

# Republic of Korea-Pacific Islands Climate Prediction Services Project Summary: May to July 2021 (MJJ)

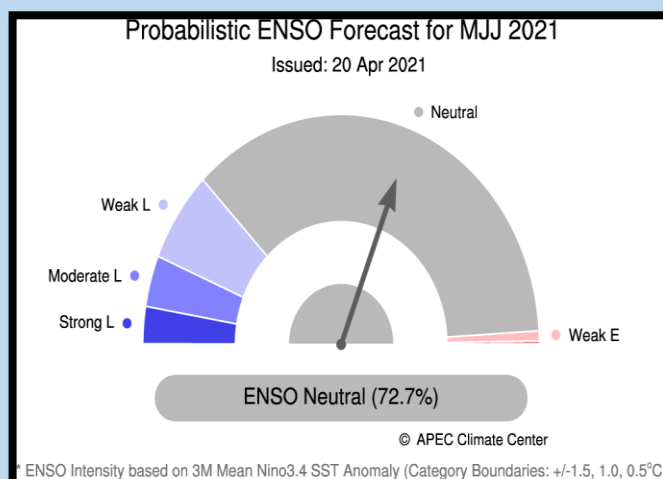
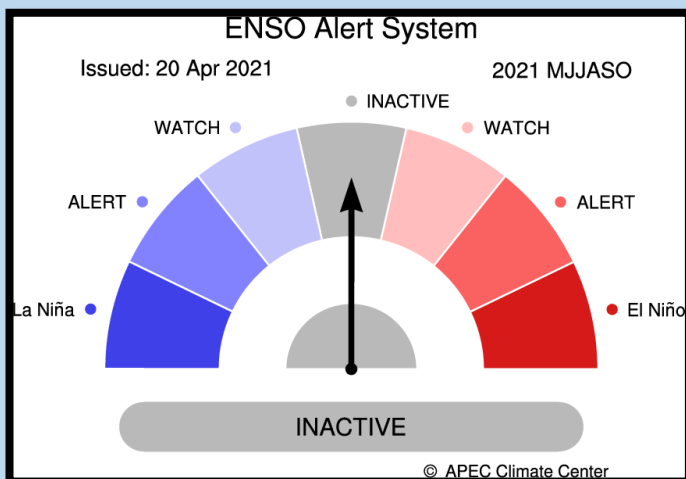
2021-04 Edition



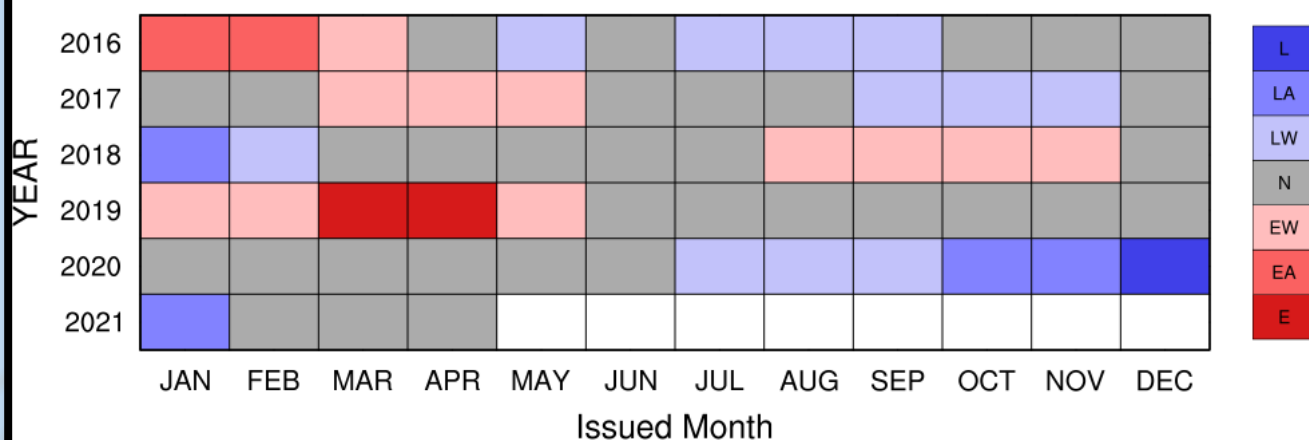
## Climate Outlook for May ~ October 2021

