Republic of Korea-Pacific Islands
Climate Prediction Services Project
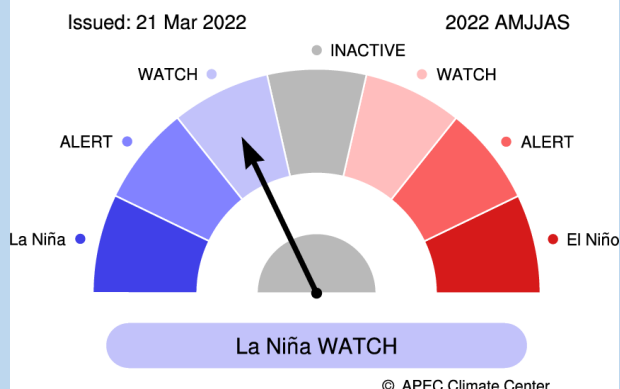# Summary: April to June 2022 (AMJ)

Climate Outlook for April ~ September 2022

- The APCC ENSO Alert suggests "La Niña WATCH" for April – September 2022. During February 2022, negative sea surface temperature anomalies were observed over the central and eastern tropical Pacific. The Niño3.4 index is expected to be below -0.7 ℃ and gradually increase to -0.2 ℃ through the forecast period. Based on the running 3-month mean Niño3.4 index, the latest APCC ENSO outlook suggests an around 60% chance of La Niña conditions with weak intensity for April – June 2022, which gradually decreases. Meanwhile, ENSO-neutral conditions are likely to be gradually intensified and then dominant (~56%) during July – September 2022.
- Strongly enhanced probability for above normal temperatures is predicted for Micronesia and Melanesia (excluding the boundary between them near the Date Line), and southern Polynesia for April – September 2022.
- Strongly enhanced probability for below normal precipitation is predicted for the equatorial regions for the same period.
- Please see https://apcc21.org/ser/outlook.do?lang=en for more information.
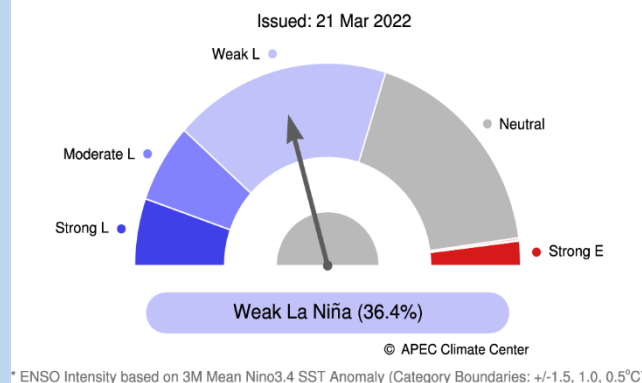
ENSO

CURRENT STATUS

ENSO FORECAST AMJ

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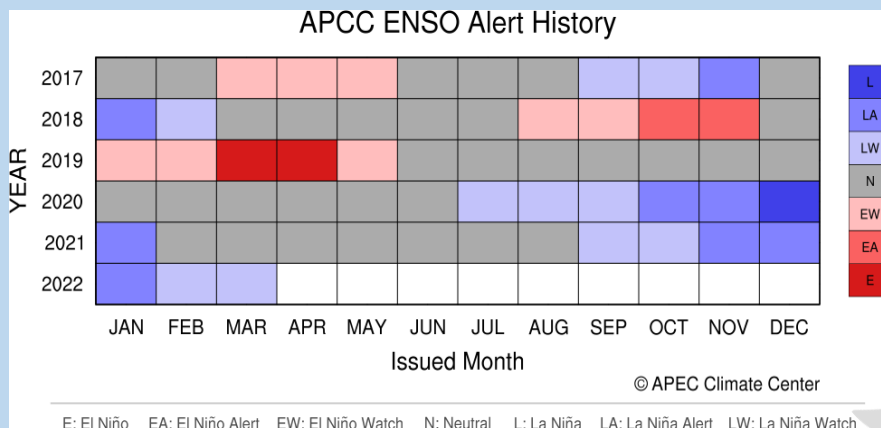
E: El Niño   EA: El Niño Alert   EW: El Niño Watch   N: Neutral   L: La Niña   LA: La Niña Alert   LW: La Niña Watch

A resilient Pacific environment, sustaining our livelihoods and natural heritage in harmony with our cultures.

