

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 188

Country: Niue

Part 1: Recent climate

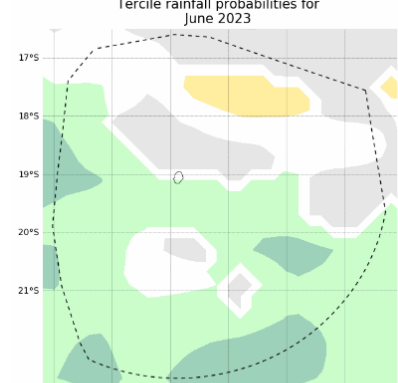
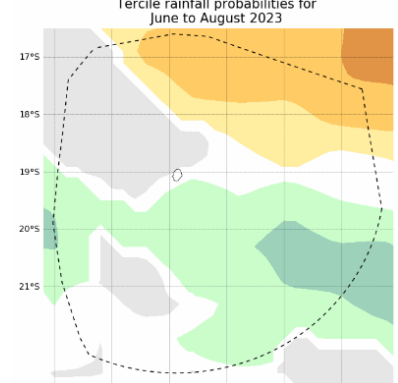
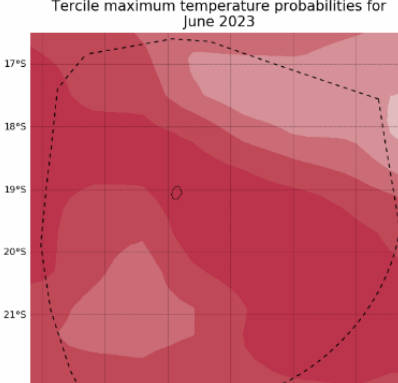
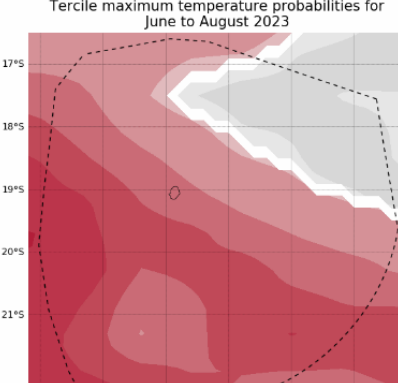
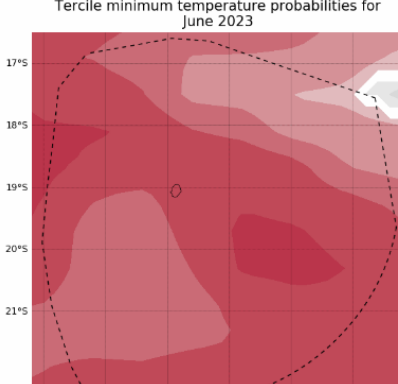
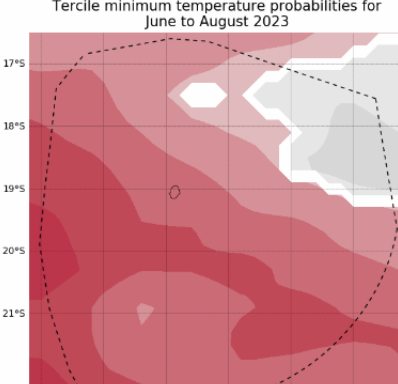
TABLE 1: Monthly Rainfall

Station (include data period)	Feb-2023	Mar-2023	Apr-2023				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
Hanan Airport (1905-2023)	522.2	309.9	315.3	171.9	270.5	219.6	94/118

