

# Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 170

Country: Samoa

## Part 1: Recent climate

**TABLE 1: Monthly Rainfall**

Station (include data period)	Aug-2021	Sep-2021	Oct-2021				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Apia (1890-2021)	166.1	66.6	110.4	155.3	257.7	202.1	24/132
Afiamalu (1903-2021)	245.0	54.9	227.6	259.3	418.8	352.8	20/70
Nafanua (1965-2021)	156.9	27.3	114.2	186.8	344.4	238.3	9/50
Faleolo (1956-2021)	47.8	6.1	91.2	126.0	192.4	155.3	12/60

**TABLE 2: Three-month Total Rainfall for August to October 2021**

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Apia (1890-2021)	343.1	Below normal	387.7	539.0	470.3	39/132
Afiamalu (1903-2021)	527.5	Below normal	646.3	832.6	733.7	18/67
Nafanua (1965-2021)	298.4	Below normal	464.8	603.1	535.1	7/49
Faleolo (1956-2021)	145.1	Below normal	274.9	422.1	351.8	7/58

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

Very Low:  $X < 0.0$

Low:  $0 \leq X < 5$

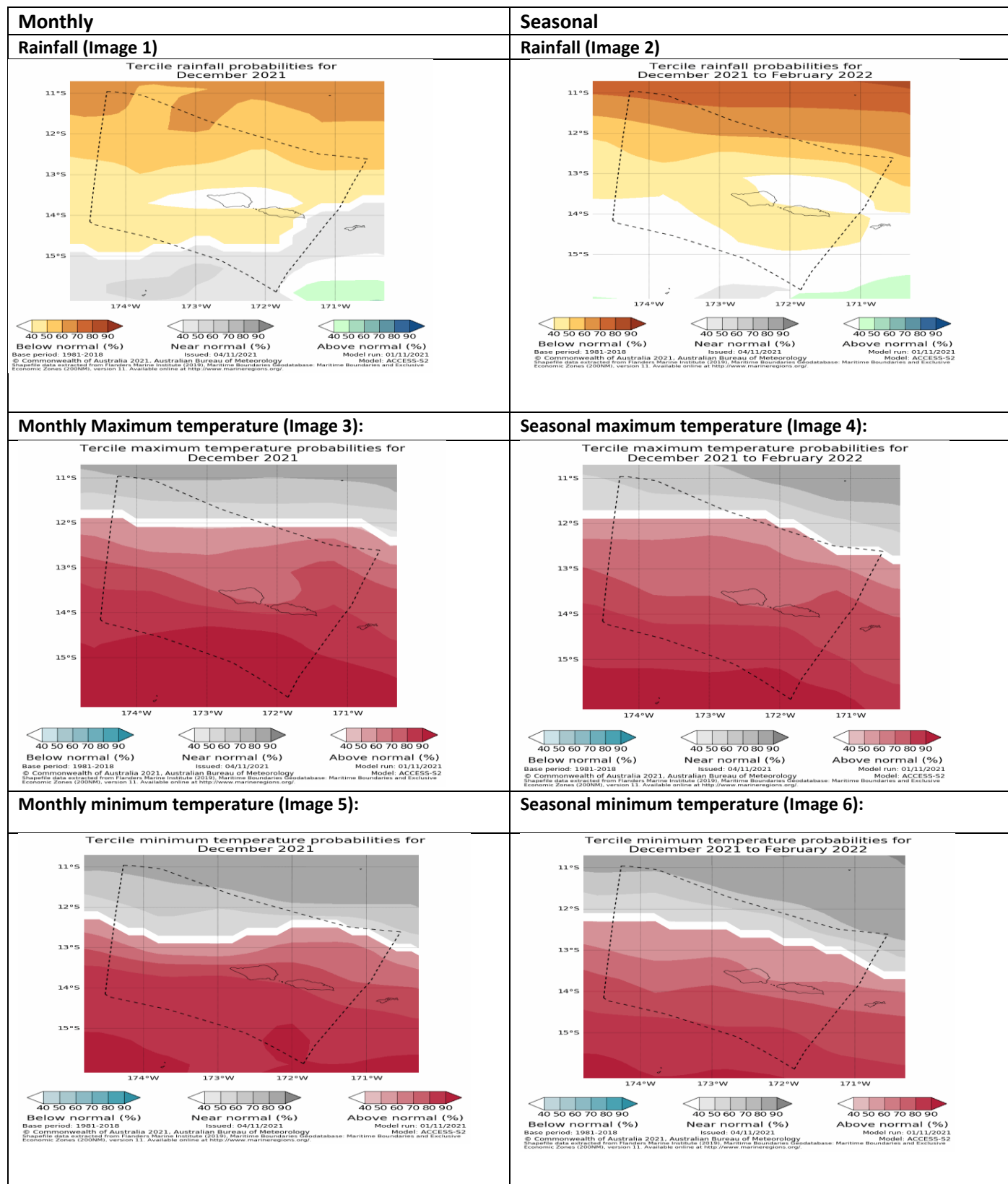
Moderate  $5 \leq X < 10$

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 December 2021 and December 2022 to February 2022



