



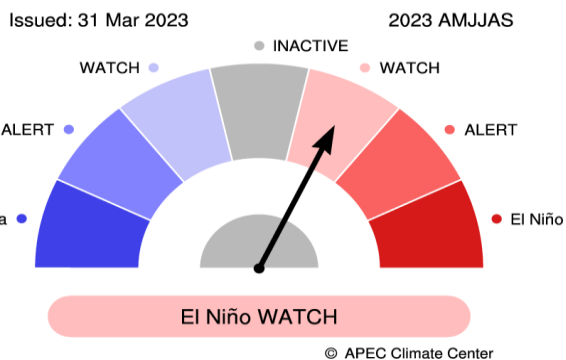
## Climate Outlook for April ~ September 2023

- The APCC ENSO Alert suggests “El Niño WATCH”. In February 2023, negative sea surface temperature anomalies were observed over the tropical Pacific. The Niño3.4 index is expected to be 0.2°C for April 2023 and exceed 1°C from July 2023. For April – June 2023, the probability for ENSO-neutral conditions is expected to be around 53%, which is slightly higher than that of El Niño conditions. For the remaining forecast periods, the chance for El Niño conditions is expected to gradually increase and then be dominant (~91%).
- Strongly enhanced probability for above normal temperatures is predicted for Micronesia, Melanesia, and Polynesia near the equator for April – September 2023.
- For April – June 2023, a tendency for above normal precipitation is predicted for Micronesia, Melanesia, and southern Polynesia south of 20°S. Enhanced probability for below normal precipitation is expected for off-equatorial Polynesia, which is expected to persist for July – September 2023. For the same period, enhanced probability for above normal precipitation is expected for the equator.
- Please see <https://apcc21.org/ser/outlook.do?lang=en> for more information.

## ENSO

### CURRENT STATUS

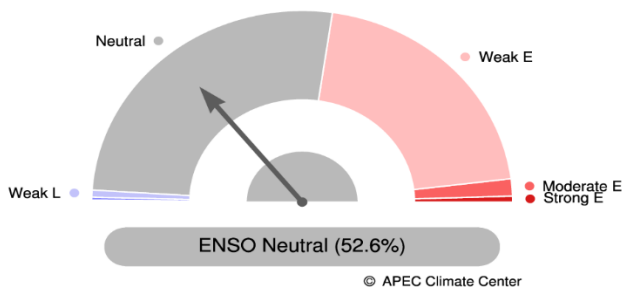
#### ENSO Alert System



### ENSO FORECAST

#### Probabilistic ENSO Forecast for AMJ 2023

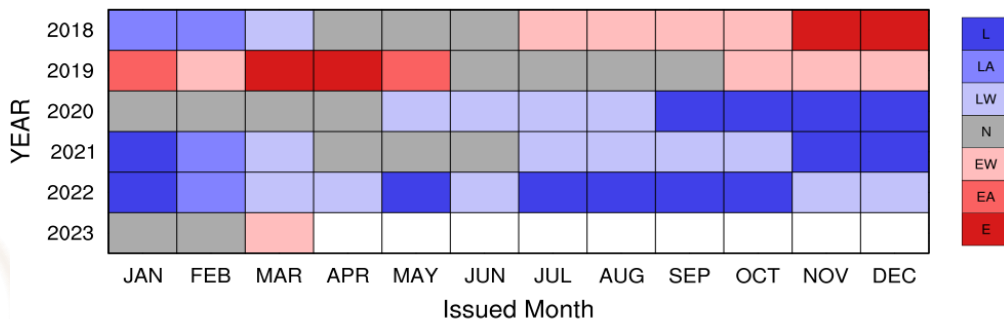
Issued: 15 Mar 2023



\* ENSO Intensity based on 3M Mean Niño3.4 SST Anomaly (Category Boundaries: +/-1.5, 1.0, 0.5°C)

