

Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 179

Country: Samoa

Part 1: Recent climate

TABLE 1: Monthly Rainfall

| Station (include data period) | May-2022 | Jun-2022 | Jul-2022 | | | | |
|-------------------------------|------------|------------|---------------|---------|---------|--------|---------|
| | | | Total (mm) | 33%tile | 67%tile | Median | Rank |
| | Total (mm) | Total (mm) | Rainfall (mm) | | | | |
| Apia (1890-2022) | 167.5 | 121.1 | 158.5 | 89.2 | 143.9 | 103.6 | 106/133 |
| Afiamalu (1903-2022) | 254.9 | 124.0 | 131.0 | 147.0 | 268.8 | 213.4 | 20/71 |
| Nafanua (1965-2022) | 208.2 | 88.9 | 126.4 | 89.9 | 171.9 | 128.0 | 26/51 |
| Faleolo (1956-2022) | 118.6 | 86.6 | 69.4 | 54.8 | 103.4 | 75.7 | 28/62 |

TABLE 2: Three-month Total Rainfall for May to July 2022

| Station | Three-month Total | | 33%tile | 67%tile | Median | Rank |
|----------------------|-------------------|--------------|---------|---------|--------|--------|
| | Rainfall (mm) | | | | | |
| Apia (1890-2022) | 447.1 | Normal | 395.0 | 527.0 | 453.0 | 78/133 |
| Afiamalu (1903-2022) | 509.9 | Below normal | 650.9 | 858.7 | 751.4 | 14/68 |
| Nafanua (1965-2022) | 423.5 | Below normal | 451.1 | 650.4 | 527.6 | 15/50 |
| Faleolo (1956-2022) | 274.6 | Normal | 274.5 | 392.1 | 325.6 | 21/60 |

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

Very Low: $X < 0.0$

Low: $0 \leq X < 5$

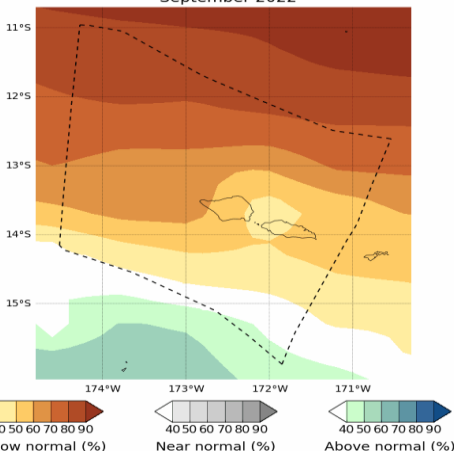
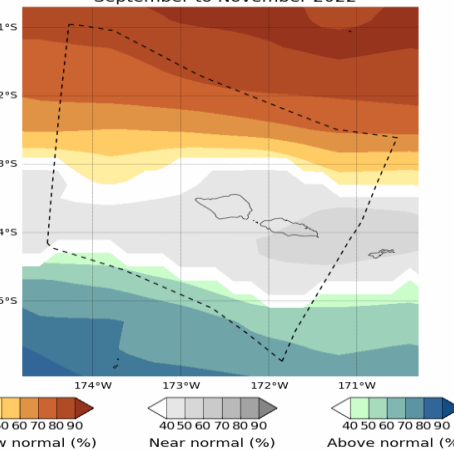
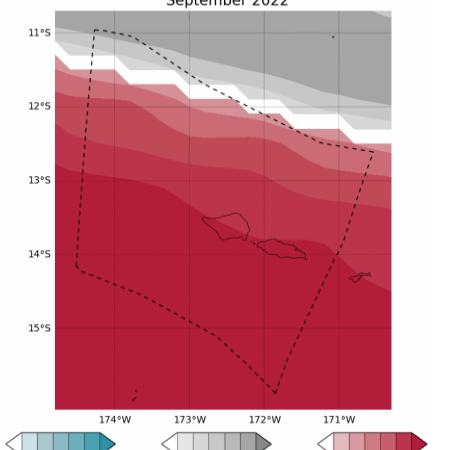
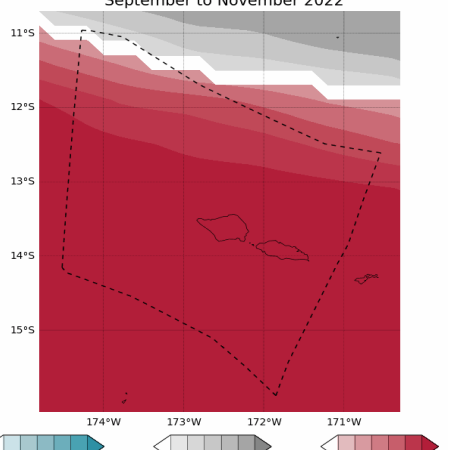
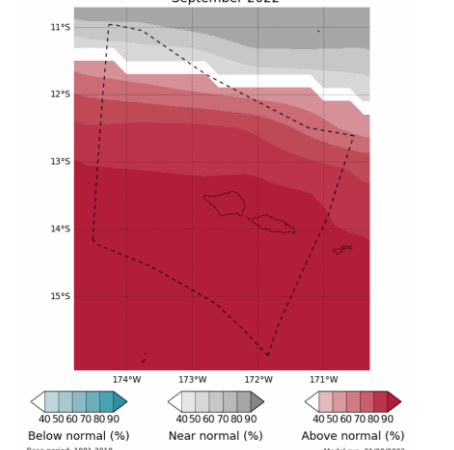
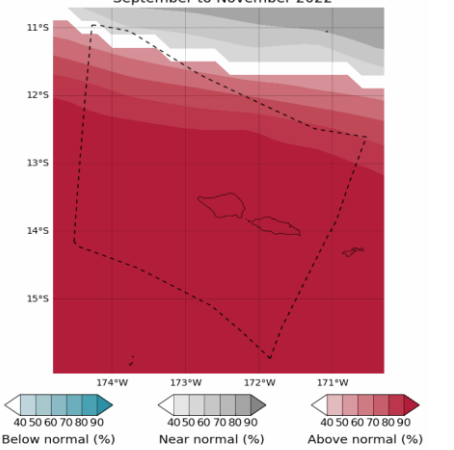
Moderate $5 \leq X < 10$