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

Very Low:  $X < 0.0$

Low:  $0 \leq X < 5$

Moderate:  $5 \leq X < 10$

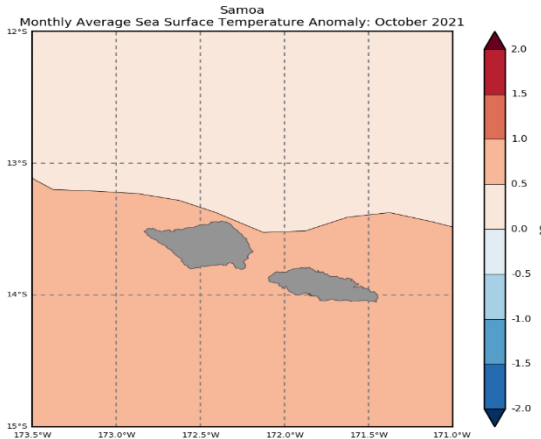
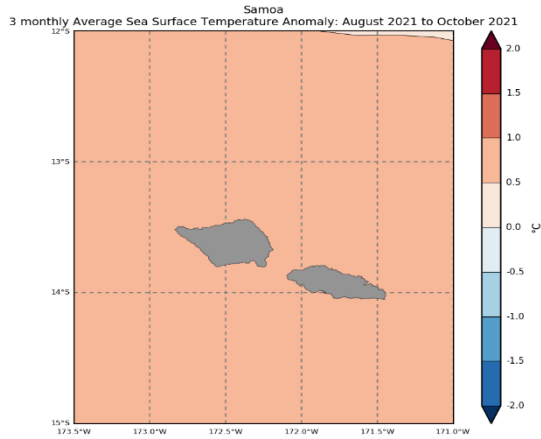
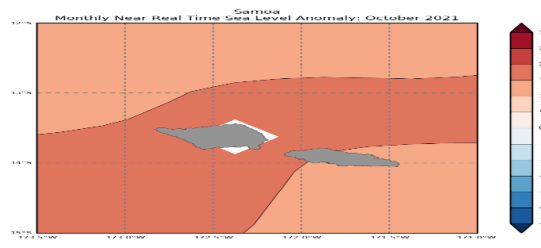
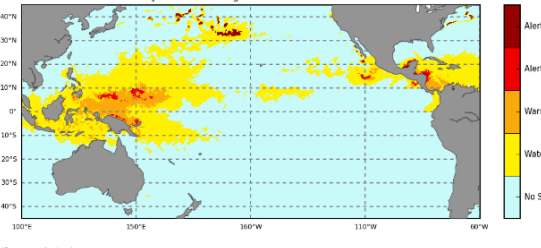
Good:  $10 \leq X < 15$

High:  $15 \leq X < 25$

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

Part 2: Recent Ocean summary statement

Monthly: October 2021

<p><b>Monthly: October</b></p> <p><b>Sea Surface Temperature (Image 1):</b></p>  <p>©Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, COSPPac SPP Reynolds SST</p>	<p><b>Last three months: August to October 2021:</b></p> <p><b>Sea Surface Temperature (Image 4):</b></p>  <p>©Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, COSPPac SPP Reynolds SST</p>
<p><b>Sea level (Image 2):</b></p>  <p>©Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, COSPPac SPP AVISO SeaWiFS/Quik SCAR</p>	
<p><b>Daily coral bleaching alert (Image 3):</b></p>  <p>©Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, COSPPac SPP 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:  $X \geq 35$