RAINFALL OUTLOOK

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

*Note: * indicate stations that have an <u>equal or similar probability</u> of getting Above normal, Normal, and Below normal (Climatology)*

TEMPERATURE OUTLOOK : CLIK℗ toolkit

Status	COUNTRY (Area)
Above Normal	**Cook Is (**Rarotonga, southern group**), FSM, Fiji, Republic of Marshall Is, Kiribati** (Tarawa, Butaritari), **Nauru, Niue, Palau, PNG, Samoa, Solomon Islands, Tonga, Vanuatu**.
Normal	**Tuvalu**(Niulakita, Nui), **Tokelau**
Below Normal	**Cook Is (**Penrhyn, northern group**), Kiribati (**Kiritimati, Kanton**), Tuvalu**(Funafuti, Nanumea)

Republic of Korea-Pacific Islands
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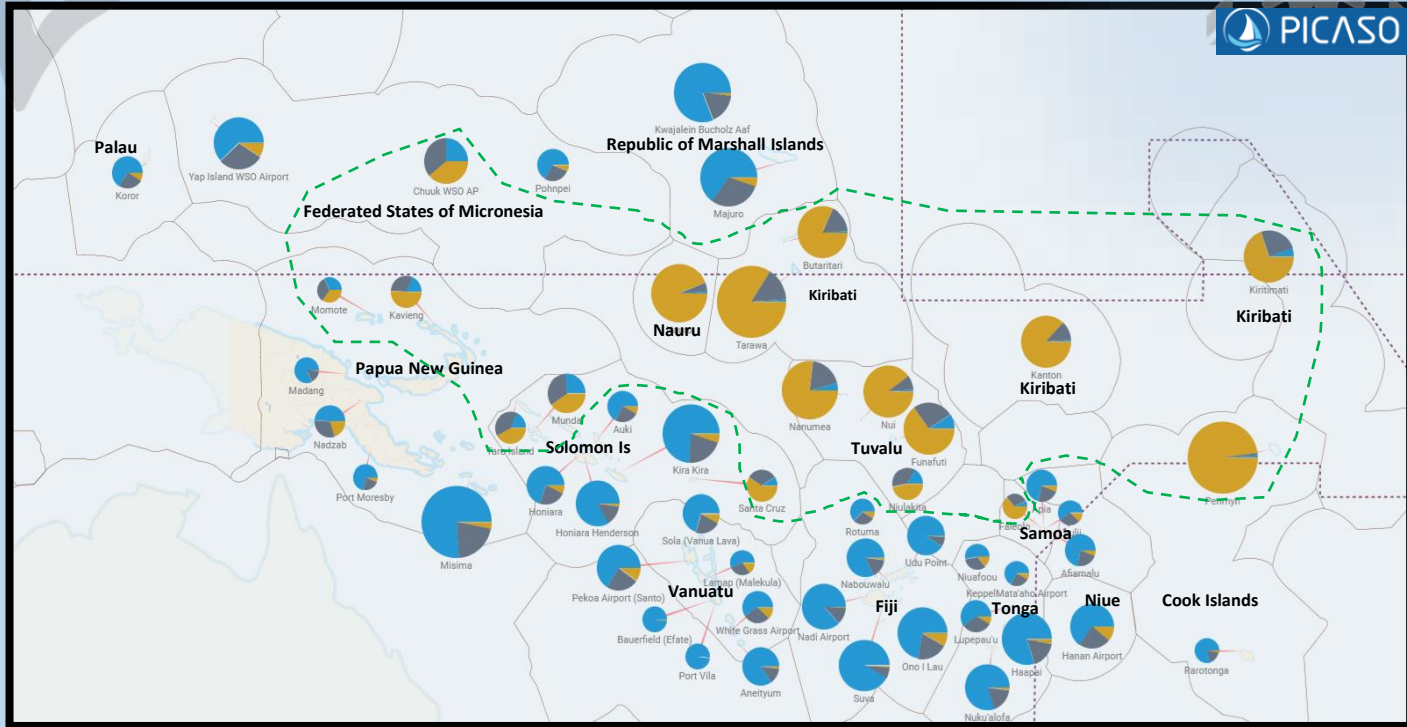# PICASO Regional Rainfall Forecast (AMJ)

