

# Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 185

Country: Samoa

Part 1: Recent climate

**TABLE 1: Monthly Rainfall**

Station (include data period)	Nov-2022	Dec-2022	Jan-2023				Rank
			Total (mm)	33%tile	67%tile	Median	
	Total (mm)	Total (mm)	Rainfall (mm)				
Apia (1890-2023)	192.3	313.7	506.5	346.6	489.1	399.6	92/134
Afiamalu (1903-2023)	314.9	816.6	787.5	561.5	815.8	693.3	45/70
Nafanua (1965-2023)	218.5	365.1	518.8	356.8	707.3	446.8	28/49
Faleolo (1956-2023)	197.4	133.4	246.2	217.7	357.5	284.4	27/63

**TABLE 2: Three-month Total Rainfall for November 2022 to January 2023**

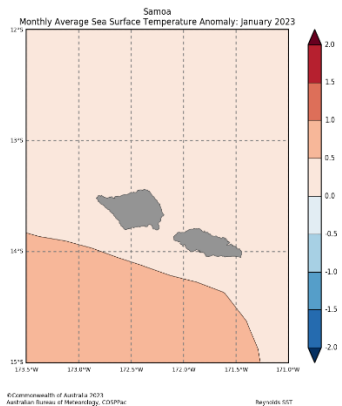
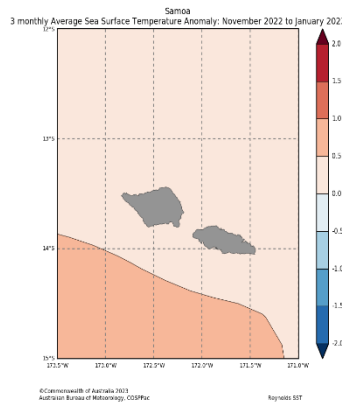
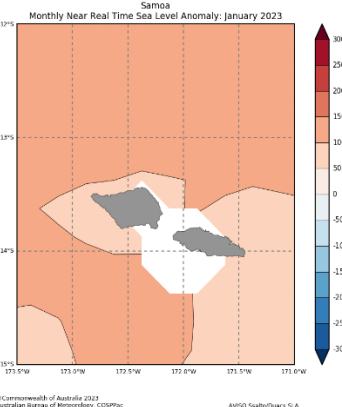
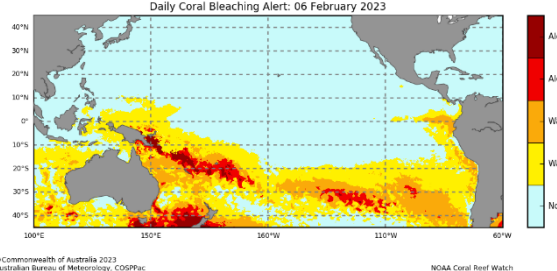
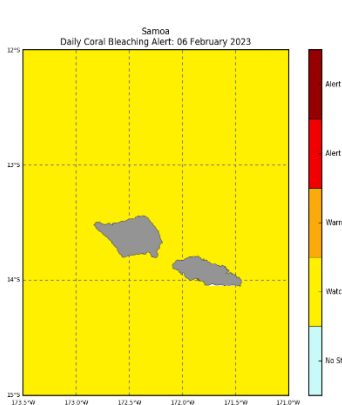
Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Apia (1890-2023)	1012.5	Normal	955.7	1209.0	1056.0	58/132
Afiamalu (1903-2023)	1919.0	Normal	1496.4	2063.2	1814.3	43/68
Nafanua (1965-2023)	1102.4	Normal	1097.2	1496.7	1337.2	16/46
Faleolo (1956-2023)	577.0	Below normal	702.4	897.7	797.1	11/61