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 September and September to November 2022

| Monthly: September | Seasonal: September to November |
|---|--|
| Rainfall (Image 1) | Rainfall (Image 2) |
| <p>Tercile rainfall probabilities for September 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. Australian Bureau of Meteorology Shapfile data extracted from Flinders Marine Institute (2013). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/</p> | <p>Tercile rainfall probabilities for September to November 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. Australian Bureau of Meteorology Shapfile data extracted from Flinders Marine Institute (2013). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/</p> |
| Monthly Maximum temperature (Image 3): | Seasonal maximum temperature (Image 4): |
| <p>Tercile maximum temperature probabilities for September 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. Australian Bureau of Meteorology Shapfile data extracted from Flinders Marine Institute (2013). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/</p> | <p>Tercile maximum temperature probabilities for September to November 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. Australian Bureau of Meteorology Shapfile data extracted from Flinders Marine Institute (2013). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/</p> |
| Monthly minimum temperature (Image 5): | Seasonal minimum temperature (Image 6): |
| <p>Tercile minimum temperature probabilities for September 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. Australian Bureau of Meteorology Shapfile data extracted from Flinders Marine Institute (2013). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/</p> | <p>Tercile minimum temperature probabilities for September to November 2022</p>  <p>Base period: 1981-2018 Model: ACCESS-S2 © Commonwealth of Australia 2022. Australian Bureau of Meteorology Shapfile data extracted from Flinders Marine Institute (2013). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineregions.org/</p> |

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Part 2: Recent Ocean Observation

Monthly: July 2022

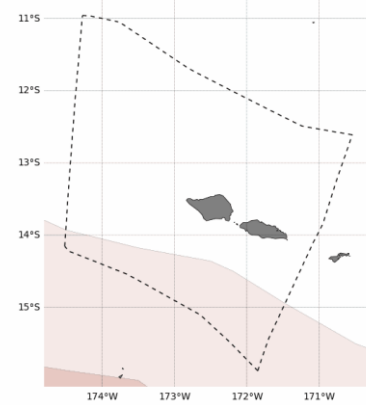
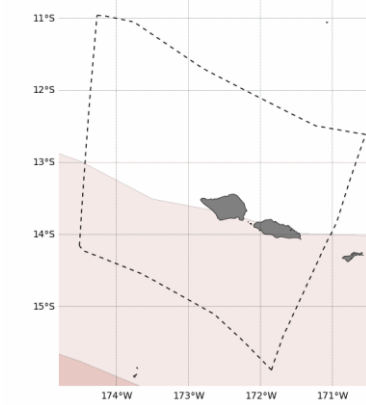
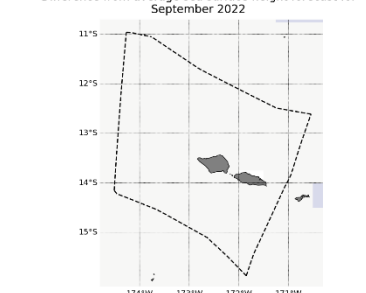
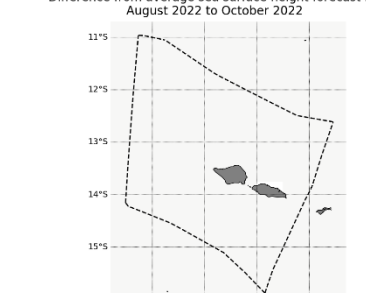
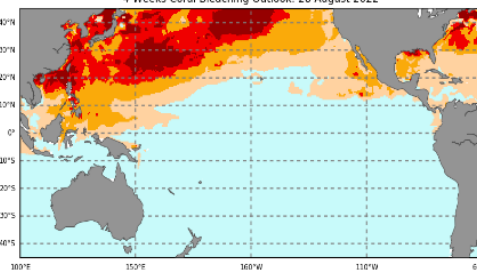
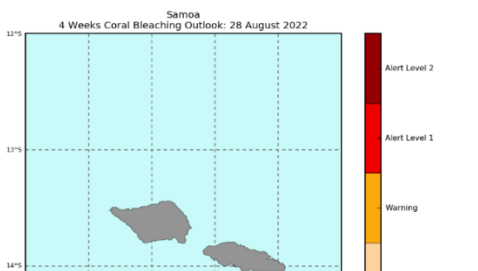
| | |
|---|---|
| <p>Monthly: July</p> | <p>Last three months: May to July 2022:</p> |
| <p>Sea Surface Temperature (Image 1):</p> | <p>Sea Surface Temperature (Image 4):</p> |
| | |
| <p>Sea level (Image 2):</p> | |
| | |
| <p>Daily coral bleaching alert (Image 3):</p> | |
| | |

