

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 186

Country: Samoa

Part 1: Recent climate

TABLE 1: Monthly Rainfall

Station (include data period)	Dec-2022	Jan-2023	Feb-2023				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Apia (1890-2023)	313.7	506.5	325.6	272.7	422.7	346.7	61/134
Afiamalu (1903-2023)	816.6	787.5	608.0	420.2	705.1	548.9	34/70
Nafanua (1965-2023)	365.1	518.8	381.0	363.3	501.7	406.7	16/51
Faleolo (1956-2023)	133.4	346.3	292.0	193.7	297.1	238.5	41/62

TABLE 2: Three-month Total Rainfall for December 2022 to February 2023

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Apia (1890-2023)	1145.8	Normal	1032.6	1340.2	1147.0	66/132
Afiamalu (1903-2023)	2212.1	Normal	1649.4	2347.4	1997.3	39/68
Nafanua (1965-2023)	1264.9	Normal	1202.5	1711.9	1411.4	17/46
Faleolo (1956-2023)	771.7	Normal	769.8	964.9	877.7	22/60

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

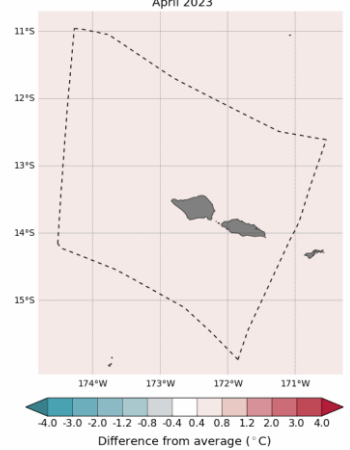
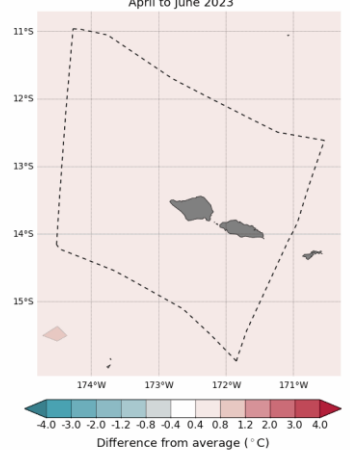
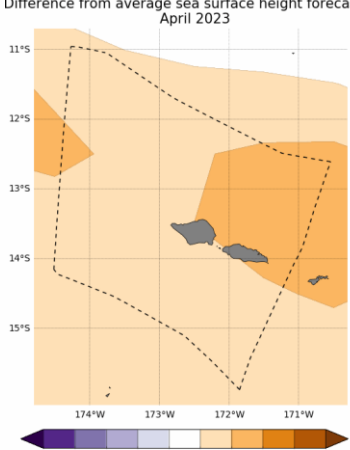
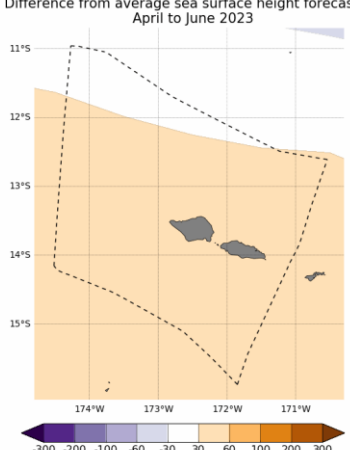
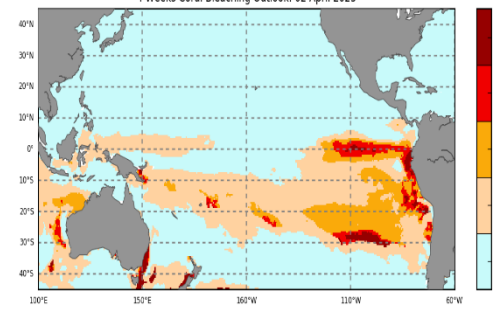
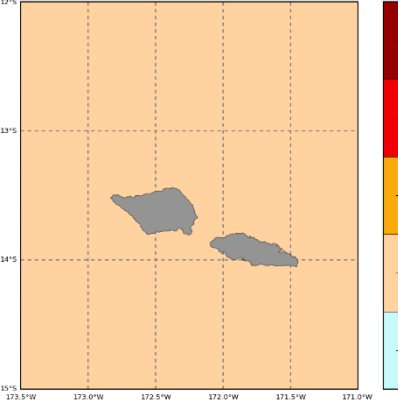
<p>Monthly: April</p> <p>Rainfall (Image 1)</p> <p>Tercile rainfall probabilities for April 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapelite data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marinerregions.org/. Model run: 06/03/2023 Issued: 09/03/2023</p>	<p>Seasonal: April to June</p> <p>Rainfall (Image 2)</p> <p>Tercile rainfall probabilities for April to June 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapelite data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marinerregions.org/. Model run: 06/03/2023 Issued: 09/03/2023</p>
<p>Monthly Maximum temperature (Image 3):</p> <p>Tercile maximum temperature probabilities for April 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapelite data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marinerregions.org/. Model run: 06/03/2023 Issued: 09/03/2023</p>	<p>Seasonal maximum temperature (Image 4):</p> <p>Tercile maximum temperature probabilities for April to June 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapelite data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marinerregions.org/. Model run: 06/03/2023 Issued: 09/03/2023</p>
<p>Monthly minimum temperature (Image 5):</p> <p>Tercile minimum temperature probabilities for April 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapelite data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marinerregions.org/. Model run: 06/03/2023 Issued: 09/03/2023</p>	<p>Seasonal minimum temperature (Image 6):</p> <p>Tercile minimum temperature probabilities for April to June 2023</p> <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023, Australian Bureau of Meteorology Shapelite data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marinerregions.org/. Model run: 06/03/2023 Issued: 09/03/2023</p>