## ENSO ALERT HISTORY

### 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

# Republic of Korea-Pacific Islands Climate Prediction Services Project PICASO & CLIK® Summary



## RAINFALL OUTLOOK

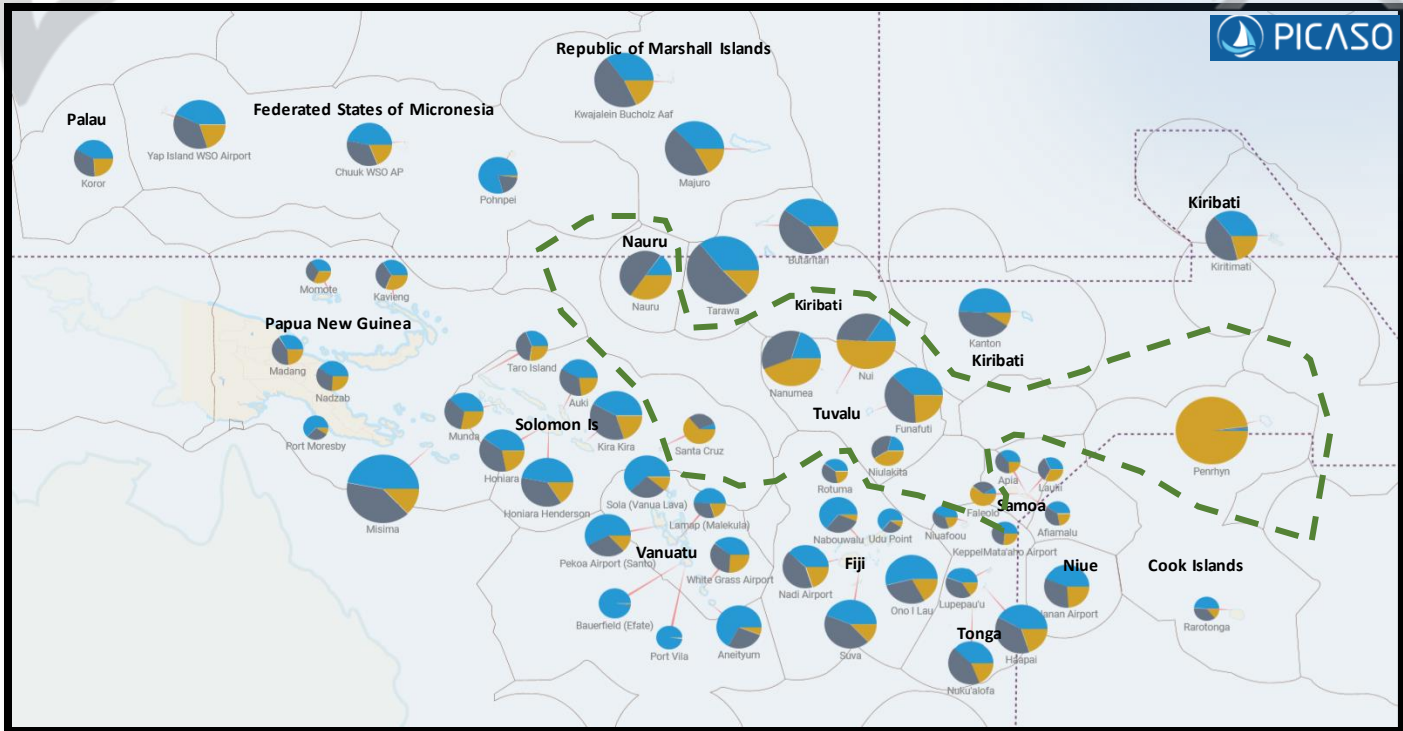
Model	PICASO	CLIK® (APCC MME)
Status	COUNTRY (Area)	
<b>Above Normal</b>	<b>Cook Islands</b> (Rarotonga) <b>Fiji</b> (Suva, Nabouwalu, Udu Point, Ono-i-lau, *Rotuma) <b>FSM</b> (Chuuk, Pohnpei, Yap) <b>Kiribati</b> (Kanton) <b>Niue</b> (Hanan) <b>Palau</b> (Koror) <b>PNG</b> (Port Moresby, Misima, Madang,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

Note: \* indicate stations that have an equal or similar probability of getting Above Normal, Normal, and Below Normal (Climatology)

## TEMPERATURE OUTLOOK : CLIK® toolkit

Status	COUNTRY (Area)
<b>Above Normal</b>	<b>Cook Is, FSM, Fiji, Kiribati , Republic of Marshall Is, Nauru, Niue, Palau, PNG, Samoa, Solomon Islands, Tonga, Tuvalu, Tokelau, Vanuatu</b>
Normal	
<b>Below Normal</b>	