# Part 1i. Monthly and Seasonal Outlooks for March and March to May 2023

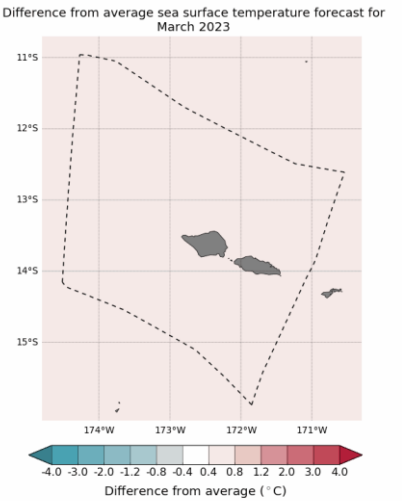
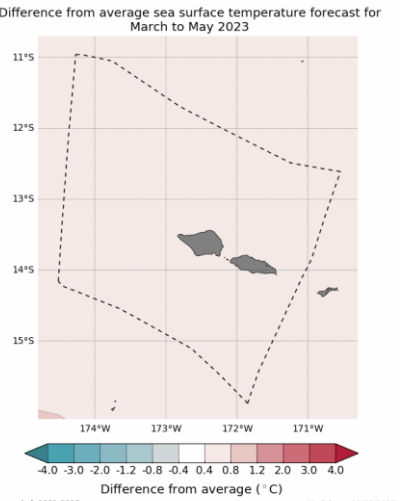
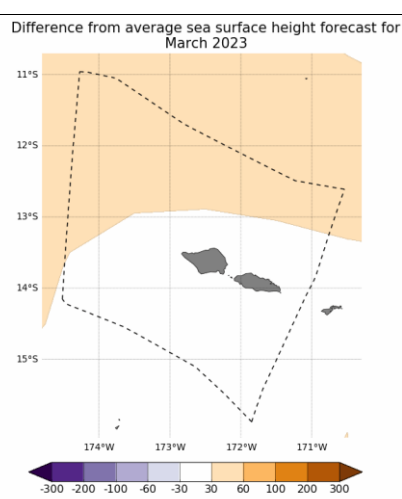
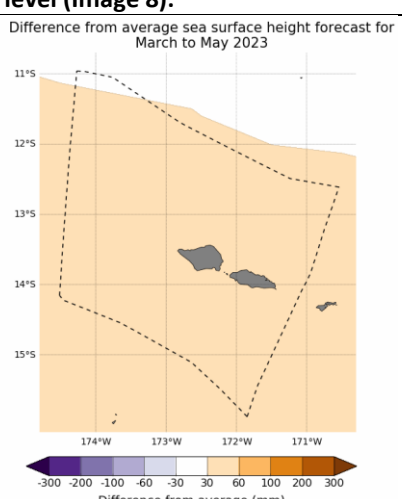
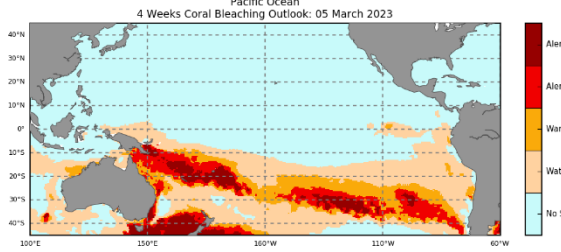
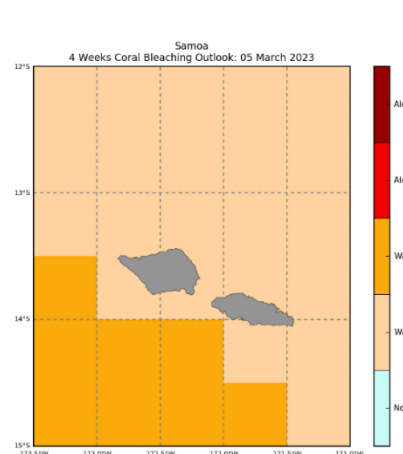
Monthly: March	Seasonal: March to May
<p><b>Rainfall (Image 1)</b></p> <p>Tercile rainfall probabilities for March 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023. Australian Bureau of Meteorology Shapefile data extracted from Flanders Marine Institute (2019). Maritime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

# Part 2: Recent Ocean Observation

## Monthly/Three months: January 2023 and November 2022 to January 2023

Monthly: January	Last three months: November 2022 to January 2023:
<p><b>Sea Surface Temperature (Image 1):</b></p>  <p>Samoa Monthly Average Sea Surface Temperature Anomaly: January 2023</p> <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p>	<p><b>Sea Surface Temperature (Image 4):</b></p>  <p>Samoa 3 monthly Average Sea Surface Temperature Anomaly: November 2022 to January 2023</p> <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p>
<p><b>Sea level (Image 2):</b></p>  <p>Samoa Monthly Near Real Time Sea Level Anomaly: January 2023</p> <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p>	
<p><b>Daily coral bleaching alert (Image 3):</b></p>  <p>Pacific Ocean Daily Coral Bleaching Alert: 06 February 2023</p> <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>	 <p>Samoa Daily Coral Bleaching Alert: 06 February 2023</p> <p>©Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>

