

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 178

Country: Niue

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Apr-2022	May-2022	Jun-2022				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
Hanan Airport (1905-2022)	236.1	138.8	141.1	59.4	107.0	81.3	90/117

TABLE 2: Three-month Total Rainfall for April to June 2022

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Hanan Airport (1905-2022)	516.0	Normal	355.3	526.7	443.0	78/116

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

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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 August and August to October 2022

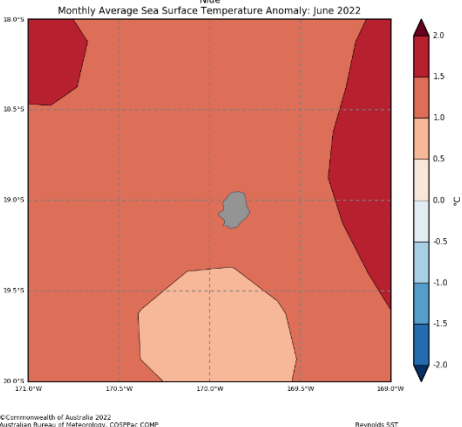
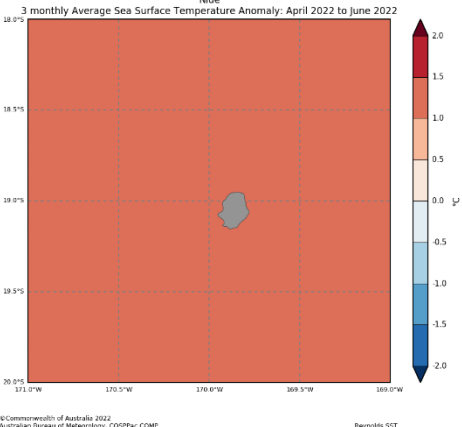
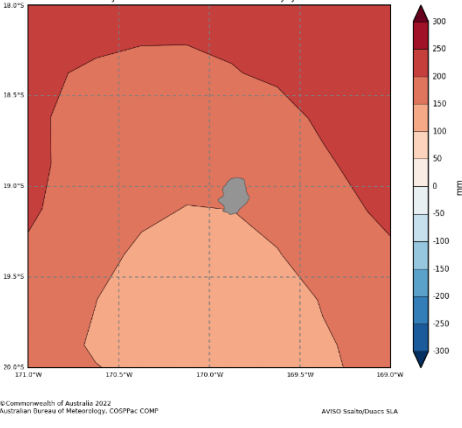
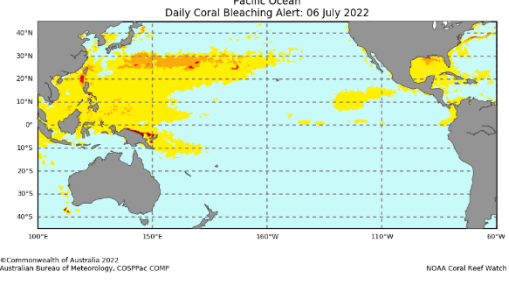
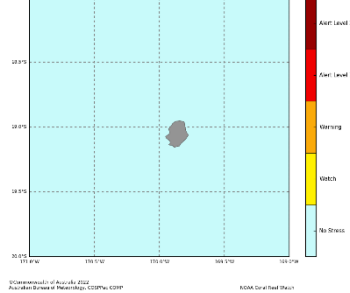
Monthly: August	Seasonal: August to October
<p>Rainfall (Image 1)</p> <p>Tercile rainfall probabilities for August 2022</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (EZZs), version 11. Available online at http://www.marine.gov.au</p>	<p>Rainfall (Image 2)</p> <p>Tercile rainfall probabilities for August to October 2022</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 (EZZs), version 11. Available online at http://www.marine.gov.au</p>
<p>Monthly Maximum temperature (Image 3):</p> <p>Tercile maximum temperature probabilities for August 2022</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 (EZZs), version 11. Available online at http://www.marine.gov.au</p>	<p>Seasonal maximum temperature (Image 4):</p> <p>Tercile maximum temperature probabilities for August to October 2022</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 (EZZs), version 11. Available online at http://www.marine.gov.au</p>
<p>Monthly minimum temperature (Image 5):</p> <p>Tercile minimum temperature probabilities for August 2022</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 (EZZs), version 11. Available online at http://www.marine.gov.au</p>	<p>Seasonal minimum temperature (Image 6):</p> <p>Tercile minimum temperature probabilities for August to October 2022</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 (EZZs), version 11. Available online at http://www.marine.gov.au</p>