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



**Figure 1:** Regional outlook map of the Pacific. In general, all stations enclosed within the green-dash line anticipated to have Below Normal (BN) rainfall. Normal (N) to Above Normal (AN) rainfall is predicted for stations outside the green-dashed 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			
	KEY	BN	N			AN			
Cook Islands									
Penrhyn		98%		60.7	Excellent	55.9	12	4	1
Rarotonga	14%	37%	49%	-6.6	Very Low	-5.9	5	7	5
Fiji									
Rotuma	22%	39%	39%	-21.1	Very Low	-5.9	5	5	7
Udu Point	99	27%	64%	-1.2	Very Low	-17.9	3	9	2
Nabouwalu	6	30%	64%	6	Moderate	18.2	5	3	3
Nadi Airport	20%	42%	38%	10.5	Good	-5.9	5	9	3
Suva	13%	43%	44%	15.4	High	2.9	6	8	3
Ono I Lau	17%	29%	54%	20	High	62.5	12	2	2
Kiribati									
Kiritimati	21%	43%	36%	19.9	High	38.2	10	5	2
Butaritari	16%	44%	40%	27.2	Very High	42.6	9	6	2
Tarawa	13%	51%	36%	42.6	Excellent	20.6	8	9	0
Kanton	99	42%	49%	16	High	-7.1	4	9	1
Marshall Islands									
Kwajalein Bucholz Aaf	18%	47%	35%	32.3	Very High	29.4	9	8	0
Majuro	17%	46%	37%	29.4	Very High	38.2	10	6	1

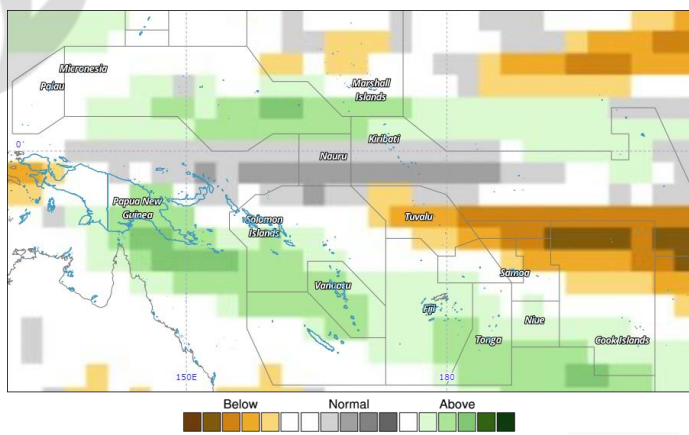
# Republic of Korea-Pacific Islands Climate Prediction Services Project PICASO Regional Rainfall Forecast (AMJ)



