

Pacific Islands - Online Climate Outlook Forum (OCOF) No. 160

Country: Fiji

TABLE 1: Monthly Rainfall

Station (include data period)	Oct-2020	Nov-2020	Dec-2020				
			Total (mm)	33%tile	67%tile	Median	Rank
	Total (mm)	Total (mm)	Rainfall (mm)				
Western Division							
Penang Mill (1910-2020)	165.9	197.8	527.4	149.8	256.1	202.6	99/108
Lautoka Mill (1900-2020)	80.6	161.3	143.3	107.8	197.5	159.8	56/121
Nadi Airport (1942-2020)	148.7	144.5	170.4	119.9	238.4	184.2	37/79
Central Division							
Laucala Bay (Suva) (1942-2020)	177.2	385.6	481.5	211.9	330.6	269.5	71/79
Nausori Airport (1957-2020)	240.4	330.4	443.0	216.3	326.0	258.2	54/65
Tokotoko (Navua) (1945-2020)	287.7	395.9	463.0	228.8	399.5	291.0	61/75
Eastern Division							
Lakeba (1950-2020)	71.4	64.2	353.4	136.2	208.8	168.2	61/71
Vunisea (Kadavu) (1931-2020)	231.9	65.6	282.5	110.8	216.6	142.0	70/84
Ono-i-Lau (1943-2020)	145.7	103.6	102.6	82.2	172.6	114.9	31/73
Northern Division							
Labasa Airport (1946-2020)	109.4	M	M	146.8	268.3	202.0	M
Savusavu Airfield (1956-2020)	128.6	M	M	146.3	247.0	169.7	M
Udu Point (1946-2020)	295.6	170.6	385.1	186.0	309.9	264.8	56/71
Rotuma (1912-2020)	594.5	476.2	373.4	237.1	353.8	287.6	71/106

TABLE 2: Three-month Rainfall for October to December 2020

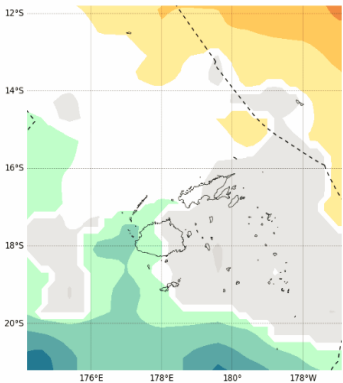
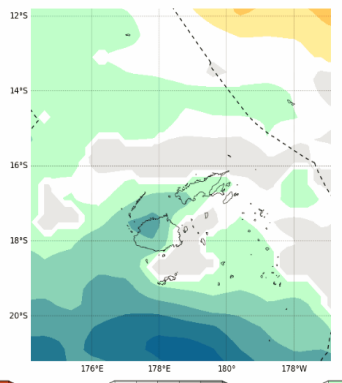
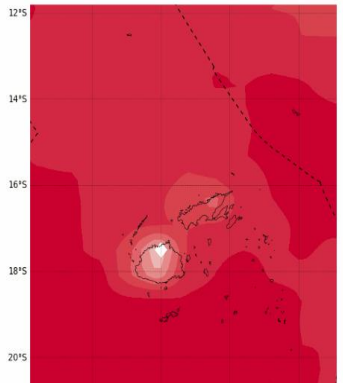
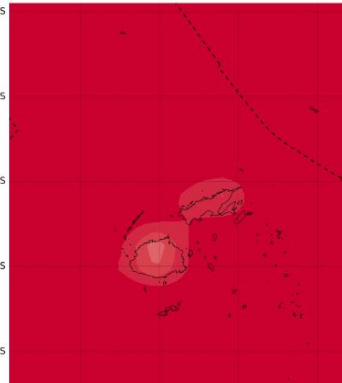
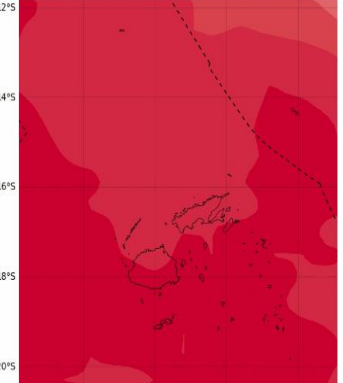
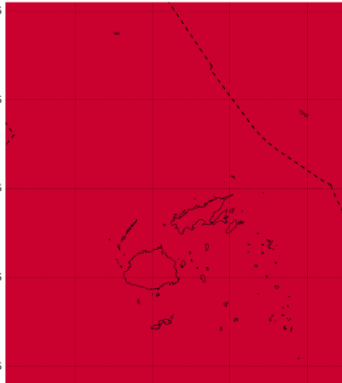
Station	Three-month Total		33%tile	67%tile	Median	Rank	SCOPIC forecast probabilities based on NINO3.4 July-August 2020				Verification: Consistent, Near-consistent, Inconsistent?
	Rainfall (mm)						B-N	N	A-N	LEPS	
Western Division											
Penang Mill (1910-2020)	891.1	Above normal	347.0	586.6	462.0	100 /106	25	37	38	14	Consistent
Lautoka Mill (1900-2020)	385.2	Normal	296.3	438.8	359.4	69 /121	20	41	39	24	Consistent
Nadi Airport (1942-2020)	463.6	Normal	328.4	492.0	378.2	50 /78	22	39	39	19	Near-consistent
Central Division											
Laucala Bay (Suva) (1942-2020)	1044.3	Above normal	557.5	890.5	761.6	60 /79	30	34	36	3	Consistent
Nausori Airport (1957-2020)	1013.8	Above normal	573.0	905.0	716.9	50 /64	27	35	38	7	Consistent
Tokotoko (Navua) (1945-2020)	1146.6	Above normal	755.4	1041.7	884.0	59 /75	28	35	37	7	Consistent
Eastern Division											
Lakeba (1950-2020)	489.0	Normal	341.3	535.0	424.8	41 /71	26	37	37	11	Near-consistent
Vunisea (Kadavu) (1931-2020)	580.0	Above normal	313.7	535.1	465.4	63 /82	28	35	37	13	Consistent
Ono-i-Lau (1943-2020)	351.9	Normal	222.0	416.9	347.6	37 /73	20	40	40	22	Near-consistent
Northern Division											
Labasa Airport (1947-2020)	M		361.0	588.1	482.7	M	19	37	44	25	
Savusavu Airfield (1957-2020)	M		424.5	648.0	521.2	M	23	38	39	12	
Udu Point (1946-2020)	851.3	Above normal	543.7	736.6	629.1	56 /70	29	36	35	2	Near-consistent
Rotuma (1912-2020)	1444.1	Above normal	818.0	1059.7	948.3	102 /105	30	35	35	1	Near-consistent