TABLE 2: Three-month Total Rainfall for February to April 2023

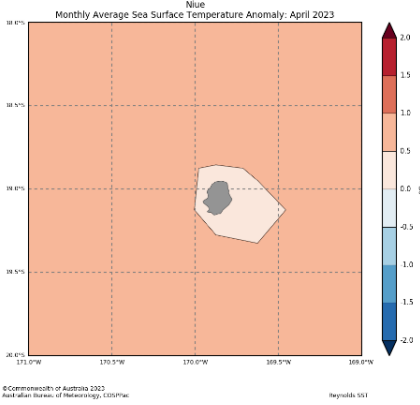
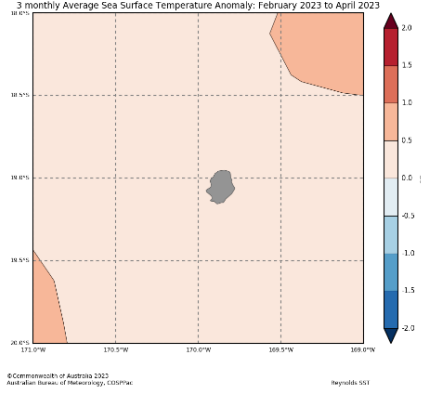
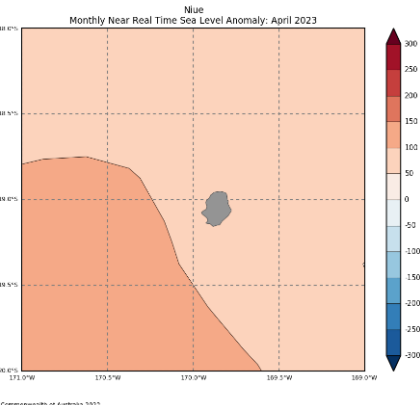
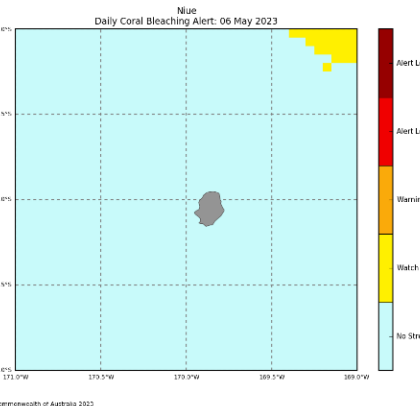
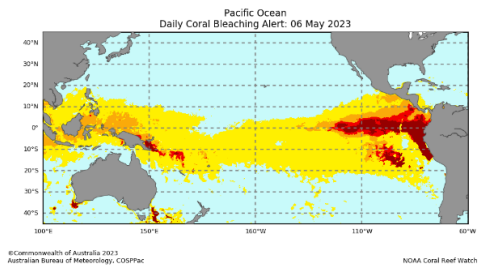
Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Hanan Airport (1905-2023)	1146.2	Above normal	657.9	869.4	761.3	110/118

Part 1i. Monthly and Seasonal Outlooks for June and June to August 2023

Monthly: June	Seasonal: June to August
<p>Rainfall (Image 1)</p> <p>Tercile rainfall probabilities for June 2023</p>  <p>172°W 171°W 170°W 169°W 168°W 167°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>Base period: 1981-2018 Model: ACCESS-2 Model run: 06/05/2023 Issued: Map not issued</p> <p><small>© Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2018). Maritime Boundaries: Geobasebase: Maritime Boundaries and Exclusive Economic Zones (220786), version 11. Available online at http://www.marine.gov.au</small></p>	<p>Rainfall (Image 2)</p> <p>Tercile rainfall probabilities for June to August 2023</p>  <p>172°W 171°W 170°W 169°W 168°W 167°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>Base period: 1981-2018 Model: ACCESS-2 Model run: 06/05/2023 Issued: Map not issued</p> <p><small>© Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2018). Maritime Boundaries: Geobasebase: Maritime Boundaries and Exclusive Economic Zones (220786), version 11. Available online at http://www.marine.gov.au</small></p>
<p>Monthly Maximum temperature (Image 3):</p> <p>Tercile maximum temperature probabilities for June 2023</p>  <p>172°W 171°W 170°W 169°W 168°W 167°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>Base period: 1981-2018 Model: ACCESS-2 Model run: 06/05/2023 Issued: Map not issued</p> <p><small>© Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2018). Maritime Boundaries: Geobasebase: Maritime Boundaries and Exclusive Economic Zones (220786), version 11. Available online at http://www.marine.gov.au</small></p>	<p>Seasonal maximum temperature (Image 4):</p> <p>Tercile maximum temperature probabilities for June to August 2023</p>  <p>172°W 171°W 170°W 169°W 168°W 167°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>Base period: 1981-2018 Model: ACCESS-2 Model run: 06/05/2023 Issued: Map not issued</p> <p><small>© Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2018). Maritime Boundaries: Geobasebase: Maritime Boundaries and Exclusive Economic Zones (220786), version 11. Available online at http://www.marine.gov.au</small></p>
<p>Monthly minimum temperature (Image 5):</p> <p>Tercile minimum temperature probabilities for June 2023</p>  <p>172°W 171°W 170°W 169°W 168°W 167°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>Base period: 1981-2018 Model: ACCESS-2 Model run: 06/05/2023 Issued: Map not issued</p> <p><small>© Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2018). Maritime Boundaries: Geobasebase: Maritime Boundaries and Exclusive Economic Zones (220786), version 11. Available online at http://www.marine.gov.au</small></p>	<p>Seasonal minimum temperature (Image 6):</p> <p>Tercile minimum temperature probabilities for June to August 2023</p>  <p>172°W 171°W 170°W 169°W 168°W 167°W</p> <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>Base period: 1981-2018 Model: ACCESS-2 Model run: 06/05/2023 Issued: Map not issued</p> <p><small>© Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2018). Maritime Boundaries: Geobasebase: Maritime Boundaries and Exclusive Economic Zones (220786), version 11. Available online at http://www.marine.gov.au</small></p>

