

# Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 180

Country: Niue

Part 1: Recent climate

**TABLE 1: Monthly Rainfall**

Station (include data period)	Jun-2022	Jul-2022	Aug-2022				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
Hanan Airport (1905-2022)	141.1	40.7	89.2	53.2	105.0	86.2	62/115

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

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Hanan Airport (1905-2022)	271.0	Below normal	224.9	473.2	336.3	60/113

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

Very Low:  $X < 0.0$

Low:  $0 \leq X < 5$

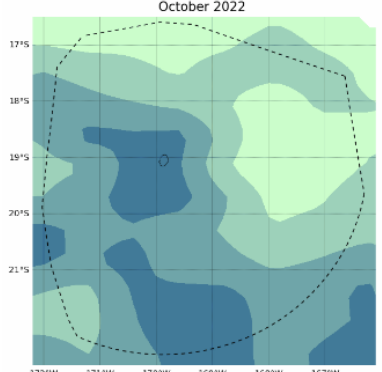
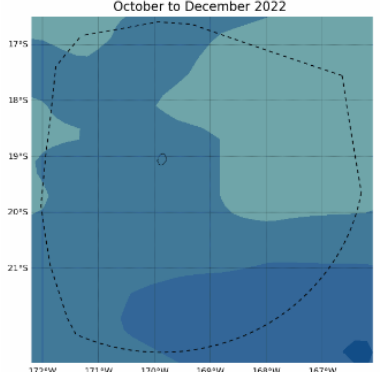
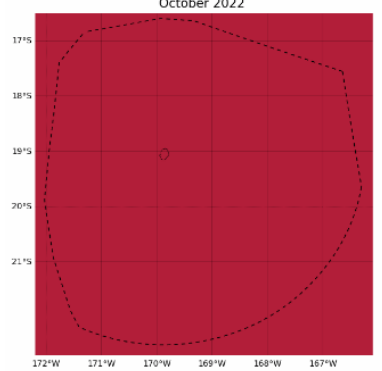
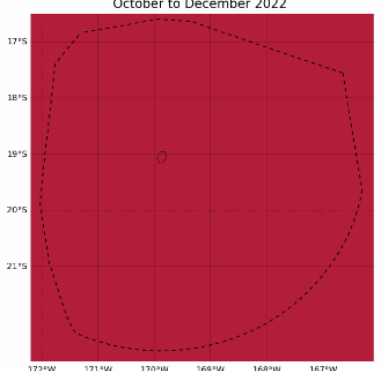
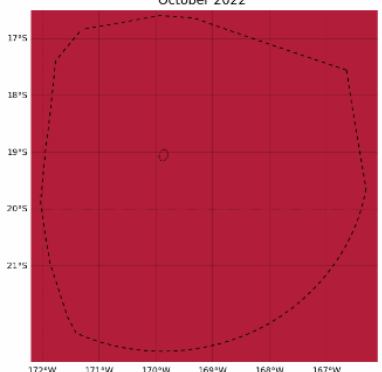
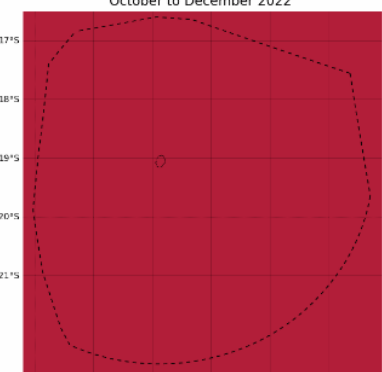
Moderate  $5 \leq X < 10$