- The APCC ENSO Alert suggests "INACTIVE". During March 2021, negative sea surface temperature anomalies were observed over the equatorial Pacific. The negative Niño3.4 index around  $-0.2^{\circ}\text{C}$  to  $-0.5^{\circ}\text{C}$  is expected during May – October 2021. Based on the running 3-month mean Niño3.4 index, the latest APCC ENSO outlook suggests ENSO neutral conditions with a decreasing chance from 73% to 50% during the forecast period.
- Strongly enhanced probability for above normal temperatures is predicted for Micronesia, Melanesia (excluding equatorial region) and southern Polynesia for May – October 2021.
- Enhanced probability for below normal precipitation is predicted for equatorial region of Pacific Islands for May – October 2021.
- Please see <https://apcc21.org/ser/outlook.do?lang=en> for more information

## ENSO



## APCC ENSO Alert History



E: El Niño EA: El Niño Alert EW: El Niño Watch N: Neutral L: La Niña LA: La Niña Alert LW: La Niña Watch



## RAINFALL OUTLOOK

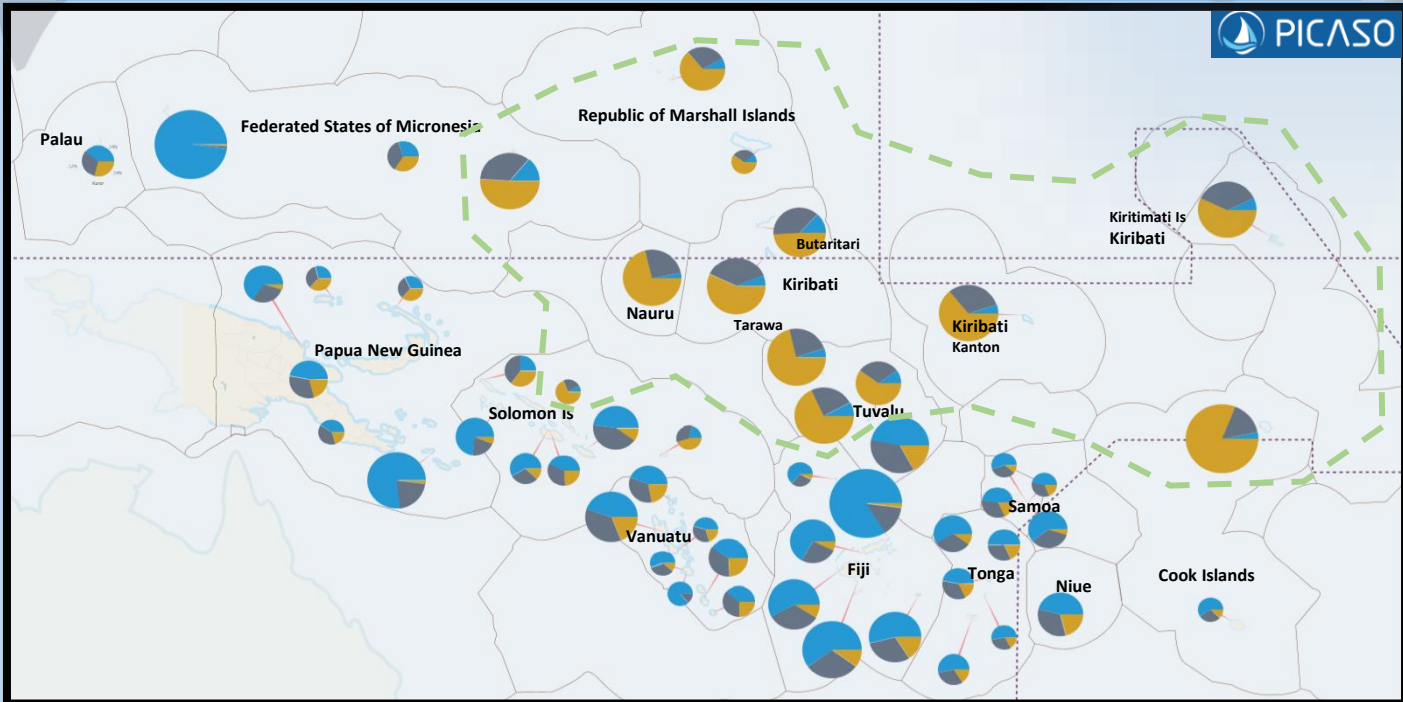
Model	PICASO	CLIK®
Status	COUNTRY (Area)	
<b>Above Normal</b>	<b>Cook Is</b> - (Rarotonga) <b>Fiji</b> – (Udu Point, Nabouwalu, Nadi Airport, Suva, Ono-i-lau, Rotuma) <b>FSM</b> – (Yap) <b>Niue</b> – (Hanan Airport) <b>Palau</b> – (Koror) <b>PNG</b> – (Madang, *Port Moresby, Misima, Nadzab) <b>Samoa</b> – (Apia, Afiamalu, Faleolo, Lauli'i) <b>Solomon Is</b> – (Munda, Honiara, Henderson, Kirakira) <b>Tonga</b> – (Nukualofa, Lupepau'u, Haapai, Niuafoou, Keppel Mata'aho) <b>Tuvalu</b> – (Niulakita) <b>Vanuatu</b> – (Sola, Peko, Lamap, Bauerfield, Port