 1i. Monthly and Seasonal Outlooks for October and October to December 2021

Monthly /Seasonal rainfall and temperature Outlook statements

The monthly rainfall outlook for all the Kiribati region (except central Line and northern Phoenix) is very likely to be below normal rainfall. Near normal rainfall is expected for the central parts of the Line and northern Phoenix. The seasonal rainfall outlook for all the Kiribati region is very likely to be below normal while the central parts of the Line group will remain near normal.

The monthly and seasonal minimum and maximum temperature outlook is very likely to be below normal for northern Phoenix and central parts of the Gilbert and Line groups. Near normal temperature is very likely for the northern most parts of the Gilbert and Line groups and the southern most parts of all the groups.

Part 2: Recent Ocean summary statement

Monthly and last three months: August/June to August 2021

The Gilbert and Northern Line islands experienced above average SST while the Phoenix group experienced below average SST ranging from 0.5 to -0.5 degrees in August 2021. For the June to August period, the Gilbert and some parts of the northern Line groups experienced warmer SST while the Phoenix and the northern most islands in the Line group experienced cooler than average SST ranging from 0.0 to -0.5°C.

The monthly sea level anomaly across Kiribati in August 2021 was significantly higher than normal ranging from 50 to 250mm.

The daily coral bleaching alert for the northern Gilbert and Line groups are on 'watch' status and the rest of the islands experienced no thermal stress.

Part 2i. Monthly and Seasonal Outlooks for October and October to December 2021

Ocean Variable statement

The monthly and seasonal outlook for Kiribati shows a significant temperature difference of up to -3.0°C.

The monthly and seasonal outlook for Kiribati shows a significant sea surface heights difference of -60 to 100mm.

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The 4-weeks coral bleaching outlook shows no thermal stress for Kiribati.

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

Product	Date: August 2021	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin	3 rd	Government Sectors, Non- Government Organisations, Fisheries (coastal and offshore) sector, SPREP, General Public and internal staffs	118 + 122	45	73
EAR Watch	11 th	Government Sectors, Non- Government Organisations, Fisheries (coastal and offshore) sector, SPREP, General Public and internal staffs	118 + 122	45	73
Monthly Media release	3 rd	Media experts	44 +122	25	19
Ocean Outlook	3 rd	Government Sectors, Non- Government Organisations, Fisheries (coastal and offshore) sector, SPREP, General Public and internal staffs	118 + 122	45	73
Total			284	70	92

Note: We couldn't identify the total number of males and females from the 122 number of participants (Line group).

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