TABLE 3: Seasonal Climate Outlooks using SCOPIC for February to April 2021**Predictor and Period used: NINO3.4 for November to December 2020**

Station	Below Median (prob)	Median Rainfall (mm)	Above Median (prob)		LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Western Division						
Penang Mill (1910-2020)	38	1013.5	62		5	62
Lautoka Mill (1900-2020)	34	833.7	66		7	57
Nadi Airport (1942-2020)	33	815.2	67		8	61
Central Division						
Laucala Bay (Suva) (1942-2020)	51	944.8	49		-1	53
Nausori Airport (1957-2020)	59	966.4	41		2	58
Tokotoko (Navua) (1945-2020)	56	1116.0	44		0	55
Eastern Division						
Lakeba (1950-2020)	38	715.0	62		4	60
Vunisea (Kadavu) (1931-2020)	39	772.8	61		4	59
Ono-i-Lau (1943-2020)	41	597.4	59		1	58
Northern Division						
Labasa Airport (1946-2020)	36	1025.6	64		8	67
Savusavu Airfield (1956-2020)	42	694.9	58		1	59
Udu Point (1946-2020)	44	851.0	56		0	52
Rotuma (1912-2020)	42	994.5	58		1	51

Station	Below Normal (prob)	33%ile Rainfall (mm)	Normal (prob)	67%ile Rainfall (mm)	Above Normal (prob)	LEPS (%) [whole numbers]	Hit-rate (%) [whole numbers]
Western Division							
Penang Mill (1910-2020)	18	833.1	35	1131.8	47	9	48
Lautoka Mill (1900-2020)	15	746.0	43	958.7	42	8	37
Nadi Airport (1942-2020)	16	679.5	32	954.4	52	13	51
Central Division							
Laucala Bay (Suva) (1942-2020)	30	856.8	44	1059.6	26	-1	40
Nausori Airport (1957-2020)	41	894.0	35	1047.4	24	2	42
Tokotoko (Navua) (1945-2020)	34	999.3	42	1217.8	24	0	36
Eastern Division							
Lakeba (1950-2020)	16	653.1	40	830.5	44	9	42
Vunisea (Kadavu) (1931-2020)	15	646.0	41	840.5	44	9	39
Ono-i-Lau (1943-2020)	26	481.1	33	748.7	41	1	38
Northern Division							
Labasa Airport (1946-2020)	22	773.6	37	1142.7	41	4	51
Savusavu Airfield (1956-2020)	22	638.9	38	827.3	40	1	25
Udu Point (1946-2020)	27	782.5	34	1018.2	39	1	34
Rotuma (1912-2020)	29	860.7	32	1073.8	39	0	37

TABLE 4: Monthly and Seasonal Climate Outlooks using ACCESS-S for February to April 2021