Vila, White Grass, Aneityum)	<b>Cook Is</b> – (Rarotonga) <b>Fiji</b> – (Suva, Nadi, Ono-i-lau, Nabowalu, Udu Point) <b>FSM</b> (Yap, Pohnpei, Chuuk) <b>Marshall Is</b> <b>Niue</b> <b>Palau</b> <b>PNG</b> – (Port Moresby, Misima, Nadzab, Madang) <b>Solomon Is</b> – (Honiara, Henderson, Kirakira) <b>Tonga</b> <b>Vanuatu</b>
<b>Normal</b>	<b>FSM</b> – (Chuuk) <b>Solomon Is</b> – (Taro Is.) <b>PNG</b> – (*Port Moresby)	<b>Fiji</b> – (Rotuma) <b>Samoa</b> <b>Kiribati</b> – (Tarawa/Butaritari) <b>Solomon Is.</b> – (Santa Cruz, Munda, Taro Island, Auki)
<b>Below Normal</b>	<b>Cook Is</b> - (Penrhyn) <b>Kiribati</b> – (Tarawa, Butaritari, Kanton, Kiritimati) <b>Marshall Is.</b> – (Majuro, Kwajalein) <b>FSM</b> – (Pohnpei) <b>Nauru</b> <b>PNG</b> – (Momote, Kavieng) <b>Solomon Is</b> – (Auki, Santa Cruz) <b>Tuvalu</b> – (Funafuti, Nui, Nanumea)	<b>Cook Is</b> - (Penrhyn) <b>Kiribati</b> – (Kanton/Kiritimati) <b>Nauru</b> <b>PNG</b> – (Kavieng, Momote) <b>Tuvalu</b> <b>Tokelau</b>

Note: \* indicate stations that have equal or similar probability of getting Above normal, Normal and Below normal

## TEMPERATURE OUTLOOK

Status	COUNTRY
	CLIK®
Above Normal	<b>Cook Is</b> (Rarotonga, southern group), <b>FSM</b> , <b>Fiji</b> , <b>Marshall Is</b> , <b>Kiribati</b> - (Tarawa, Kanton, Butaritari), <b>Nauru</b> , <b>Niue</b> , <b>Palau</b> , <b>PNG</b> , <b>Samoa</b> , <b>Solomon Is.</b> , <b>Tonga</b> , <b>Vanuatu</b> .
Normal	<b>Kiribati</b> - (Kiritimati),
Below Normal	<b>Cook Is</b> (Penrhyn, northern group), <b>Tokelau</b> , <b>Tuvalu</b> .

