

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

Country: Fiji

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)				
Western Division							
Penang Mill (1910-2021)	15.1	56.8	28.1	44.5	120.7	72.8	22/112
Lautoka Mill (1900-2021)	19.9	62.6	41.0	38.3	103.2	65.3	45/122
Nadi Airport (1942-2021)	4.9	70.0	40.5	39.6	111.4	61.9	28/80
Central Division							
Laucala Bay (Suva) (1942-2021)	114.5	95.0	211.5	134.0	230.5	173.7	50/80
Nausori Airport (1957-2021)	116.2	109.6	442.6	129.2	240.4	153.0	57/65
Tokotoko (Navua) (1945-2021)	169.0	208.0	321.0	195.1	317.4	249.1	51/77
Eastern Division							
Lakeba (1950-2021)	47.0	171.2	47.5	66.2	140.2	87.9	16/72
Vunisea (Kadavu) (1931-2021)	96.5	174.2	M	97.8	170.4	128.4	
Ono-i-Lau (1943-2021)	25.8	133.3	37.6	41.1	111.7	76.0	22/76
Northern Division							
Labasa Airport (1946-2021)	2.0	M	M	68.2	132.4	96.7	
Savusavu Airfield (1956-2021)	M	M	M	98.4	189.6	129.0	
Udu Point (1946-2021)	119.6	162.5	105.8	93.0	210.0	165.6	27/73
Rotuma (1912-2021)	226.8	163.2	M	244.6	369.0	298.0	

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: $X \geq 35$

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

Station	Three-month Total		33%tile	67%tile	Median	Rank
	Rainfall (mm)					
Western Division						
Penang Mill (1910-2021)	100.0	Below normal	187.2	278.5	239.6	9/111
Lautoka Mill (1900-2021)	123.5	Below normal	152.5	253.8	214.3	22/122
Nadi Airport (1942-2021)	115.4	Below normal	171.7	281.7	225.0	15/80
Central Division						
Laucala Bay (Suva) (1942-2021)	421.0	Below normal	425.8	627.0	513.2	28/80
Nausori Airport (1957-2021)	668.4	Above normal	422.5	605.2	486.0	49/65
Tokotoko (Navua) (1945-2021)	698.0	Normal	551.8	784.2	647.6	41/75
Eastern Division						
Lakeba (1950-2021)	265.7	Normal	253.7	342.8	307.9	26/71
Vunisea (Kadavu) (1931-2021)			327.1	447.6	394.0	
Ono-i-Lau (1943-2021)	196.7	Below normal	236.9	370.6	312.5	17/74
Northern Division						
Labasa Airport (1947-2021)			176.2	242.0	198.6	
Savusavu Airfield (1957-2021)			301.4	420.1	354.6	
Udu Point (1946-2021)	387.9	Normal	298.6	419.6	346.4	43/72
Rotuma (1912-2021)			634.6	889.0	718.2	

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

Monthly	Seasonal
Rainfall (Image 1)	Rainfall (Image 2)
<p>Tercile rainfall probabilities for December 2021</p> <p>Base period: 1981-2018 © Commonwealth of Australia 2021, Australian Bureau of Meteorology Uncertainty data extracted from Tropicus Marine Institute (2020). Maritime Boundaries Database: Maritime Boundaries and Exclusive Economic Zones (2008/09), version 1.1. Available online at http://www.marine-geo.org</p>	<p>Tercile rainfall probabilities for December 2021 to February 2022</p> <p>Base period: 1981-2018 © Commonwealth of Australia 2021, Australian Bureau of Meteorology Uncertainty data extracted from Tropicus Marine Institute (2020). Maritime Boundaries Database: Maritime Boundaries and Exclusive Economic Zones (2008/09), version 1.1. Available online at http://www.marine-geo.org</p>
Monthly Maximum temperature (Image 3)	Seasonal maximum temperature (Image 4):
<p>Tercile maximum temperature probabilities for December 2021</p> <p>Base period: 1981-2018 © Commonwealth of Australia 2021, Australian Bureau of Meteorology Uncertainty data extracted from Tropicus Marine Institute (2020). Maritime Boundaries Database: Maritime Boundaries and Exclusive Economic Zones (2008/09), version 1.1. Available online at http://www.marine-geo.org</p>	<p>Tercile maximum temperature probabilities for December 2021 to February 2022</p> <p>Base period: 1981-2018 © Commonwealth of Australia 2021, Australian Bureau of Meteorology Uncertainty data extracted from Tropicus Marine Institute (2020). Maritime Boundaries Database: Maritime Boundaries and Exclusive Economic Zones (2008/09), version 1.1. Available online at http://www.marine-geo.org</p>
Monthly minimum temperature (Image 5):	Seasonal minimum temperature (Image 6):
<p>Tercile minimum temperature probabilities for December 2021</p> <p>Base period: 1981-2018 © Commonwealth of Australia 2021, Australian Bureau of Meteorology Uncertainty data extracted from Tropicus Marine Institute (2020). Maritime Boundaries Database: Maritime Boundaries and Exclusive Economic Zones (2008/09), version 1.1. Available online at http://www.marine-geo.org</p>	<p>Tercile minimum temperature probabilities for December 2021 to February 2022</p> <p>Base period: 1981-2018 © Commonwealth of Australia 2021, Australian Bureau of Meteorology Uncertainty data extracted from Tropicus Marine Institute (2020). Maritime Boundaries Database: Maritime Boundaries and Exclusive Economic Zones (2008/09), version 1.1. Available online at http://www.marine-geo.org</p>