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 2022

Monthly: October	Seasonal: October to December
<p><b>Rainfall (Image 1)</b></p> <p>Tercile rainfall probabilities for October 2022</p>  <p>Legend: Below normal (%), Near normal (%), Above normal (%)</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. Australian Bureau of Meteorology Spatial data extracted from Hurrell's Climate Reanalysis (2017). Reanalysis boundaries, cloud/precipitation and radiation fluxes from the National Centers for Environmental Prediction (2015). Reanalysis boundaries, cloud/precipitation and radiation fluxes from the National Centers for Environmental Prediction (2015). Reanalysis boundaries, cloud/precipitation and radiation fluxes from the National Centers for Environmental Prediction (2015). Model run: 05/08/2022 Issued: 08/09/2022</p>	<p><b>Rainfall (Image 2)</b></p> <p>Tercile rainfall probabilities for October to December 2022</p>  <p>Legend: Below normal (%), Near normal (%), Above normal (%)</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. Australian Bureau of Meteorology Spatial data extracted from Hurrell's Climate Reanalysis (2017). Reanalysis boundaries, cloud/precipitation and radiation fluxes from the National Centers for Environmental Prediction (2015). Reanalysis boundaries, cloud/precipitation and radiation fluxes from the National Centers for Environmental Prediction (2015). Model run: 05/08/2022 Issued: 08/09/2022</p>
<p><b>Monthly Maximum temperature (Image 3):</b></p> <p>Tercile maximum temperature probabilities for October 2022</p>  <p>Legend: Below normal (%), Near normal (%), Above normal (%)</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. Australian Bureau of Meteorology Spatial data extracted from Hurrell's Climate Reanalysis (2017). Reanalysis boundaries, cloud/precipitation and radiation fluxes from the National Centers for Environmental Prediction (2015). Reanalysis boundaries, cloud/precipitation and radiation fluxes from the National Centers for Environmental Prediction (2015). Model run: 05/08/2022 Issued: 08/09/2022</p>	<p><b>Seasonal maximum temperature (Image 4):</b></p> <p>Tercile maximum temperature probabilities for October to December 2022</p>  <p>Legend: Below normal (%), Near normal (%), Above normal (%)</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. Australian Bureau of Meteorology Spatial data extracted from Hurrell's Climate Reanalysis (2017). Reanalysis boundaries, cloud/precipitation and radiation fluxes from the National Centers for Environmental Prediction (2015). Reanalysis boundaries, cloud/precipitation and radiation fluxes from the National Centers for Environmental Prediction (2015). Model run: 05/08/2022 Issued: 08/09/2022</p>
<p><b>Monthly minimum temperature (Image 5):</b></p> <p>Tercile minimum temperature probabilities for October 2022</p>  <p>Legend: Below normal (%), Near normal (%), Above normal (%)</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. Australian Bureau of Meteorology Spatial data extracted from Hurrell's Climate Reanalysis (2017). Reanalysis boundaries, cloud/precipitation and radiation fluxes from the National Centers for Environmental Prediction (2015). Reanalysis boundaries, cloud/precipitation and radiation fluxes from the National Centers for Environmental Prediction (2015). Model run: 05/08/2022 Issued: 08/09/2022</p>	<p><b>Seasonal minimum temperature (Image 6):</b></p> <p>Tercile minimum temperature probabilities for October to December 2022</p>  <p>Legend: Below normal (%), Near normal (%), Above normal (%)</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. Australian Bureau of Meteorology Spatial data extracted from Hurrell's Climate Reanalysis (2017). Reanalysis boundaries, cloud/precipitation and radiation fluxes from the National Centers for Environmental Prediction (2015). Reanalysis boundaries, cloud/precipitation and radiation fluxes from the National Centers for Environmental Prediction (2015). Model run: 05/08/2022 Issued: 08/09/2022</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 Observation

## Monthly/Three months: August 2022 and June to August 2022

Monthly: August	Last three months: June to August 2022:
<p><b>Sea Surface Temperature (Image 1):</b></p>	<p><b>Sea Surface Temperature (Image 4):</b></p>
<p><b>Sea level (Image 2):</b></p>	
<p><b>Daily coral bleaching alert (Image 3):</b></p>	<p><b>Niue Daily Coral Bleaching Alert: 06 September 2022</b></p>

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

Very Low:  $X < 0.0$

Low:  $0 \leq X < 5$

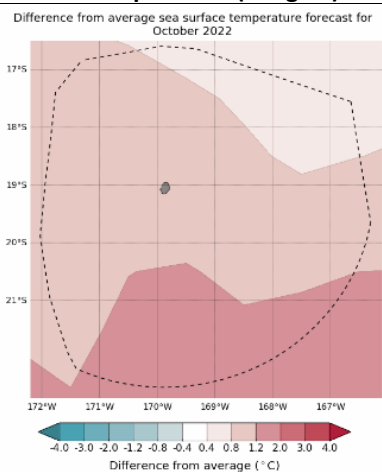
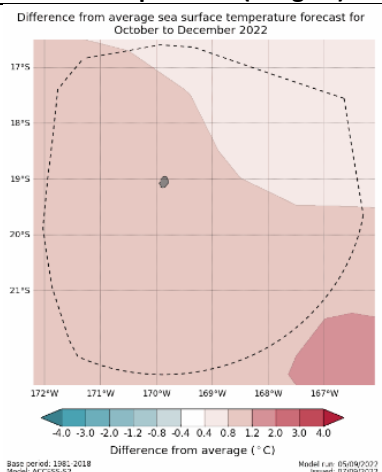
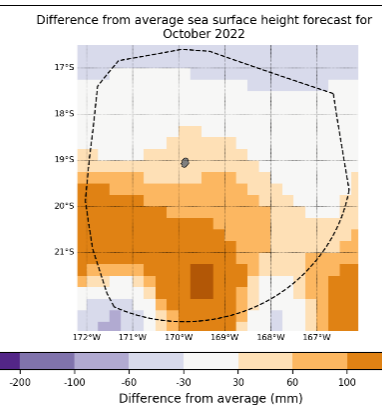
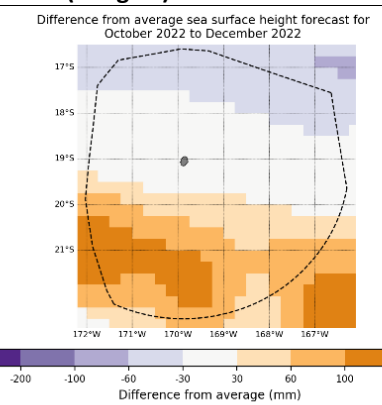
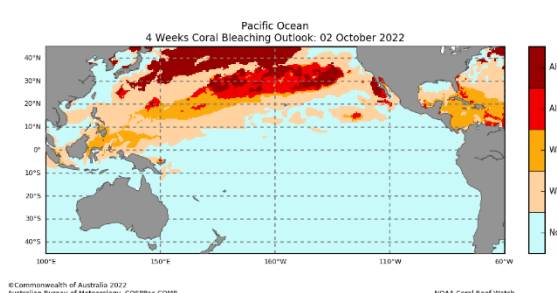
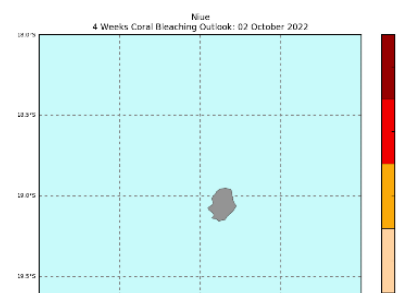
Moderate  $5 \leq X < 10$