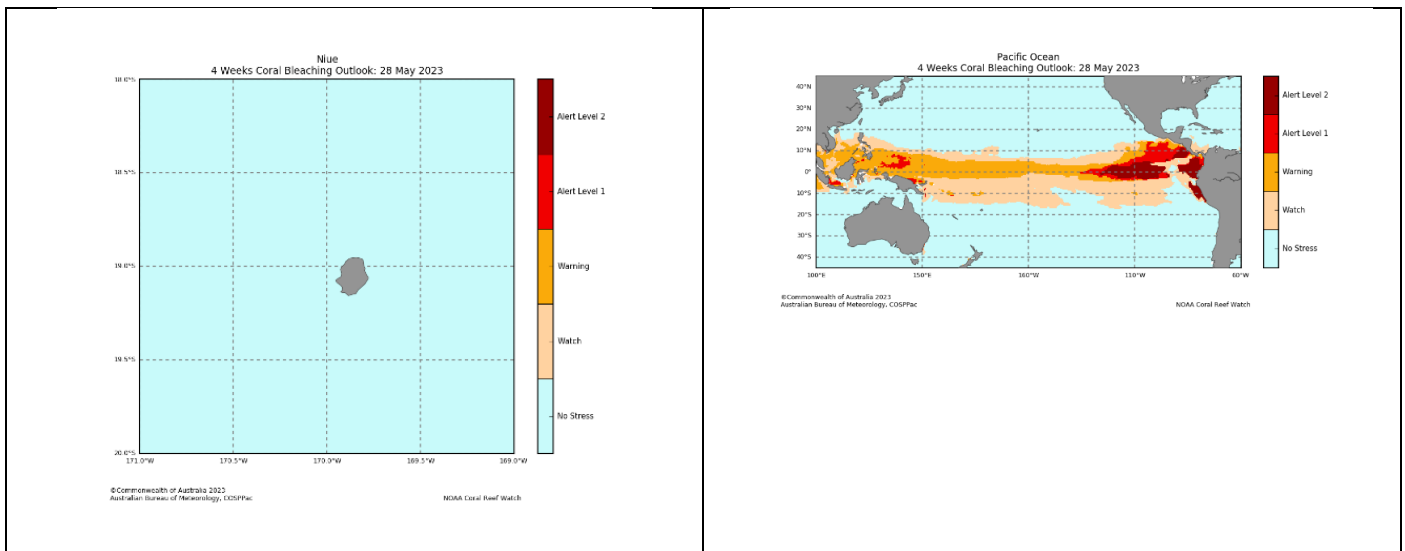
Part 2: Recent Ocean Observation

Monthly/Three months: April and February to April 2023

<p>Monthly: April</p>	<p>Last three months: February to April 2023:</p>
<p>Sea Surface Temperature (Image 1):</p>	<p>Sea Surface Temperature (Image 4):</p>
 <p>Niue Monthly Average Sea Surface Temperature Anomaly: April 2023</p> <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac Reynolds SST</p>	 <p>Niue 3 monthly Average Sea Surface Temperature Anomaly: February 2023 to April 2023</p> <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac Reynolds SST</p>
<p>Sea level (Image 2):</p>	
 <p>Niue Monthly Near Real Time Sea Level Anomaly: April 2023</p> <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac AVISO SeaLevel SJA</p>	
<p>Daily coral bleaching alert (Image 3):</p>	
 <p>Niue Daily Coral Bleaching Alert: 06 May 2023</p> <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac NOAA Coral Reef Watch</p>	 <p>Pacific Ocean Daily Coral Bleaching Alert: 06 May 2023</p> <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac NOAA Coral Reef Watch</p>

Part 2i. Monthly and Seasonal Outlooks for June and June to August 2023

<p>Monthly: June</p>	<p>Seasonal: June to August</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 June 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: 13/05/2023 Issued: 16/05/2023</p>	<p>Difference from average sea surface temperature forecast for June to August 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: 13/05/2023 Issued: 16/05/2023</p>
<p>Monthly sea level (Image 7):</p>	<p>Seasonal sea level (Image 8):</p>
<p>Difference from average sea surface height forecast for June 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: 13/05/2023 Issued: 16/05/2023</p>	<p>Difference from average sea surface height forecast for June to August 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: 13/05/2023 Issued: 16/05/2023</p>
<p>4-week Coral Bleaching (Image 9):</p>	



Summary Statement

Monthly and last three months: April 2023/February to April 2023 statement

Hanan Airport's April rainfall and February to April rainfall was above normal. Hanan Airport registered its ninth wettest February – April in 118 years of record.