# Republic of Korea-Pacific Islands Climate Prediction Services Project PICASO Regional Rainfall Forecast (MJJ)



**Figure 1:** Regional outlook map of the Pacific. In general, all stations within the green-dash line is anticipated to have Below Normal (BN) rainfall. Normal (N) to Above Normal (AN) rainfall is predicted for stations above and below the green line. (Note: the larger the pie chart the higher the forecast skills.)

## OUTLOOK TABLE BY COUNTRY

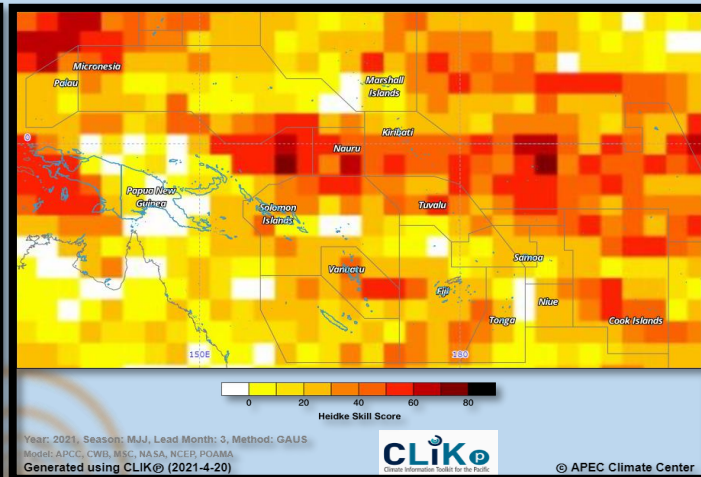
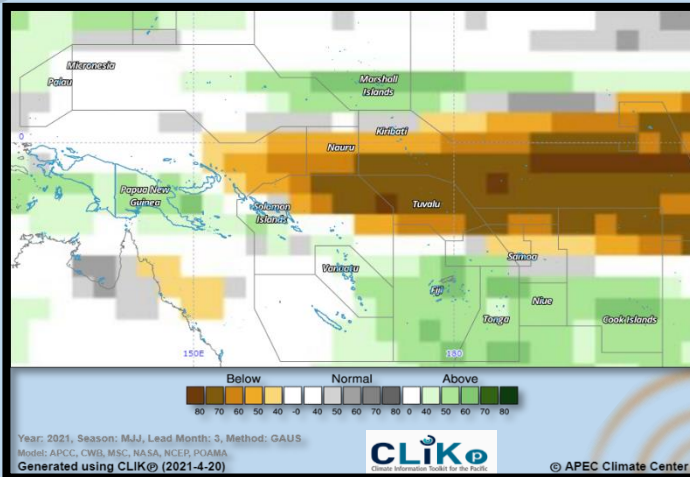
	Station	Tercile Probability			Verification Score (LEPS)		Verification Score (HSS)		Hit/NearMiss/Miss		
 Cook Islands											
	Penrhyn	<div><div>81%</div><div>16%</div></div>			43.4	Excellent	40		9	6	0
	Rarotonga	<div><div>129</div><div>29%</div><div>59%</div></div>			-12.2	Very Low	-20		3	7	5
 Fiji											
	Rotuma	<div><div>7</div><div>29%</div><div>64%</div></div>			-3.7	Very Low	0		5	5	5
	Udu Point	<div><div>14%</div><div>84%</div></div>			36.7	Excellent	12.5		5	7	0
	Nabouwalu	<div><div>7</div><div>26%</div><div>67%</div></div>			12.1	Good	-9.1		3	6	2
	Nadi Airport	<div><div>99</div><div>33%</div><div>58%</div></div>			23.8	High	55		10	4	1
	Suva	<div><div>10</div><div>30%</div><div>60%</div></div>			30	Very High	30		8	7	0
	Ono I Lau	<div><div>16%</div><div>30%</div><div>54%</div></div>			16.3	High	67.9		11	0	3
 Kiribati											
	Kiritimati	<div><div>57%</div><div>36%</div><div>7</div></div>			26.7	Very High	60		11	3	1
	Butaritari	<div><div>49%</div><div>38%</div><div>13%</div></div>			19.6	High	25		7	7	0
	Tarawa	<div><div>57%</div><div>37%</div><div>6</div></div>			34.7	Very High	50		10	5	0
	Kanton	<div><div>64%</div><div>31%</div><div>4</div></div>			27.1	Very High	46.4		9	5	0
 Marshall Islands											
	Kwajalein Bucholz Aaf	<div><div>64%</div><div>28%</div><div>8</div></div>			11.7	Good	20		7	6	2
	Majuro	<div><div>60%</div><div>29%</div><div>11</div></div>			-1.1	Very Low	-20		3	9	3

