

# Pacific Islands - Ocean and Climate Outlook Forum (OCOF) No. 167

Country: Samoa

## Part 1: Recent climate

**TABLE 1: Monthly Rainfall**

Station (include data period)	May-2021	Jun-2021	Jul-2021				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Apia (1890-2021)	190.5	121.5	96.4	89.2	143.9	104.1	67/132
Afiamalu (1903-2021)	314.1	224.8	301.2	146.8	260.6	211.4	50/70
Nafanua (1965-2021)	200.0	132.6	100.1	89.1	175.1	134.9	21/50
Faleolo (1956-2021)	41.5	56.2	32.1	54.7	103.4	80.9	9/61

### Monthly: July 2021 statement

Below normal rainfall was recorded at Faleolo. On the other hand, above normal rainfall was registered at Afiamalu. Near normal rainfall was received at Apia and Nafanua.

**TABLE 2: Three-month Total Rainfall for May to July 2021**

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Apia (1890-2021)	408.4	Normal	392.7	527.1	455.0	64/132
Afiamalu (1903-2021)	840.1	Normal	649.4	855.6	743.6	47/67
Nafanua (1965-2021)	432.7	Below normal	461.3	653.0	528.6	16/49
Faleolo (1956-2021)	129.8	Below normal	274.6	392.7	331.0	4/59

### Last three months: May to July 2021 statement:

#### Rainfall (Table 2):

*Below normal* rainfall was recorded for Faleolo and Nafanua while Afiamalu and Apia received *normal* rainfall. Faleolo recorded it's fourth (4th) driest May to July three monthly rainfall on record.

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

Very Low:  $X < 0.0$

Low:  $0 \leq X < 5$

Moderate  $5 \leq X < 10$

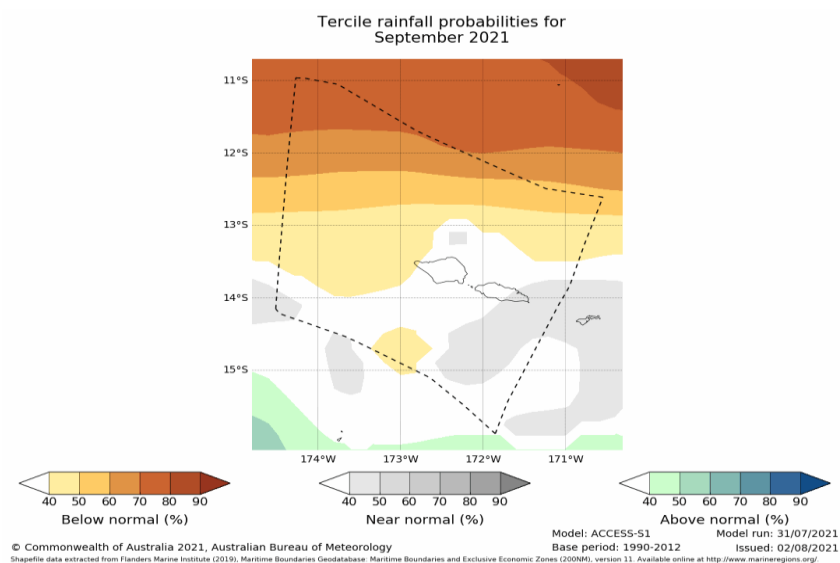
Good:  $10 \leq X < 15$

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 2021

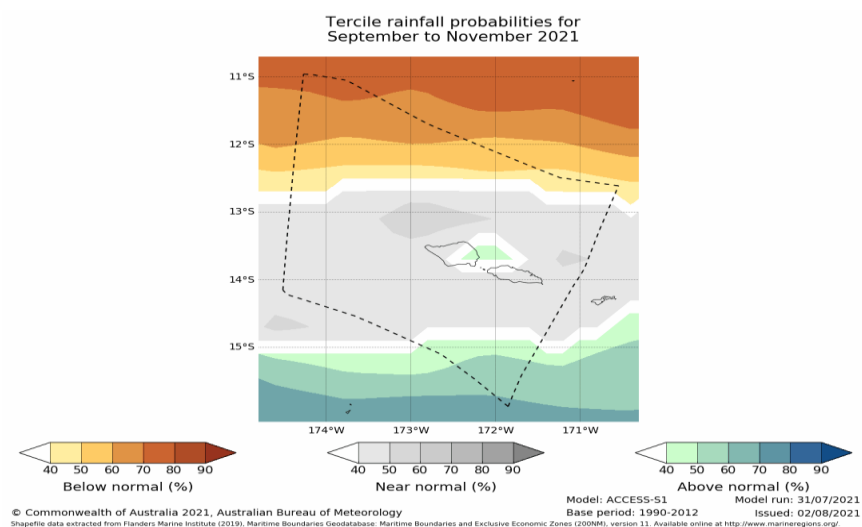
### Monthly rainfall (Image 1):