Station	Tercile Probability				Verification Score (LEPS)		Verification Score (HSS)		Hit/Near/Miss/MS		
	KEY	BN	N	AN	Score	Quality	Score	Quality	Hit	Near	Miss
<b>Micronesia</b>											
Chuuk WSO AP	19%	34%	47%		10.4	Good	33.8		8	6	3
Pohnpei	19%		79%		8.1	Moderate	-5.9		5	8	4
Yap Island WSO Airport	20%	37%	43%		20		47.1	High	11	3	3
<b>Nauru</b>											
Nauru	35%		50%	15%	19.7		0	High	3	6	0
<b>Niue</b>											
Hanan Airport	24%	32%	44%		13.3		20.6	Good	8	8	1
<b>Palau</b>											
Koror	24%	34%	42%		6.1	Moderate	20.3		7	3	6
<b>Papua New Guinea</b>											
Madang	24%	42%	34%		1.1	Low	20.6		8	4	5
Port Moresby	99	28%	63%		-18.1	Very Low	-23.5		3	8	6
Momote	32%	33%	35%		-1.6	Very Low	11.8		7	2	8
Nadzab	26%	33%	41%		2.6	Low	-1.5		5	7	5
Kavieng	31%	35%	34%		2.8	Low	25		8	3	6
Misima	13%	40%	47%		38.4	Excellent	25		8	8	0
<b>Samoa</b>											
Afiamalu	22%	37%	41%		-5.4	Very Low	2.9		6	6	5
Laulii	32%	36%	32%		-16.6	Very Low	-27.9		1	11	5
Faleolo	61%		31%	8%	-28	Very Low	-23.5		3	4	10
Apia	24%	40%	36%		-2.8	Very Low	20.6		8	3	6
<b>Solomon Islands</b>											
Taro Island	27%	42%	31%		4.5	Low	25		8	8	1
Munda	28%	34%	38%		6.3	Moderate	20.6		8	5	4
Auki	23%	35%	42%		5.2	Moderate	20.6		8	5	4
Honiara	22%	38%	40%		12.1	Good	2.9		6	9	2
Honiara Henderson	16%	37%	47%		19.7	High	6.3		6	8	2
Kira Kira	20%	38%	42%		24.1	High	29.4		9	7	1
Santa Cruz	64%		30%	6%	4.4	Low	-5.9		5	7	5
<b>Tonga</b>											
Niuafoou	20%	37%	43%		-7	Very Low	11.8		5	7	5
KeppelMata'aho Airport	27%	38%	35%		-17.3	Very Low	-14.7		4	4	9
Lupepau'u	16%	40%	44%		3.7	Low	2.9		6	9	2
Haapai	20%	38%	42%		18.4	High	7.4		6	9	2
Nuku'alofa	19%	43%	38%		10.2	Good	20.6		8	5	4
<b>Tuvalu</b>											
Nanumea	44%	36%	20%		31.1	Very High	73.5		14	1	2
Nui	51%	33%	16%		28.7	Very High	47.1		11	4	2
Funafuti	24%	38%	38%		25.6	Very High	42.6		10	6	1
Niulakita	41%	38%	21%		1.8	Low	11.8		7	7	3
<b>Vanuatu</b>											
Sola (Vanua Lava)	11%	27%	62%		11.4	Good	-3.8		4	7	2
Pekoa Airport (Santo)	13%	29%	58%		12.9	Good	10.9		5	8	3
Lamap (Malekula)	20%	31%	49%		2.2	Low	5		4	6	5
Bauerfield (Efate)		98%			4.5	Low	25		8	3	6
Port Vila		98%			-5.5	Very Low	-12.5		4	7	5
White Grass Airport	26%	35%	39%		5.1	Moderate	25		8	2	6
Aneityum	6	27%	67%		12.7	Good	2.9		6	8	3



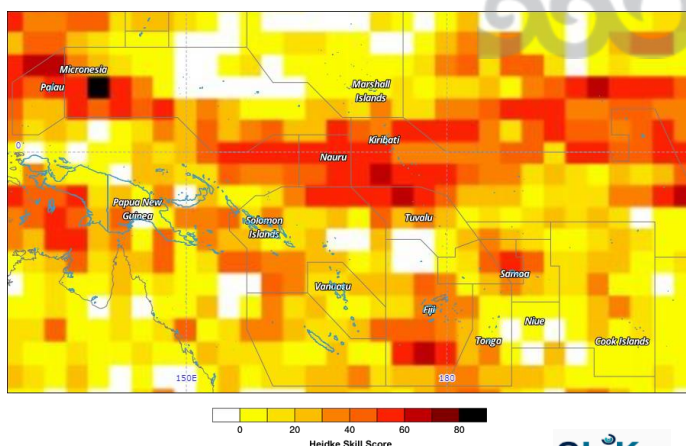
# Republic of Korea-Pacific Islands Climate Prediction Services Project CLIK® Rainfall Forecast (AMJ)



Year: 2023, Season: AMJ, Lead Month: 3, Method: GAUS  
Model: APCC, BOM, CMCC, CWB, MSC, NASA, NCEP  
Generated using CLIK® (2023-3-20)

**CLIK®**  
Climate Information Link for the Pacific  
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Figure 1: MME Rainfall Forecast for the Pacific Islands – AMJ 2023 period



Year: 2023, Season: AMJ, Lead Month: 3, Method: GAUS  
Model: APCC, BOM, CMCC, CWB, MSC, NASA, NCEP  
Generated using CLIK® (2023-3-20)

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Climate Information Link for the Pacific  
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Figure 2: Rainfall Forecast Skill for the Pacific Islands – AMJ 2023 period