Monthly rainfall	Seasonal rainfall
<p>Tercile rainfall probabilities for February 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>Model: ACCESS-S1 Model run: 02/01/2021 Base period: 1990-2012 Issued: 04/01/2021</p> <p><small>© Commonwealth of Australia 2021, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineengins.org/</small></p>	<p>Tercile rainfall probabilities for February to April 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>Model: ACCESS-S1 Model run: 02/01/2021 Base period: 1990-2012 Issued: 04/01/2021</p> <p><small>© Commonwealth of Australia 2021, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineengins.org/</small></p>
Monthly Tmax	Seasonal Tmax
<p>Tercile maximum temperature probabilities for February 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>Model: ACCESS-S1 Model run: 02/01/2021 Base period: 1990-2012 Issued: 04/01/2021</p> <p><small>© Commonwealth of Australia 2021, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineengins.org/</small></p>	<p>Tercile maximum temperature probabilities for February to April 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>Model: ACCESS-S1 Model run: 02/01/2021 Base period: 1990-2012 Issued: 04/01/2021</p> <p><small>© Commonwealth of Australia 2021, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineengins.org/</small></p>
Monthly Tmin	Seasonal Tmin
<p>Tercile minimum temperature probabilities for February 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>Model: ACCESS-S1 Model run: 02/01/2021 Base period: 1990-2012 Issued: 04/01/2021</p> <p><small>© Commonwealth of Australia 2021, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineengins.org/</small></p>	<p>Tercile minimum temperature probabilities for February to April 2021</p>  <p>Below normal (%) Near normal (%) Above normal (%)</p> <p>Model: ACCESS-S1 Model run: 02/01/2021 Base period: 1990-2012 Issued: 04/01/2021</p> <p><small>© Commonwealth of Australia 2021, Australian Bureau of Meteorology Shapefile data extracted from Flinders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at http://www.marineengins.org/</small></p>

Summary Statements

Rainfall for December 2020:

Normal to above normal rainfall was recorded across the country, while rainfall data is not available for Labasa and Savusavu Airfield.

Accumulated rainfall for October to December 2020, including outlook verification:

Above normal rainfall was recorded across the Central Division, together with Penang Mill, Vunisea, Udu Point and Rotuma. *Near-normal* rainfall was received at Lautoka Mill, Nadi Airport, Lakeba and Ono-i-Lau. Labasa and Savusavu could not be analysed due to missing rainfall data.

Rotuma recorded its fourth wettest October- December period in 105 years of record, and Penang had its seventh wettest in 106 years of record.

The rainfall outlooks were 'Consistent' at six sites and 'Near Consistent' at five sites, while Labasa Airport and Savusavu Airfield could not be verified due to missing readings.

Outlooks for February to April 2021:

1. SCOPIC:

- **Lakeba, Penang, Ono-i-Lau, Udu Point and Labasa:** The outlook shows *above normal* rainfall as the most likely outcome, with *near-normal* the next most likely. *Below normal* rainfall is least likely.
- **Nadi:** The outlook favours *above normal* rainfall, with *near normal* the next most likely.
- **Suva and Navua:** The outlook shows *near-normal* rainfall as the most likely outcome, with *above normal* the next most likely for Lautoka. *Below normal* rainfall is the least likely.
- **Nausori:** The outlook shows *below normal* as the most likely outcome, with *near-normal* the next most likely. *Above normal* is the least likely.
- **Lautoka, Vunisea (Kadavu) and Savusavu:** The outlook shows a near-equal likelihood of *above normal* and *normal* rainfall. *Below normal* is the least likely.
- **Rotuma:** The outlook offers little guidance as the chances of *above normal*, *near-normal* and *below normal* rainfall are similar.

2. ACCESS-S:

Monthly rainfall:

- **Western Division and southern Kadavu:** *Above normal* rainfall is favoured in February.
- **Central and Eastern Division, with northern and eastern Vanua Levu:** *Near-normal* rainfall is the most likely.
- **Rotuma:** *Below normal* rainfall is the most likely.

Monthly maximum and Minimum temperatures:

- **All regions:** Maximum temperatures are favoured to be *above normal* across the Fiji Group, except for northern Viti Levu and the interior where there's little guidance. Minimum temperatures are favoured to be *above normal* across the Fiji Group in February.

Seasonal rainfall:

- *Above normal* rainfall is the favoured or most likely outcome across much of the Fiji Group for the **February to April 2021** period, the main exceptions being the **Lomaiviti Group and northern Kadavu** where there is little guidance.

Seasonal maximum and minimum temperatures:

- **All regions:** Maximum and minimum temperatures are favoured to be *above normal* across the Fiji Group for the coming three months.

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

Product	Date: December 2020	Stakeholder	Total Number of Participants	Number of male	Number of female
Fiji Climate Summary	07/12/20	General public	140	106	34
EAR Watch	04/12/ 20	Humanitarian partners	122	96	26
Fiji Climate Outlook	29/12/20	General public	124	93	31
Climate Outlook for Monasavu	09/12/20	Energy Fiji Limited	13	13	-
Ocean Outlook	18/12/20	A number of key ocean related stakeholders	36	29	7
Meteorological Data Request	01/12/20 to 31/12/20	A range of stakeholders	44	40	4
Total			479	377	102