Figure 1: Regional outlook map of the Pacific. In general, all stations enclose 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		
Cook Islands	KEY	BN	N / AN							
Penrhyn	98%			62.1	Excellent	62.5		12	3	1
Rarotonga	3% 17%	80%		-6.1	Very Low	-3.1		5	6	5
Fiji										
Rotuma	9% 28%	63%		-17.5	Very Low	-3.1		5	6	5
Udu Point	8%	91%		8.2	Moderate	-15.4		3	9	1
Nabouwalu	16%	82%		6	Moderate	18.2		5	3	3
Nadi Airport	12%	87%		11.5	Good	-3.1		5	8	3
Suva	7%	92%		16.5	High	6.3		6	7	3
Ono I Lau	8% 20%	72%		20.7	High	70		12	1	2
Kiribati										
Kiritimati	70%	25% 5%		16.6	High	34.4		9	5	2
Butaritari	82%	17%		23.5	High	39.1		8	6	2
Tarawa	84%	15%		39.3	Excellent	15.6		7	9	0
Kanton	87%	12%		16	High	-7.1		4	9	1
Marshall Islands										
Kwajalein Bucholz Aaf	17%	81%		27.4	Very High	25		8	8	0
Majuro	5% 30%	65%		27.2	Very High	34.4		9	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/NearMiss/Miss		
	KEY	BN	N	AN						
Micronesia										
Chuuk WSO AP	39%	36%	25%	12.2		Good	39.1	8	6	2
Pohnpei	6%	28%	66%	3.3		Low	-12.5	4	8	4
Yap Island WSO Airport	9%	29%	62%	18.2		High	43.8	10	3	3
Nauru										
Nauru	94%		5%	26.3		Very High	14.3	3	4	0
Niue										
Hanan Airport	11%	24%	65%	14		Good	25	8	7	1
Palau										
Koror	9%	25%	66%	2.3		Low	15	6	3	6
Papua New Guinea										
Madang	16%		82%	-6		Very Low	15.6	7	4	5
Port Moresby	6%	22%	72%	-17.8		Very Low	-21.9	3	7	6
Momote	35%	33%	32%	-2		Very Low	6.3	6	2	8
Nadzab	20%	31%	49%	2.4		Low	1.6	5	6	5
Kavieng	51%	31%	18%	0.7		Low	20.3	7	3	6
Misima	3%	21%	76%	38.3		Excellent	25	8	8	0
Samoa										
Afiamalu	6%	22%	72%	0.6		Low	6.3	6	6	4
Laulii	12%	28%	60%	-12.6		Very Low	-26.6	1	11	4
Faleolo	63%	30%	7%	-28.2		Very Low	-21.9	3	3	10
Apia	6%	23%	71%	1.6		Low	25	8	3	5
Solomon Islands										
Taro Island	42%	40%	18%	2.9		Low	20.3	7	8	1
Munda	40%	34%	26%	5.7		Moderate	15.6	7	5	4
Auki	8%	25%	67%	1		Low	15.6	7	5	4
Honiara	7%	23%	70%	7.1		Moderate	-3.1	5	9	2
Honiara Henderson	15%		83%	13.8		Good	0	5	8	2
Kira Kira	5%	21%	74%	25.4		Very High	34.4	9	6	1
Santa Cruz	59%	32%	9%	1.3		Low	-12.5	4	7	5
Tonga										
Niuafoou	14%	33%	53%	-4.3		Very Low	15.6	5	7	4
KeppelMata'aho Airport	8%	25%	67%	-13.8		Very Low	-12.5	4	4	8
Lupepau'u	8%	32%	60%	3.8		Low	6.3	6	8	2
Haapai	3%	17%	80%	19.4		High	10.9	6	8	2
Nuku'alofa	18%		80%	11		Good	25	8	4	4
Tuvalu										
Nanumea	77%	19%	4%	28.5		Very High	71.9	13	1	2
Nui	90%		9%	24.8		High	43.8	10	4	2
Funafuti	65%	26%	9%	23.3		High	39.1	9	6	1
Niulakita	47%	36%	17%	0		Low	6.3	6	7	3
Vanuatu										
Sola (Vanua Lava)	8%	22%	70%	6		Moderate	-12.5	3	7	2
Pekoa Airport (Santo)	10%	24%	66%	13.8		Good	15	5	7	3
Lamap (Malekula)	15%	28%	57%	-2.3		Very Low	-1.8	3	6	5
Bauerfield (Efate)			98%	-1.9		Very Low	20.3	7	3	6
Port Vila			98%	-14.6		Very Low	-20	3	7	5
White Grass Airport	12%	29%	59%	2		Low	20	6	8	2
Aneityum	13%		85%	5.3		Moderate	-3.1	5	8	3