### Monthly rainfall Outlook statements

The outlook offers little guidance for the most parts of Samoa. The outlook shows *near normal* rainfall for the Eastern part of Upolu and *below normal* rainfall for the far western part of Savaii.

### Seasonal rainfall (Image 2):



### Seasonal Rainfall Outlook statements

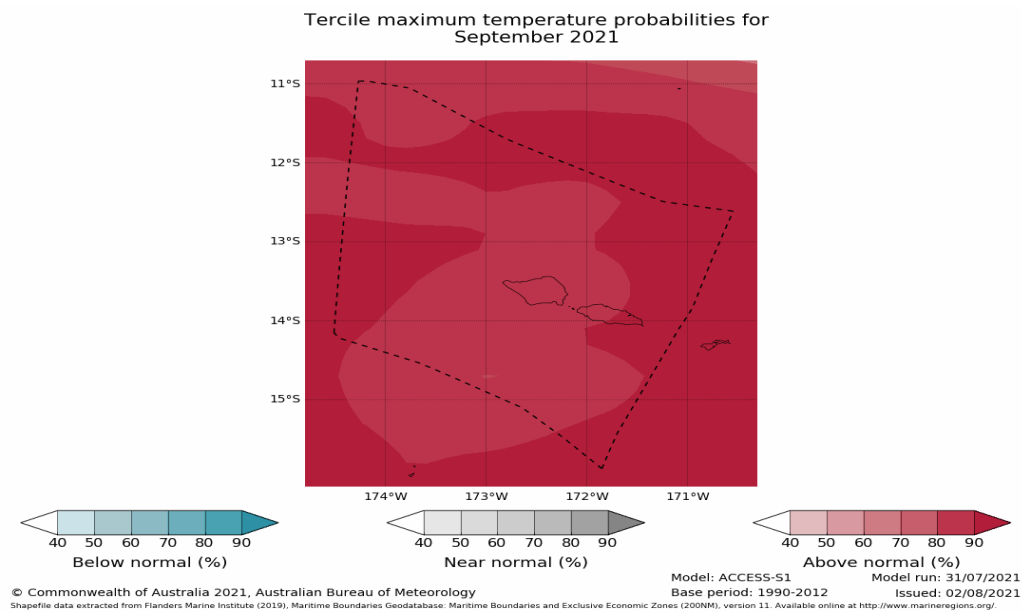
The outlook shows *near normal* rainfall for the western part of Savaii and eastern part of Upolu. *Above normal* rainfall is favoured for a minor eastern part of Savaii. The outlook offers little guidance for the central parts of Savaii and western part of Upolu.