# Republic of Korea-Pacific Islands Climate Prediction Services Project PICASO Regional Rainfall Forecast (MJJ)

Station	Tercile Probability				Verification Score (LEPS)		Verification Score (HSS)		Hit/NearMiss/Miss		
	KEY	BN	N	AN							
Micronesia											
<input checked="" type="checkbox"/> Chuuk WSO AP	34%	36%	30%	2.6	Low	55	10	1	4		
<input checked="" type="checkbox"/> Pohnpei	51%	35%	14%	29.8	Very High	55	10	4	1		
<input checked="" type="checkbox"/> Yap Island WSO Airport	98%			64.3	Excellent	100	15	0	0		
Nauru											
<input checked="" type="checkbox"/> Nauru	71%	26%		27.3	Very High	14.3	3	4	0		
Niue											
<input checked="" type="checkbox"/> Hanan Airport	21%	33%	46%	10.8	Good	40	9	4	2		
Palau											
<input checked="" type="checkbox"/> Koror	29%	32%	39%	1.5	Low	-10	4	6	5		
Papua New Guinea											
<input checked="" type="checkbox"/> Madang	29%	66%		5	Moderate	0	5	7	3		
<input checked="" type="checkbox"/> Port Moresby	20%	40%	40%	-4.2	Very Low	0	5	7	3		
<input checked="" type="checkbox"/> Momote	37%	34%	29%	-1.6	Very Low	20	5	7	3		
<input checked="" type="checkbox"/> Nadzab	21%	32%	47%	9.6	Moderate	30	8	4	3		
<input checked="" type="checkbox"/> Kavieng	37%	31%	32%	-1.2	Very Low	0	4	6	5		
<input checked="" type="checkbox"/> Misima	21%	77%		34.4	Very High	40	9	6	0		
Samoa											
<input checked="" type="checkbox"/> Afiamalu	34%	61%		8.4	Moderate	40	9	4	2		
<input checked="" type="checkbox"/> Laulili	19%	34%	47%	-5.3	Very Low	10	6	5	4		
<input checked="" type="checkbox"/> Faleolo	18%	34%	48%	0.5	Low	0	5	6	4		
<input checked="" type="checkbox"/> Apia	11%	34%	55%	-2.9	Very Low	10	6	7	2		
Solomon Islands											
<input checked="" type="checkbox"/> Taro Island	35%	40%	25%	4.7	Low	20	7	7	1		
<input checked="" type="checkbox"/> Munda	21%	73%		6	Moderate	30	8	4	3		
<input checked="" type="checkbox"/> Auki	69%	23%	8%	-15.7	Very Low	-20	3	7	5		
<input checked="" type="checkbox"/> Honiara	12%	30%	58%	2.8	Low	10	3	10	2		
<input checked="" type="checkbox"/> Honiara Henderson	24%	33%	43%	1.6	Low	0	5	6	4		
<input checked="" type="checkbox"/> Kira Kira	10%	42%	48%	11.7	Good	20	7	7	1		
<input checked="" type="checkbox"/> Santa Cruz	45%	34%	21%	-1.9	Very Low	10	6	5	4		
Tonga											
<input checked="" type="checkbox"/> Niuafoou	10%	32%	58%	9.3	Moderate	35	7	6	2		
<input checked="" type="checkbox"/> KeppelMata'aho Airport	18%	32%	50%	1.3	Low	20	5	4	6		
<input checked="" type="checkbox"/> Lupepau'u	18%	35%	47%	3.1	Low	10	6	3	6		
<input checked="" type="checkbox"/> Haapai	17%	30%	53%	-3.2	Very Low	-10	4	7	4		
<input checked="" type="checkbox"/> Nuku'alofa	16%	31%	53%	4	Low	30	7	6	2		
Tuvalu											
<input checked="" type="checkbox"/> Nanumea	71%	24%	8%	30.6	Very High	65	10	5	0		
<input checked="" type="checkbox"/> Nui	68%	24%	8%	26	Very High	20	7	8	0		
<input checked="" type="checkbox"/> Funafuti	60%	30%	10%	14.9	Good	0	5	9	1		
<input checked="" type="checkbox"/> Niulakita	17%	36%	47%	28.4	Very High	35	7	7	1		
Vanuatu											
<input checked="" type="checkbox"/> Sola (Vanua Lava)	22%	34%	44%	6.4	Moderate	18.2	5	4	2		
<input checked="" type="checkbox"/> Pekoa Airport (Santo)	19%	36%	45%	15.1	High	46.4	9	4	1		
<input checked="" type="checkbox"/> Lamap (Malekula)	20%	35%	45%	-2	Very Low	7.7	5	6	2		
<input checked="" type="checkbox"/> Bauerfield (Efate)	11%	33%	56%	-0.3	Very Low	-20	3	9	3		
<input checked="" type="checkbox"/> Port Vila	13%	86%		-8.4	Very Low	3.6	5	5	4		
<input checked="" type="checkbox"/> White Grass Airport	24%	35%	41%	7.3	Moderate	57.1	10	2	2		
<input checked="" type="checkbox"/> Aneityum	25%	36%	39%	2.7	Low	10	6	8	1		