## Part 2i. Monthly and Seasonal Outlooks for December and December 2021 to February 2022

Monthly: December	Seasonal: December to February
<b>Monthly sea surface temperature (Image 5):</b> <p>Difference from average sea surface temperature forecast for December 2021</p> <p>Base period: 1981-2018          Issued: 03/11/2021          Model run: 01/11/2021          © Commonwealth of Australia 2021. Australian Bureau of Meteorology          Shapefile data extracted from Flanders Marine Institute (2019). Maritime Boundaries Database: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.marinerregions.org/">http://www.marinerregions.org/</a></p>	<b>Seasonal sea surface temperature (Image 6):</b> <p>Difference from average sea surface temperature forecast for December 2021 to February 2022</p> <p>Base period: 1981-2018          Issued: 03/11/2021          Model run: 01/11/2021          © Commonwealth of Australia 2021. Australian Bureau of Meteorology          Shapefile data extracted from Flanders Marine Institute (2019). Maritime Boundaries Database: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <a href="http://www.marinerregions.org/">http://www.marinerregions.org/</a></p>
<b>Monthly sea level (Image 7):</b> <p>Difference from average sea surface height forecast for December 2021</p> <p>© Commonwealth of Australia 2021          Bureau of Meteorology          Model: ACCESS-S2          Base Period: 1981-2018          Model Run: 27/10/2021          Issued: Map not issued</p>	<b>Seasonal sea level (Image 8):</b> <p>Difference from average sea surface height forecast for December 2021 to February 2022</p> <p>© Commonwealth of Australia 2021          Bureau of Meteorology          Model: ACCESS-S2          Base Period: 1981-2018          Model Run: 27/10/2021          Issued: Map not issued</p>
<b>4-week Coral Bleaching (Image 9):</b> <p>Pacific Ocean          4 Weeks Coral Bleaching Outlook: 21 November 2021</p> <p>Alert Level 2          Alert Level 1          Warning          Watch          No Stress</p> <p>© Pacific Community (SPC) 2021          Geoscience Energy and Maritime Division, COSPac SPP          NOAA Coral Reef Watch</p>	

## Summary Statement

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:  $X \geq 35$

### **Monthly and last three months: October 2021/August to October statement (Highly significant changes)**

*Below normal rainfall* was recorded at all stations.

*Below normal rainfall* was recorded at all stations in the past three months.

## **Part 1i. Monthly and Seasonal Outlooks for December and December 2021 to February 2022**

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

The monthly rainfall outlook shows *below normal* rainfall likely for Upolu and offers little guidance for the whole of Savai'i. The seasonal rainfall outlook shows *below normal* rainfall likely for Upolu and most parts of Savai'i and offers little guidance for the north eastern side of Savai'i.

Above normal maximum and minimum temperatures are very likely to occur across Samoa for December 2021.

Above normal maximum and minimum temperatures are likely to occur across Samoa for December 2021 to February 2022.

## **Part 2: Recent Ocean summary statement**

### **Monthly and last three months: October/August to October 2021 (Highly significant changes)**

Sea Surface temperatures (SST) for Samoa is anticipated to be average for the rest of the island in December 2021. It is forecasted that Samoa is expected to experience average conditions in the upcoming three-month period December to February 2021. Sea Level Anomaly (SLA) shows an increase of 100mm-200mm in October 2021.

## **Part 2i. Monthly and Seasonal Outlooks for December and December 2021 to February 2022**

### **Ocean Variable statement (Highly significant changes)**

The outlook for Samoa shows SSTs are likely to be close to average for both the monthly and seasonal outlook periods.

The outlook for the Samoa region shows a significant sea level elevation of 0.10m-0.20m for the period December 2021 to February 2022.

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

**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:  $X \geq 35$

Product	Date: October 2021	Stakeholder	Total Number of Participants	Number of male	Number of female
PICOF	21 <sup>st</sup> and 22 <sup>nd</sup> October	SPREP, WMO, BOM, APCC, NOAA, SPC, NIWA, NMS and partners	50	25	25
NCOF	28th October	SPREP, WMO, SMET	80	40	40
<b>Total</b>			<b>130</b>	<b>65</b>	<b>65</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:  $X \geq 35$