# Part 2i. Monthly and Seasonal Outlooks for March and March to May 2023

Monthly: March	Seasonal: March to May
<p><b>Monthly sea surface temperature (Image 5):</b></p> <p>Difference from average sea surface temperature forecast for March 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023. Australian Bureau of Meteorology Source: data extracted from Repetitive Marine Institute (2013). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.marine.gov.au">http://www.marine.gov.au</a></p> <p>Model run: 11/02/2023 Issued: 13/02/2023</p>	<p><b>Seasonal sea surface temperature (Image 6):</b></p> <p>Difference from average sea surface temperature forecast for March to May 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023. Australian Bureau of Meteorology Source: data extracted from Repetitive Marine Institute (2013). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.marine.gov.au">http://www.marine.gov.au</a></p> <p>Model run: 11/02/2023 Issued: 13/02/2023</p>
<p><b>Monthly sea level (Image 7):</b></p> <p>Difference from average sea surface height forecast for March 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023. Australian Bureau of Meteorology Source: data extracted from Repetitive Marine Institute (2013). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.marine.gov.au">http://www.marine.gov.au</a></p> <p>Model run: 11/02/2023 Issued: 13/02/2023</p>	<p><b>Seasonal sea level (Image 8):</b></p> <p>Difference from average sea surface height forecast for March to May 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023. Australian Bureau of Meteorology Source: data extracted from Repetitive Marine Institute (2013). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.marine.gov.au">http://www.marine.gov.au</a></p> <p>Model run: 11/02/2023 Issued: 13/02/2023</p>
<p><b>4-week Coral Bleaching (Image 9):</b></p> <p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 05 March 2023</p>  <p>© Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>	<p>Samoa 4 Weeks Coral Bleaching Outlook: 05 March 2023</p>  <p>© Commonwealth of Australia 2023 Australian Bureau of Meteorology, COSPPac</p> <p>NOAA Coral Reef Watch</p>

## Summary Statement

### Monthly and last three months: January 2023/November 2022 to January 2023 statement

*Above normal* rainfall was recorded at Apia Station, while Afiamalu, Nafanua and Faleolo registered *near-normal* rainfall in January 2023.

The three-monthly November to January rainfall was *below normal* at Faleolo station, while Apia, Nafanua and Afiamalu recorded *near-normal* rainfall.

## Part 1i. Monthly and Seasonal Outlooks for March and March to May 2023

### Monthly/Seasonal rainfall and temperature Outlook statements

The rainfall for March is likely to be below normal over Samoa.

The rainfall for March to May is likely to be near-normal over the eastern part of Savaii and the whole of Upolu. In the western part of Savaii, the outlook offers little guidance.

Maximum and minimum temperatures during March and averaged over March to May, are very likely to be above normal over Samoa.

## Part 2: Recent Ocean summary statement

### Monthly and last three months: January 2023/November 2022 to January 2023

January ocean temperatures around Samoa's main islands were up to 0.5°C *near normal*, while temperatures across the southwest and southern parts of the EEZ were between 0.5 and 1.0°C *above normal*.

Averaged over November to January, ocean temperatures around Samoa were very similar to those observed in January.

January sea levels around Samoa were 50 mm to 150 mm above normal.

There is a coral bleaching *watch* for Samoa.

## Part 2i. Monthly and Seasonal Outlooks for March and March to May 2023

### Ocean Variable statement

March ocean temperatures around Samoa are predicted to be 0.4°C to 0.8°C above normal.

Averaged over March to May, ocean temperatures around Samoa are predicted to be 0.4°C to 0.8°C above normal.

March sea levels around Samoa are predicted to be near normal.

Averaged over March to May, sea levels around Samoa are predicted to be 30mm to 60mm above normal.

There is a coral bleaching watch for Samoa's main islands, and a warning for the southwest of the EEZ.

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

<b>Product</b>	<b>Date: January 2023</b>	<b>Stakeholder</b>	<b>Total Number of Participants</b>	<b>Number of male</b>	<b>Number of female</b>
EAR Watch	25th	RED Cross, Water Authority (SWA), Media, Health, Works & Infrastructure, Land & Transport Authority, Agriculture & Fisheries, Fire Services, Ministry of Women, National University of Samoa, Tourism, Foreign Affairs, Communication and Information Technology, Disaster Managers, Marines	65	27	38
Seasonal Climate Outlook	25 <sup>th</sup>	RED Cross, Water Authority (SWA), Media, Health, Works & Infrastructure, Land & Transport Authority, Agriculture & Fisheries, Fire Services, Ministry of Women, National University of Samoa, Tourism, Foreign Affairs, Communication and Information Technology, Disaster Managers, Marines	65	27	38
Community Program Review	30th	RED Cross, Water Authority (SWA), Media, Health, Works & Infrastructure, Land & Transport Authority, Agriculture & Fisheries, Fire Services, Ministry of Women, National University of Samoa, Tourism, Foreign Affairs, Communication and Information Technology, Disaster Managers, Marines	65	27	38
<b>Total</b>			<b>65</b>	<b>27</b>	<b>38</b>