# Republic of Korea-Pacific Islands Climate Prediction Services Project CLIK® Rainfall Forecast (MJJ)



**Figure 1:** MME Rainfall Forecast for the Pacific Islands – MJJ 2021 period

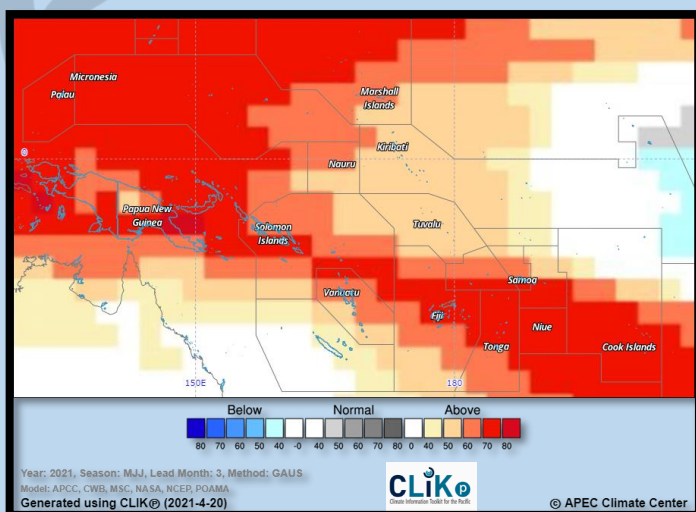
**Figure 2:** Rainfall Forecast Skill for the Pacific Islands – MJJ 2021 period

Country	Rainfall Outlook	Skill
Cook Islands	Below Normal - Penrhyn Above Normal - Rarotonga	Low Moderate
FSM	Above Normal	Very Low – Moderate
Fiji	Normal - Rotuma Above Normal elsewhere	Very Low – Moderate
Kiribati	Below Normal – Kanton, Kiritimati Normal – Tarawa, Butaritari	Low – High
Marshall Islands	Above Normal	Very Low
Nauru	Below Normal	Moderate
Niue	Above Normal	Low
Palau	Above Normal	Low
PNG	Above Normal (Port Moresby/Madang/Nadzab/Misima) Below Normal (Momote/Kavieng)	Very Low – Low
Samoa	Normal	Low
Solomon Islands	Above Normal (Honiara/Henderson/Kirakira) Normal - elsewhere	Very Low - Low
Tonga	Above Normal	Very Low - Low
Tokelau	Below Normal	Moderate
Tuvalu	Below Normal	Low - High
Vanuatu	Above Normal	Very Low - Low