Country	Rainfall Outlook	Skill
Cook Islands	Below Normal - Penrhyn Above Normal - Rarotonga	Very Low - Low
FSM	Above Normal - Chuuk Little guidance – Yap, Pohnpei	Very Low - Moderate
Fiji	Above Normal Little guidance - Rotuma	Very Low - Moderate
Kiribati	Above Normal – Tarawa, Butaritari, Kiritimati Normal – Kanton,	Moderate - High
Marshall Islands	Little guidance	Very Low
Nauru	Normal	High
Niue	Above Normal	Very Low
Palau	Little guidance	High
PNG	Normal – Momote, Kavieng Above Normal – Port Moresby, Madang, Nadzab, Misima	Very Low – Moderate
Samoa	Little guidance	Moderate
Solomon Islands	Above Normal – Honiara, Henderson, Santa Cruz, Kirakira Little guidance – Munda, Taro Island, Auki	Very Low - Moderate
Tonga	Above Normal	Very Low - Low
Tokelau	Below Normal	Low
Tuvalu	Below Normal	Very 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<sup>®</sup> Temperature Forecast (AMJ)

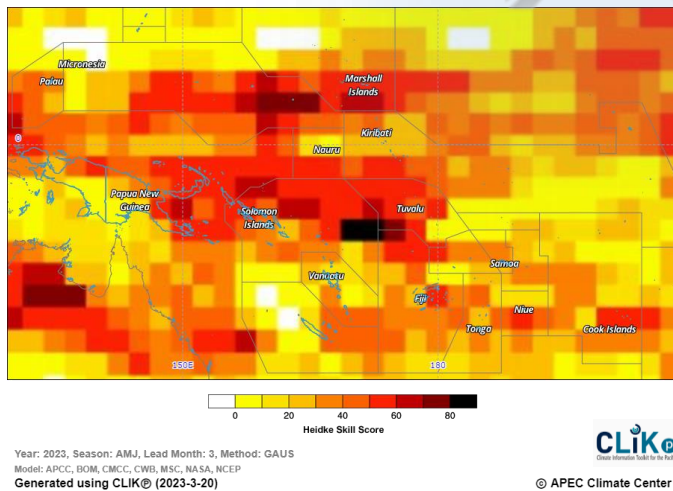
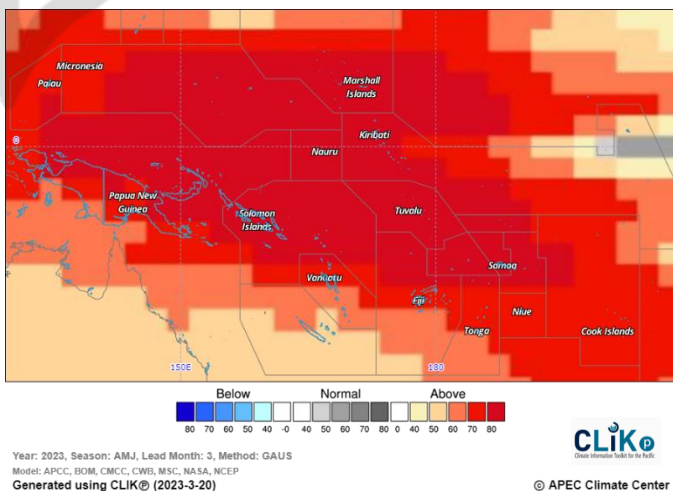


Figure 3: MME Temperature Forecast for the Pacific Islands – AMJ 2023 period

Figure 4: Air Temperature Forecast Skill for the Pacific Islands – AMJ 2023 period

Country	Air Temperature Outlook	Skill
Cook Islands	Above Normal	Low - High
FSM	Above Normal	Very Low - Moderate
Fiji	Above Normal	Low - High
Kiribati	Above Normal	Moderate
Marshall Islands	Above Normal	High
Nauru	Above Normal	Very Low
Niue	Above Normal	High
Palau	Above Normal	Moderate
PNG	Above Normal	Moderate – High
Samoa	Above Normal	Low
Solomon Islands	Above Normal	Low - High
Tonga	Above Normal	Low – Moderate
Tokelau	Above Normal	Very Low
Tuvalu	Above Normal	Very Low - 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).

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

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