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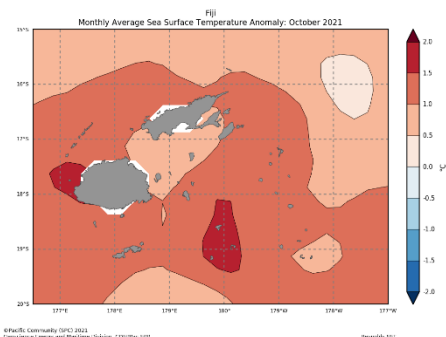
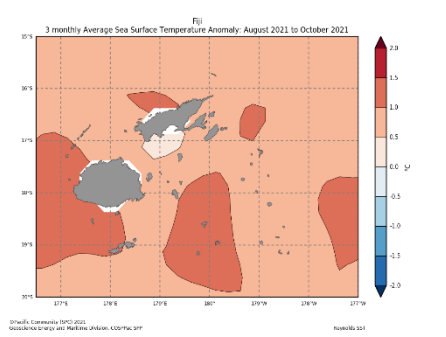
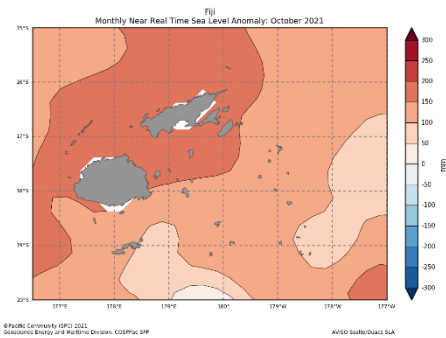
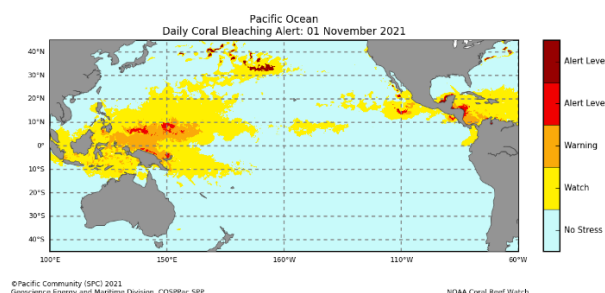
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Part 2: Recent Ocean summary statement

Monthly: October 2021

Monthly: October	Last three months: August to October 2021:
Sea Surface Temperature (Image 1):	Sea Surface Temperature (Image 4):
 <p>Monthly Average Sea Surface Temperature Anomaly: October 2021</p> <p>©Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, CDSPPac SPP</p>	 <p>3 monthly Average Sea Surface Temperature Anomaly: August 2021 to October 2021</p> <p>©Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, CDSPPac SPP</p>
Sea level (Image 2):	
 <p>Monthly Near Real Time Sea Level Anomaly: October 2021</p> <p>©Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, CDSPPac SPP</p>	
Daily coral bleaching alert (Image 3):	
 <p>Pacific Ocean Daily Coral Bleaching Alert: 01 November 2021</p> <p>©Pacific Community (SPC) 2021 Geoscience Energy and Maritime Division, CDSPPac SPP</p> <p>NOAA Coral Reef Watch</p>	