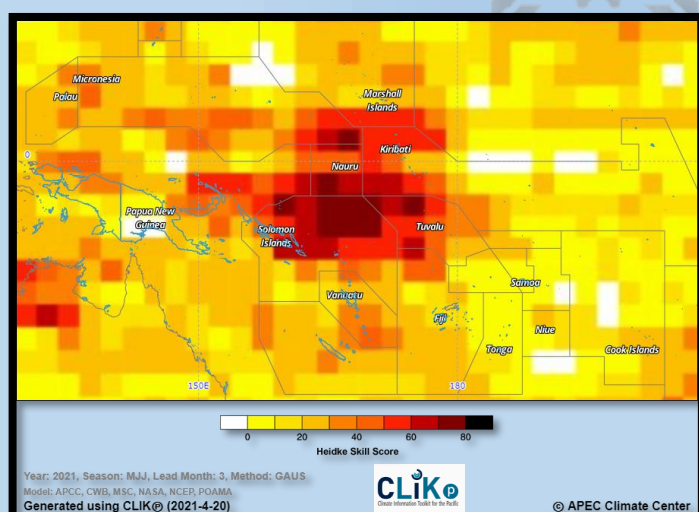
**Table 1:** Rainfall Outlook and Skill for the Pacific Islands.

**Note:** Variation in the skill is due to model agreement and data availability at each location.

# Republic of Korea-Pacific Islands Climate Prediction Services Project CLIK® Temperature Forecast (MJJ)



**Figure 3: MME Temperature Forecast for the Pacific Islands – MJJ 2021 period**



**Figure 4: Air Temperature Forecast Skill for the Pacific Islands – MJJ 2021 period**

Country	Air Temperature Outlook	Skill
Cook Islands	Below Normal (north) Above Normal (south)	Low
FSM	Above Normal	Low - Moderate
Fiji	Above Normal	Very Low – Low Moderate - Rotuma
Kiribati	Above Normal (Tarawa/Butaritari/Kanton) Normal (Kiritimati)	High – Tarawa/Butaritari Very Low – Kanton/Kiritimati
Marshall Islands	Above Normal	Low
Nauru	Above Normal	Moderate
Niue	Above Normal	Very Low
Palau	Above Normal	Low
PNG	Above Normal	Low - Moderate
Samoa	Above Normal	Very Low
Solomon Islands	Above Normal	Moderate - High
Tonga	Above Normal	Very Low
Tokelau	Below Normal	Low
Tuvalu	Below Normal	Moderate – Very High
Vanuatu	Above Normal	Low - Moderate

**Table 2: Temperature Outlook and Skill for the Pacific Islands.**

# Republic of Korea-Pacific Islands Climate Prediction Services Project



## **Important:**

This publication is developed from information in PICASO and CLIK®, products of the Republic of Korea-Pacific Islands Climate Prediction Services Project (ROK-PI CliPS).

This resource is compiled to provide dynamical model data to support and complement information generated by Pacific Islands NMHS.

Contact your location Meteorology Service for site specific forecasts.

## **PICASO**

PICASO (Pacific Island Countries Advanced Seasonal Outlook) is a PC-based seasonal prediction tool tailored for the Pacific Island countries jointly developed by APCC and SPREP through the ROK-PI CliPS project.

PICASO produces probabilistic forecasts of the seasonal mean rainfall of the given weather stations by customizing the data from the APCC dynamical seasonal prediction multi-model ensemble.

## **CLIK®**

The rainfall and temperature forecasts are derived from a multi-model ensemble (MME) of all available Dynamical Models that are provided by WMO Global Producing Centers (GPCs) available on the Climate Services Toolkit for the Pacific (CLIK Pacific or CLIK®).

CLIK® is a product of the Republic of Korea-Pacific Islands Climate Prediction Services Project (ROK-PI CliPS).

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Visit the CLIK® Online Climate Prediction System: [clikp.sprep.org](http://clikp.sprep.org)

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