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

Part 2: Recent Ocean observations

Monthly: June 2022

Monthly: June	Last three months: April to June 2022:
<p>Sea Surface Temperature (Image 1):</p>  <p>Monthly Average Sea Surface Temperature Anomaly: June 2022</p> <p>Niue</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>Reynolds SST</p>	<p>Sea Surface Temperature (Image 4):</p>  <p>3 monthly Average Sea Surface Temperature Anomaly: April 2022 to June 2022</p> <p>Niue</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>Reynolds SST</p>
<p>Sea level (Image 2):</p>  <p>Monthly Near Real Time Sea Level Anomaly: June 2022</p> <p>Niue</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>AVISO SeaWiFS/SeaWiFS SLA</p>	
<p>Daily coral bleaching alert (Image 3):</p>  <p>Pacific Ocean Daily Coral Bleaching Alert: 06 July 2022</p> <p>Alert Level 2 Alert Level 1 Warning Watch No Stress</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>NOAA Coral Reef Watch</p>	 <p>Niue Daily Coral Bleaching Alert: 06 July 2022</p> <p>Alert Level 2 Alert Level 1 Warning Watch No Stress</p> <p>©Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPPac COMP</p> <p>NOAA Coral Reef Watch</p>

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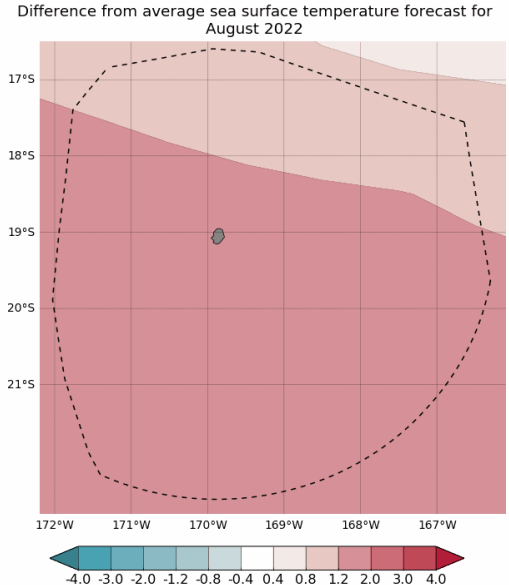
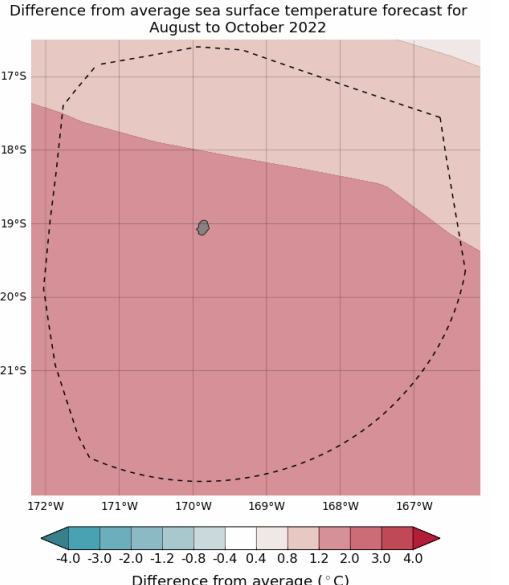
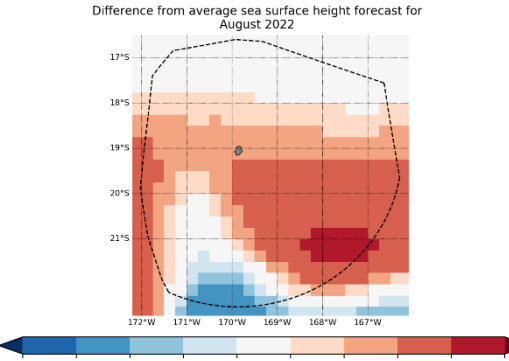
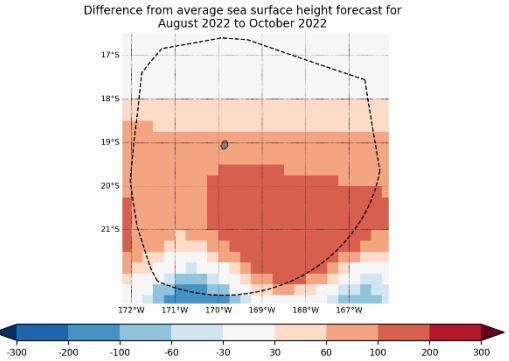
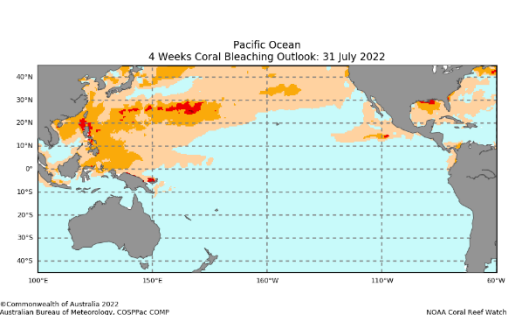
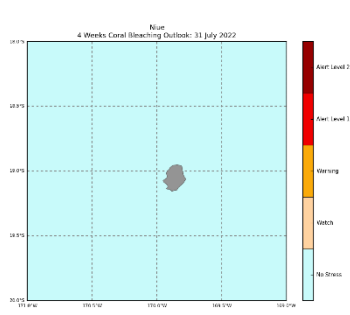
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Part 2i. Monthly and Seasonal Outlooks for August and August to October 2022