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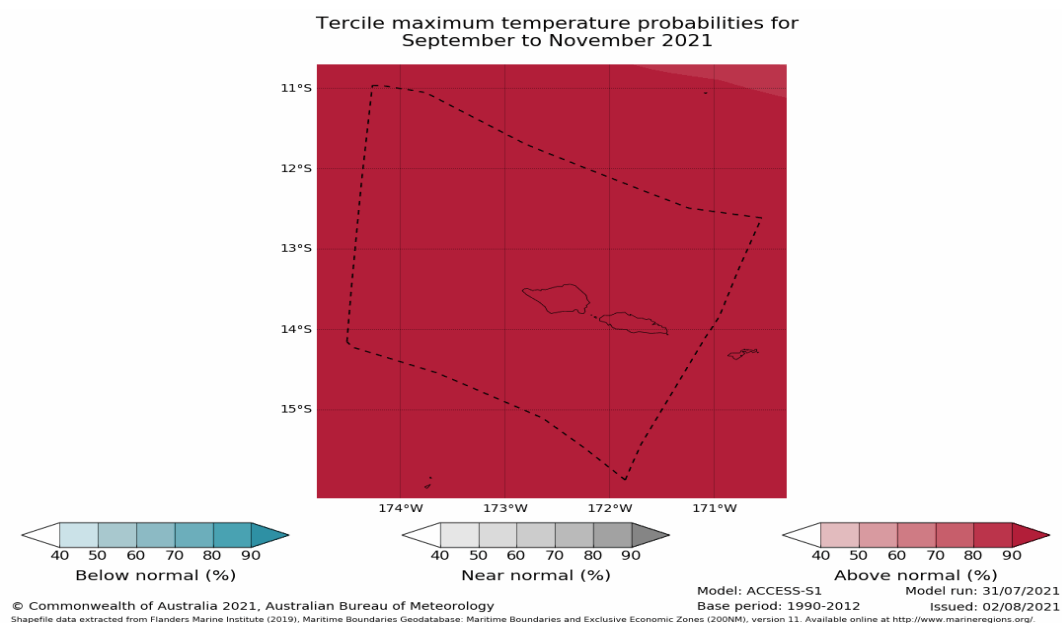
## Monthly Maximum temperature (Image 3):



## Monthly Maximum Outlook statements

The maximum temperature outlook for Samoa for September is very likely to be above normal.

## Seasonal maximum temperature (Image 4):



## Seasonal maximum temperature Outlook statement

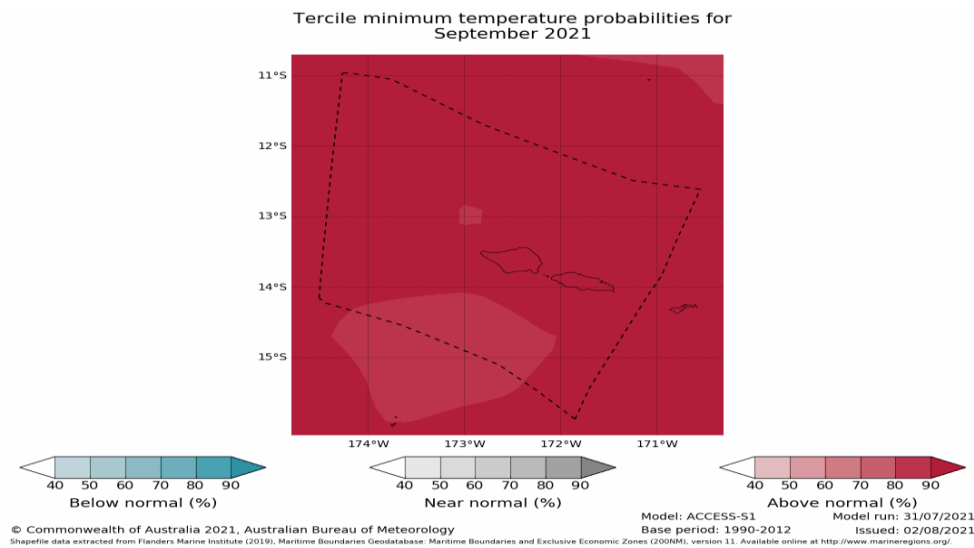
The maximum temperature outlook for Samoa for September to November is very likely to be above normal.