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

Part 2i. Monthly and Seasonal Outlooks for September and September to November 2022

| Monthly: September | Seasonal: September to November |
|--|---|
| Monthly sea surface temperature (Image 5): | Seasonal sea surface temperature (Image 6): |
| <p>Difference from average sea surface temperature forecast for September 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 (20046), version 1.1. Available online at http://www.marine.gov.au</p> <p>Model run: 13/08/2022 Issued: 15/08/2022</p> | <p>Difference from average sea surface temperature forecast for September to November 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 (20046), version 1.1. Available online at http://www.marine.gov.au</p> <p>Model run: 13/08/2022 Issued: 15/08/2022</p> |
| Monthly sea level (Image 7): | Seasonal sea level (Image 8): |
| <p>Difference from average sea surface height forecast for September 2022</p>  <p>© Commonwealth of Australia 2022 Bureau of Meteorology</p> <p>Model: ACCESS-S2 Base Period: 1981-2018</p> <p>Model Run: 28/07/2022 Issued: 03/08/2022</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: 28/07/2022 Issued: 03/08/2022</p> |
| 4-week Coral Bleaching (Image 9): | |
| <p>Pacific Ocean 4 Weeks Coral Bleaching Outlook: 28 August 2022</p>  <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac, COMIP</p> <p>NOAA Coral Reef Watch</p> | <p>Samoa 4 Weeks Coral Bleaching Outlook: 28 August 2022</p>  <p>© Commonwealth of Australia 2022 Australian Bureau of Meteorology, COSPac, COMIP</p> <p>NOAA Coral Reef Watch</p> |

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Summary Statement

Monthly and last three months: July 2022/May to July 2022 statement (Highly significant changes)

Near-normal rainfall was recorded at the Nafanua and Faleolo stations, while Apia registered *above normal* and Afiamalu *below normal* in July 2022.

Near-normal rainfall was recorded at the Apia and Faleolo stations, while Afiamalu and Nafanua registered *below normal* for the past three months of May to July.

Part 1i. Monthly and Seasonal Outlooks for September and September to November 2022

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

September rainfall is likely to be below normal across Samoa. The September to November seasonal outlook for Samoa shows rainfall is likely to be *near-normal*.

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

Part 2: Recent Ocean summary statement

Monthly and last three months: July/May to July 2022 (Highly significant changes)

For July and the past three months, May to July, Samoa experienced near to above normal SSTs ranging from 0.0 to 1.0°C.

The sea level anomaly for Samoa in July revealed significant above normal differences of 100 to 200mm.

Coral bleaching alert status is 'No Stress' for Samoa.

Part 2i. Monthly and Seasonal Outlooks for September and September to November 2022

Ocean Variable statement (Highly significant changes)

The monthly and seasonal outlook for Samoa shows sea surface temperatures are likely to be near normal for both September and September to November with temperature ranging from -0.4 to 0.8 degrees Celsius.

The monthly and seasonal outlook for Samoa shows sea surface heights are likely to be normal ranging within -30mm to 30mm.

The outlook for Samoa shows no thermal stress for the next four weeks.

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

| Product | Date: July 2022 | Stakeholder | Total Number of Participants | Number of male | Number of female |
|--------------------------|-----------------------|--|------------------------------------|-------------------|---------------------|
| Climate Bulletin | 29th | 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 |
| EAR Watch | 29th | 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 |
| Monthly Climate Briefing | 29th | SAMOA MET | 15 | 10 | 5 |
| Ocean Outlook | 29th | 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 |

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| | | | | | | |
|--------------------|------|------|-------|-----|-----|-----|
| Climate request | data | 29th | SPREP | N/A | N/A | N/A |
| Total | | | | 80 | 37 | 43 |

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