Good:  $10 \leq X < 15$

High:  $15 \leq X < 25$

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

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

Monthly: October	Seasonal: October to December
<p><b>Monthly sea surface temperature (Image 5):</b></p>  <p>Difference from average sea surface temperature forecast for October 2022</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Model Run: 05/09/2022 Issue: 07/09/2022</p>	<p><b>Seasonal sea surface temperature (Image 6):</b></p>  <p>Difference from average sea surface temperature forecast for October to December 2022</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022, Australian Bureau of Meteorology Model Run: 05/09/2022 Issue: 07/09/2022</p>
<p><b>Monthly sea level (Image 7):</b></p>  <p>Difference from average sea surface height forecast for October 2022</p> <p>© Commonwealth of Australia 2022 Bureau of Meteorology Model: ACCESS-S2 Base Period: 1981-2018 Model Run: 28/08/2022 Issue: 06/09/2022</p>	<p><b>Seasonal sea level (Image 8):</b></p>  <p>Difference from average sea surface height forecast for October to December 2022</p> <p>© Commonwealth of Australia 2022 Bureau of Meteorology Model: ACCESS-S2 Base Period: 1981-2018 Model Run: 28/08/2022 Issue: 06/09/2022</p>
<p><b>4-week Coral Bleaching (Image 9):</b></p>  <p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 02 October 2022</p> <p>Alert Level 2 Alert Level 1 Warning Watch No Stress</p> <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac COMP NOAA Coral Reef Watch</p>	<p><b>Niue</b></p>  <p>4 Weeks Coral Bleaching Outlook: 02 October 2022</p> <p>Alert Level 2 Alert Level 1 Warning Watch No Stress</p> <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac COMP NOAA Coral Reef Watch</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:  $X \geq 35$

## Summary Statement

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

Hanan Airport's monthly rainfall for August and June to August was normal.

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

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

The rainfall outlook for Niue for October and for October to December is very likely outcome to be above normal.

Monthly and seasonal maximum and minimum temperatures are very likely to be above normal.

## Part 2: Recent Ocean summary statement

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

For August and the last three months, the sea surface temperature anomaly shows warmer conditions experienced in Niue with maximum temperature difference of 1.0 to 1.5 degrees Celsius. Above normal sea level anomaly was also observed in the month of August at 200mm. Coral bleaching is on "No Stress" status for Niue.

## Part 2i. Monthly and Seasonal Outlooks for October and October to December 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 October and over the months October to December.

The monthly and seasonal sea level anomaly forecast shows above normal conditions for Niue with differences ranging from -30 to 200mm.

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

**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:  $X \geq 35$

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

Product	Date: August 2022	Stakeholder	Total Number of Participants	Number of males	Number of females
Climate Bulletin	30/08/2022	<ul style="list-style-type: none"> <li>• Private Sector</li> <li>• Government Officials</li> <li>• Government staff</li> <li>• Stakeholders</li> </ul>	70	30	40
EAR Watch					
Monthly Climate Briefing					
Ocean Outlook					
Climate data request					
<b>Total</b>			<b>70</b>	<b>30</b>	<b>40</b>

**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:  $X \geq 35$