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

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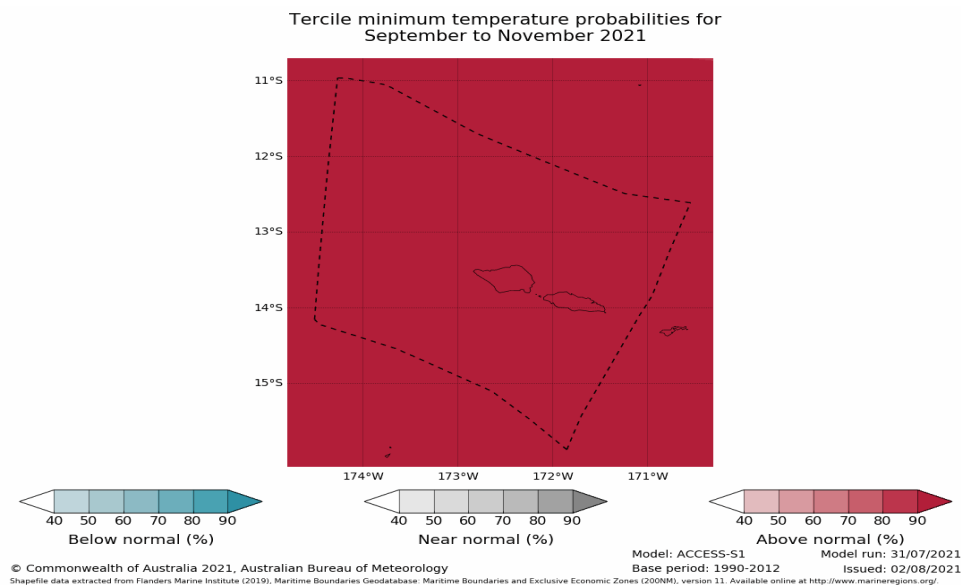
Very High:  $25 \leq X < 35$       Exceptional:  $X \geq 35$

## Monthly minimum temperature (Image 5):



## Monthly Minimum Outlook statements

The minimum temperature outlook for Samoa for September is very likely to be above normal.



## Seasonal minimum temperature (Image 6):

## Seasonal minimum temperature Outlook statement

The minimum temperature outlook for Samoa for September to November is very likely to be above normal.

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

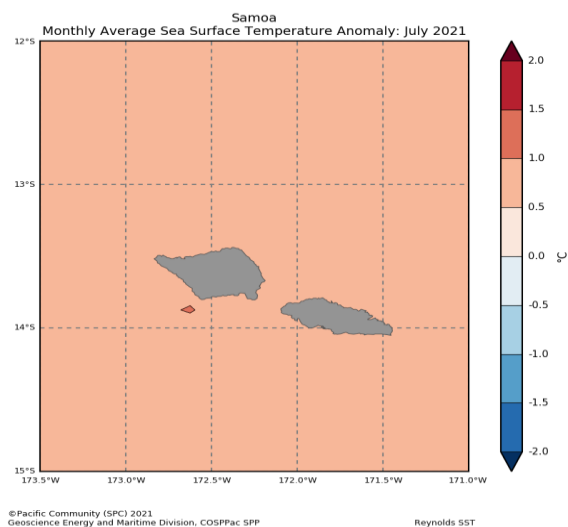
Very Low:  $X < 0.0$       Low:  $0 \leq X < 5$       Moderate:  $5 \leq X < 10$       Good:  $10 \leq X < 15$       High:  $15 \leq X < 25$

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

## Part 2: Recent Ocean summary statement

### Monthly: July 2021

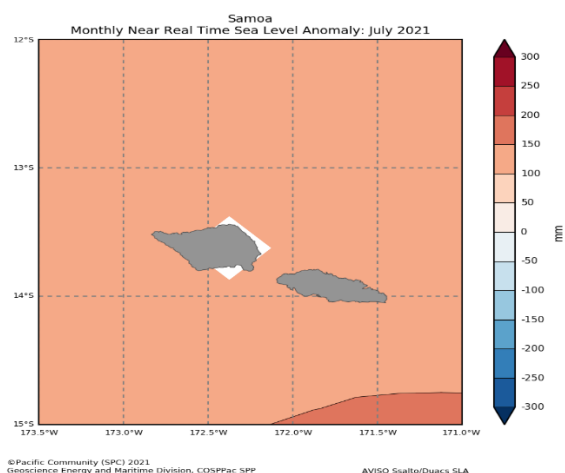
#### Sea Surface Temperature (Image 1):



#### Sea Surface Temperature statement

*Then Samoa region experienced a slight warmer than average Sea Surface Temperatures for July, with both islands observing SSTs ranging from 0.5°C-1.0°C increase from average.*