Part 2: Recent Ocean Observation

Monthly/Three months: February 2023 and December 2022 to February 2023

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

Monthly: April	Seasonal: April to June
Monthly sea surface temperature (Image 5):	Seasonal sea surface temperature (Image 6):
<p>Difference from average sea surface temperature forecast for April 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023. Australian Bureau of Meteorology Shapefile data extracted from Fisheries Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2004N), version 11. Available online at http://www.marinegovernance.org/</p> <p>Model run: 11/03/2023 Issued: 13/03/2023</p>	<p>Difference from average sea surface temperature forecast for April to June 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023. Australian Bureau of Meteorology Shapefile data extracted from Fisheries Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2004N), version 11. Available online at http://www.marinegovernance.org/</p> <p>Model run: 11/03/2023 Issued: 13/03/2023</p>
Monthly sea level (Image 7):	Seasonal sea level (Image 8):
<p>Difference from average sea surface height forecast for April 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023. Australian Bureau of Meteorology Shapefile data extracted from Fisheries Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2004N), version 11. Available online at http://www.marinegovernance.org/</p> <p>Model run: 11/03/2023 Issued: 13/03/2023</p>	<p>Difference from average sea surface height forecast for April to June 2023</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2023. Australian Bureau of Meteorology Shapefile data extracted from Fisheries Marine Institute (2019). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (2004N), version 11. Available online at http://www.marinegovernance.org/</p> <p>Model run: 11/03/2023 Issued: 13/03/2023</p>
4-week Coral Bleaching (Image 9):	
<p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 02 April 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: 02 April 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: February 2023/December 2022 to February 2023 statement

Normal rainfall was recorded at all stations in February 2023.

The three-monthly December 2022 to February 2023 rainfall was *normal* at all stations.

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

Monthly /Seasonal rainfall and temperature Outlook statements

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

The rainfall outlook for April to June over Samoa offers little guidance.

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

Part 2: Recent Ocean summary statement

Monthly and last three months: February 2023/December 2022 to February 2023

February 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 December to February, ocean temperatures around Samoa were very similar to those observed in February.

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

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

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

Ocean Variable statement

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

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

April sea levels around Samoa are predicted to be 30mm to 100mm above normal.

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

There is a coral bleaching *watch* outlook for Samoa.

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

Product	Date: February 2023	Stakeholder	Total Number of Participants	Number of male	Number of female
EAR Watch	23th	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
Ocean Outlook	16th	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
Total			65	27	38