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

<div> <div>Monthly: December</div> <div>Monthly sea surface temperature (Image 5):</div> <div> <p>Difference from average sea surface temperature forecast for December 2021</p> <p>Base period: 1981-2018 Issued: 03/11/2021 Model run: 03/11/2021 © Commonwealth of Australia 2021. Australian Bureau of Meteorology Data: Sea surface temperature (SST) from the Australian Ocean Data Archive (AODA). Model: ACCESS-S2 Version 1.1. Available online at http://www.bom.gov.au</p> </div> </div>	<div> <div>Seasonal: December to February</div> <div>Seasonal sea surface temperature (Image 6):</div> <div> <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: 03/11/2021 © Commonwealth of Australia 2021. Australian Bureau of Meteorology Data: Sea surface temperature (SST) from the Australian Ocean Data Archive (AODA). Model: ACCESS-S2 Version 1.1. Available online at http://www.bom.gov.au</p> </div> </div>
<div> <div>Monthly sea level (Image 7):</div> <div> <p>Difference from average sea surface height forecast for December 2021</p> <p>Base period: 1981-2018 Issued: 03/11/2021 Model run: 03/11/2021 © Commonwealth of Australia 2021. Australian Bureau of Meteorology Data: Sea surface height (SSH) from the Australian Ocean Data Archive (AODA). Model: ACCESS-S2 Version 1.1. Available online at http://www.bom.gov.au</p> </div> </div>	<div> <div>Seasonal sea level (Image 8):</div> <div> <p>Difference from average sea surface height forecast for December 2021 to February 2022</p> <p>Base period: 1981-2018 Issued: 03/11/2021 Model run: 03/11/2021 © Commonwealth of Australia 2021. Australian Bureau of Meteorology Data: Sea surface height (SSH) from the Australian Ocean Data Archive (AODA). Model: ACCESS-S2 Version 1.1. Available online at http://www.bom.gov.au</p> </div> </div>
<div> <div>4-week Coral Bleaching (Image 9):</div> <div> <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> </div> </div>	

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Summary Statement

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

For October 2021, *below normal* rainfall was recorded at Penang Mill, Lakeba and Ono-i-Lau. On the other hand, *above normal* rainfall was registered at Nausori Airport and Tokotoko (Navua). *Near normal* rainfall was received at Lautoka Mill, Nadi Airport, Laucala Bay and Udu Point. Rainfall data is not available for Vunisea, Labasa Airport, Savusavu Airfield and Rotuma.

Below normal rainfall was recorded in the Western Division, Laucala Bay and Ono-i-Lau for August to October period. On the other hand, *above normal* rainfall was registered at Nausori Airport. *Near normal* rainfall was received at Tokotoko (Navua), Lakeba and Udu Point. Penang Mill recorded it ninth driest August to October on record.

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 rainfall outlook for Fiji for December is very likely to be *above normal* except for Rotuma with likely normal

The rainfall outlook for Fiji for December 2021 to February 2022 is very likely to be *above normal*.

The maximum and minimum temperatures for Fiji for December and December 2021 to February 2022 are very likely to be *above normal*.

Part 2: Recent Ocean summary statement

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

Most of the Fiji Waters experienced above average SST in October 2021. Significant warm SSTs of 1.5 to 2.0°C above average were experienced on the western side of Viti Levu and parts of the Southern Lau Group.

For the August to October 2021 period, above average SSTs were experienced in most of the Fiji Waters, significant warmer SSTs of 1.0 to 1.5°C above average were experienced on the western side of Viti Levu, Northern Vanua Levu, Kadavu and parts of the northern and southern Lau Group.

The sea level anomaly across Fiji in October 2021 was significantly higher than normal, with water around Viti Levu, Vanua Levu, Yasawa, Mamanuca Islands, Lomaiviti Group and Taveuni in the range of 150 to 200 mm above average.

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

Ocean Variable statement (Highly significant changes)

The SST outlook for most of the Fiji Waters shows a significant temperature difference of 0.8-1.2°C above normal for December.

The SST outlook for Kadavu, parts of the Lomaiviti Group and southern Lau Group shows a significant temperature difference of 0.8-1.2°C above normal for December 2021 to February 2022.

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The outlook for Rotuma shows a significant sea level difference of 0.06-0.2m above normal for December 2021 and December 2021 and February 2022.

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

Product	Date: October 2021	Stakeholder	Total Number of Participants	Number of male	Number of female
Fiji Climate Summary	07/10/21	General Public	140	106	34
EAR Watch	06/10/21	Humanitarian partners	122	96	26
Fiji Climate Outlook	29/10/21	General public	124	93	31
Climate Outlook for Monasavu	30/10/21	Energy Fiji Limited	13	13	-
Fiji Ocean Outlook	20/10/21	A number of key ocean related stakeholders	36	29	7
Fiji Sugarcane Climate Outlook	31/10/21	Sugar Industry stakeholders	77	60	17
Meteorological Data Request	01/10/21 to 31/10/21	A range of stakeholders	34	23	11
PICOF 9	21/10/21 to 22/10/21	Participants from Fiji Meteorological Service	3	1	2
Total			549	421	128

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