#### Sea level (Image 2):



#### Sea level statement

*Although extreme elevation of Sea Level Anomaly (SLA) was observed to the south east of the group, the Samoa islands experienced a slight elevation of 100mm-150mm in July 2021.*

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Low:  $0 \leq X < 5$

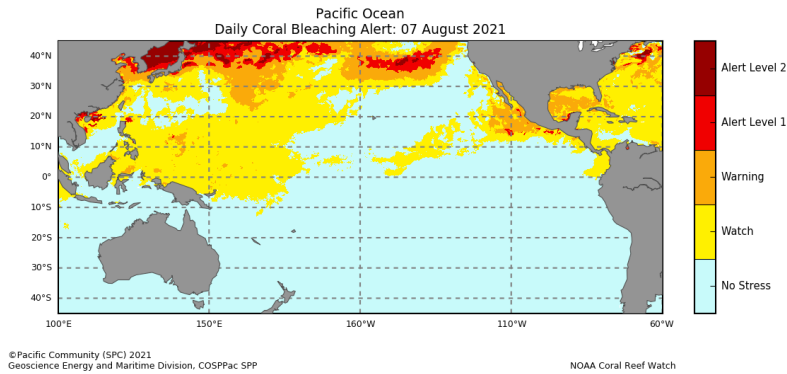
Moderate  $5 \leq X < 10$

Good:  $10 \leq X < 15$

High:  $15 \leq X < 25$

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

## Daily coral bleaching alert (Image 3): Insert Map

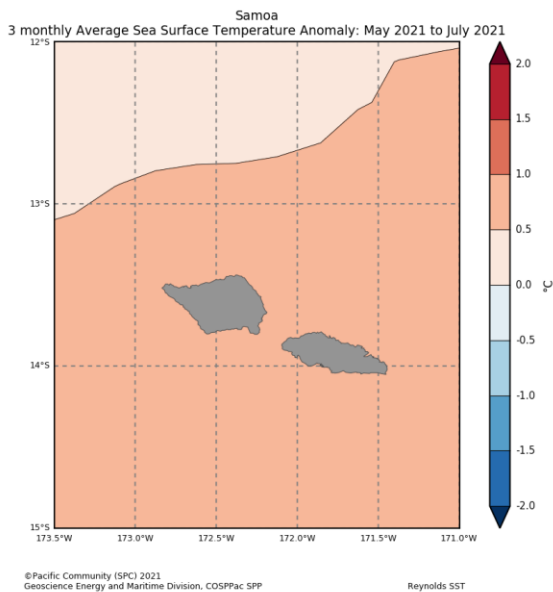


## Daily bleaching alert statement

*Although warmer SSTs were observed in recent months, the Coral Bleach Alert remains at No Stress levels for the Samoa region.*

## Last three months: May to July 2021:

## Sea Surface Temperature (Image 4):



## Last three months Sea Surface Temperature statement

*For the three-month period May to July 2021, The Samoa region observed a 0.5°C-1.0°C increase in SSTs in comparison to its average. Further north of the islands was seen to be cooler than the rest of the Samoa region (closer to average) for this period as seen above.*

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Moderate  $5 \leq X < 10$

Good:  $10 \leq X < 15$

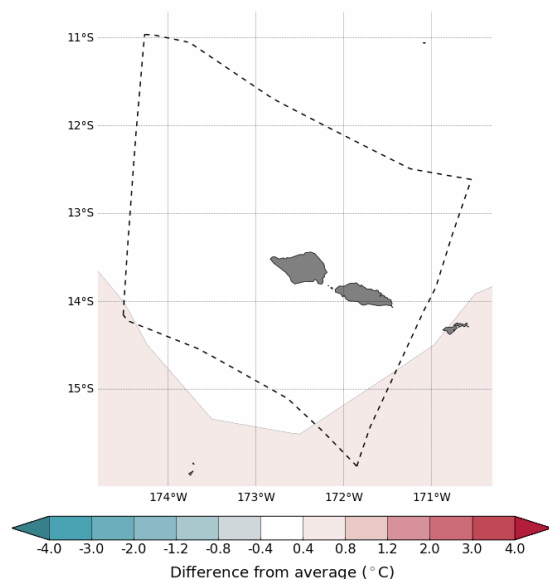
High:  $15 \leq X < 25$

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

## Part 2i. Monthly and Seasonal Outlooks for September and September to November 2021

### Monthly sea surface temperature (Image 5):

Difference from average sea surface temperature forecast for  
September 2021



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Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <http://www.marineregions.org/>