Monthly: August	Seasonal: August to October
<p>Monthly sea surface temperature (Image 5):</p>  <p>Difference from average sea surface temperature forecast for August 2022</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. 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.marinegovernance.org/</p> <p>Model run: 16/07/2022 Issued: 18/07/2022</p>	<p>Seasonal sea surface temperature (Image 6):</p>  <p>Difference from average sea surface temperature forecast for August to October 2022</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. 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.marinegovernance.org/</p> <p>Model run: 16/07/2022 Issued: 18/07/2022</p>
<p>Monthly sea level (Image 7):</p>  <p>Difference from average sea surface height forecast for August 2022</p> <p>© Commonwealth of Australia 2022 Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base Period: 1981-2018</p> <p>Model Run: 28/06/2022 Issued: 12/07/2022</p>	<p>Seasonal sea level (Image 8):</p>  <p>Difference from average sea surface height forecast for August 2022 to October 2022</p> <p>© Commonwealth of Australia 2022 Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base Period: 1981-2018</p> <p>Model Run: 28/06/2022 Issued: 12/07/2022</p>
<p>4-week Coral Bleaching (Image 9):</p>  <p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 31 July 2022</p> <p>Alert Level 2 Alert Level 1 Warning Watch No Stress</p> <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, CSIRO/NOAA NOAA Coral Reef Watch</p>	 <p>4 Weeks Coral Bleaching Outlook: 31 July 2022</p> <p>Alert Level 2 Alert Level 1 Warning Watch No Stress</p> <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, CSIRO/NOAA NOAA Coral Reef Watch</p>

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Summary Statement

Monthly and last three months: June 2022/April to June 2022 statement (Highly significant changes)

Hanan Airport's monthly rainfall for June was above normal, and the rainfall for April to June was normal.

Part 1i. Monthly and Seasonal Outlooks for August and August to October 2022

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

The rainfall outlook for Niue for August shows rainfall is likely to be above normal, while rainfall for August to October 2022 is very likely to be above normal. Maximum and Minimum monthly and seasonal temperatures are very likely to be above normal.

Part 2: Recent Ocean summary statement

Monthly and last three months: June/April to June 2022 (Highly significant changes)

For June and the last three months, the sea surface temperatures around Niue were 1.0 – 1.5 degrees Celsius above normal. Above normal sea level was also observed in June, with most of Niue's EEZ having anomalies in the +150 to +250 mm range. Across the south, however, weaker +50 to +150 mm anomalies occurred. Coral bleaching is on 'No Stress' status for Niue.

Part 2i. Monthly and Seasonal Outlooks for August and August to October 2022

Ocean Variable statement (Highly significant changes)

The outlook for Niue shows a significant temperature difference of up to 2.0 degrees Celsius warmer than average for August and over the months August to October.

Apart from the far north and far south of the country, the August outlook indicates above normal sea levels by about 30 to 200 mm. In the far north of the Niue EEZ, sea levels are expected to be close to average, while in the south the outlook indicates sea levels below normal by about 30 to 100 mm.

The outlook for August to October paints a very similar picture of sea level anomalies.

sCoral bleaching outlook has a "No stress" alert status for Niue.

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

Product	Date: June 2022	Stakeholder	Total Number of Participants	Number of males	Number of females
Climate Bulletin	30/06/2022	<ul style="list-style-type: none"> • Private Sector • Government Officials • Government staff • Stakeholders 	65	30	35
EAR Watch					
Monthly Climate Briefing					
Ocean Outlook					
Climate data request					
Total			65	30	35

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