Part 1i. Monthly and Seasonal Outlooks for June and June to August 2023

Monthly /Seasonal rainfall and temperature Outlook statements

The outlook for Niue for June and June to August offers little guidance for the main island as the chances of above normal, normal and below normal rainfall are similar. However, rainfall is likely to be above normal rainfall over the central and southern part of the EEZ. Rainfall for the north of Niue's EEZ is likely to be below normal for both periods.

Maximum and minimum temperatures during June and averaged over June to August are very likely to be above normal.

Part 2: Recent Ocean summary statement

Monthly and last three months: April 2023/February to April 2023

April ocean temperatures around Niue were above normal by 0.5 to 1°C.

Averaged over February to April, ocean temperatures were near normal.

April sea levels around were 50mm to 150mm above normal.

Coral bleaching reveals no thermal stress for Niue.

Part 2i. Monthly and Seasonal Outlooks for June and June to August 2023

Ocean Variable statement

The monthly, June, sea surface temperature around the main island is predicted to be above normal ranging from 0.4 to 0.8 degrees, while southeast of the EEZ temperatures were 0.8 to 1.2 degrees above normal.

The seasonal sea surface temperature outlook, June to August, indicates above normal SST ranging from 0.4 to 0.8 degrees.

Monthly and seasonal sea levels are forecasted to be near normal around Niue, increasing to 30 to 60mm above normal in the far southeast of the EEZ.

Coral bleaching outlook for the next four weeks reveals no thermal stress for Niue.

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

Product	Date: April 2023	Stakeholder	Total Number of Participants	Number of Male	Number of Female	Comments (If there are comments from you Stakeholders)
Climate Bulletin	21/04/2023	<ul style="list-style-type: none"> • Private Sector • Government Officials • Government staff • Stakeholders 	45	20	25	
EAR Watch						
Monthly Climate Briefing	02/04/2023 16/04/2023	Ekalesia Niue Youth Groups	60 40	15 10	45 30	
Ocean Outlook						
Climate data request						
Total			145	45	100	