Model: ACCESS-S1  
Base period: 1990-2012

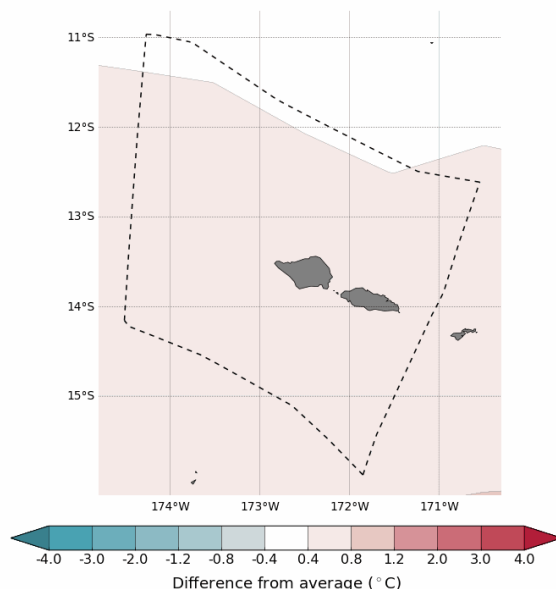
Model run: 02/08/2021  
Issued: 04/08/2021

### Monthly sea surface temperature statement

*Sea Surface temperatures for Samoa is anticipated to be average in September 2021.*

### Seasonal sea surface temperature (Image 6):

Difference from average sea surface temperature forecast for  
September to November 2021



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Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <http://www.marineregions.org/>

Model: ACCESS-S1  
Base period: 1990-2012

Model run: 02/08/2021  
Issued: 04/08/2021

### Seasonal Sea Surface Temperature statement

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Moderate:  $5 \leq X < 10$

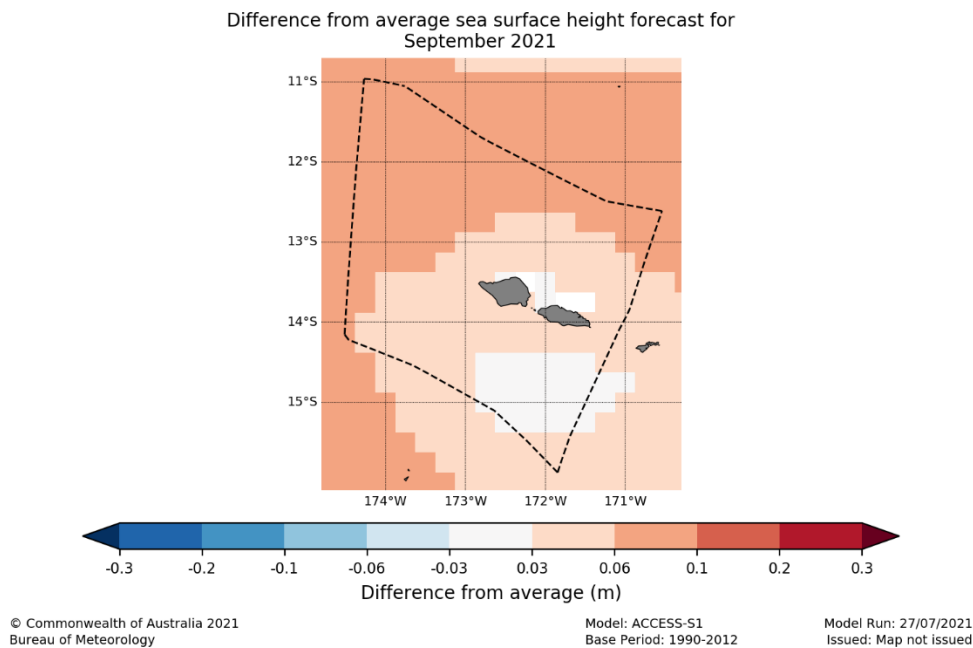
Good:  $10 \leq X < 15$

High:  $15 \leq X < 25$

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

*A slight warming of SSTs (up to 0.8°C) is forecasted for Samoa in the upcoming three month period September to November 2021*

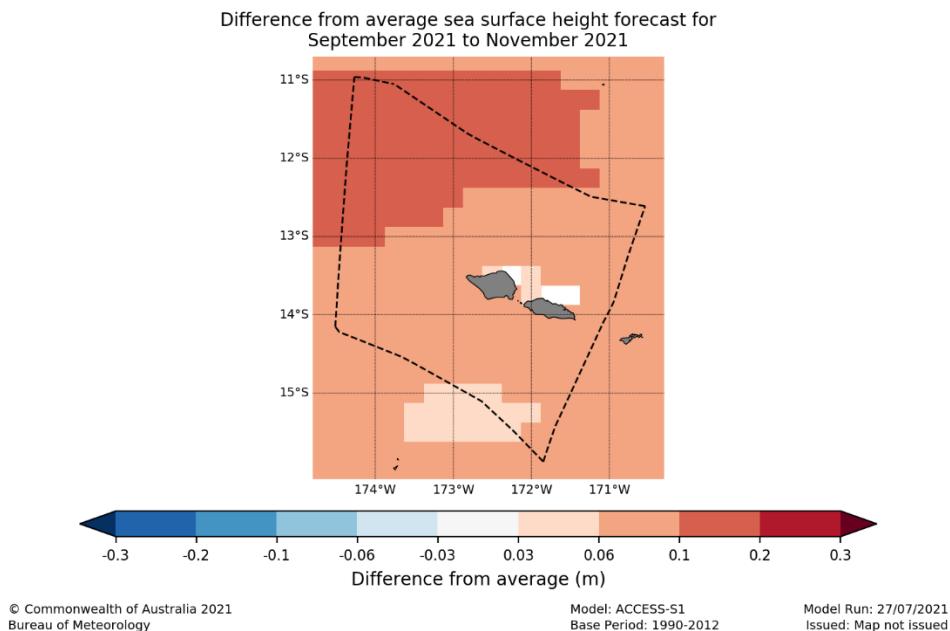
### Monthly sea level (Image 7):



### Monthly sea level statement

*The outlook for Samoa forecasts the southern waters of the islands to experience near average Sea Level, while the rest is forecasted to experience a slight elevation of 0.03m-0.1m for September 2021.*

### Seasonal sea level (Image 8):



### Seasonal sea level statement

*For the September to November 2021 outlook, Sea level is expected to be above average ranging from 0.06m-0.2m elevation.*

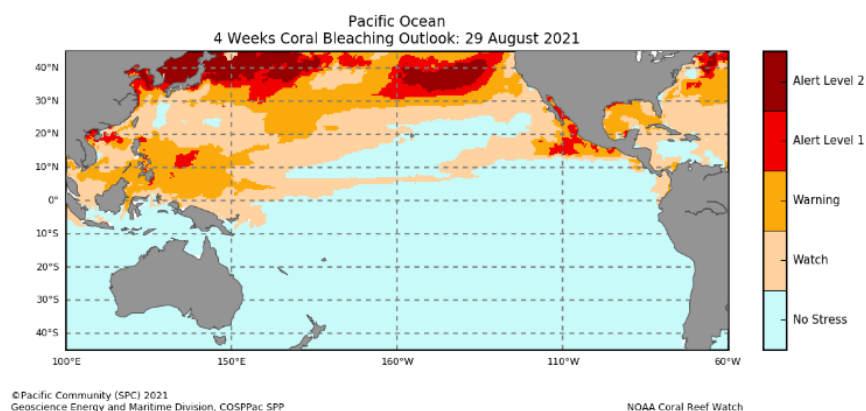
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#### 4-week Coral Bleaching (Image 9):



#### 4-weeks Coral Bleaching statement

*The outlook for Samoa shows there are no coral bleaching alerts.*

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

Product	Date: July 2021	Stakeholder	Total Number of Participants	Number of male	Number of female
Climate Bulletin					
EAR Watch					
Monthly Climate Briefing					
Ocean Outlook					
Total					

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