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CLIK℗ Rainfall Forecast (AMJ)
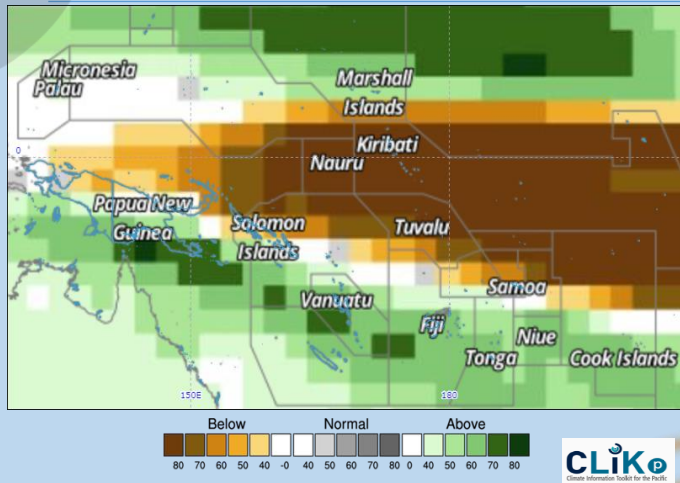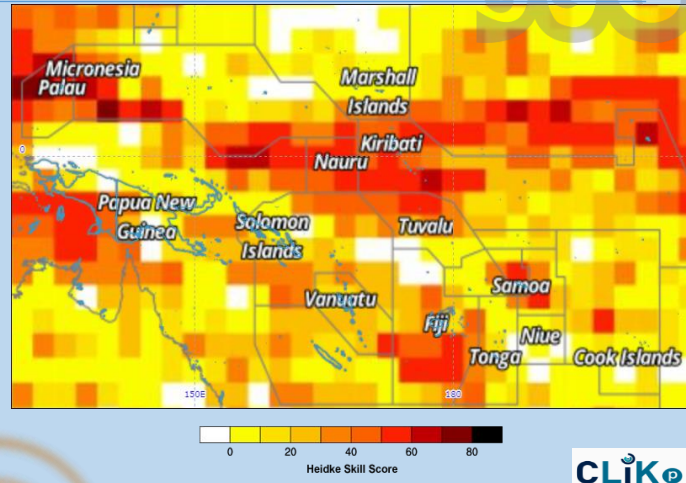
Figure 1: MME Rainfall Forecast for the Pacific Islands – AMJ 2022 period

Figure 2: Rainfall Forecast Skill for the Pacific Islands – AMJ 2022 period

Country	Rainfall Outlook	Skill
Cook Islands	Below Normal - Penrhyn Above Normal - Rarotonga	Very Low - Moderate
FSM	Above Normal	Very Low – Moderate
Fiji	Above Normal except Rotuma (N)	Very Low – Moderate
Kiribati	Below Normal	Low – High
Marshall Islands	Above Normal	Very Low
Nauru	Below Normal	Very High
Niue	Above Normal	Very Low
Palau	Above Normal	High
PNG	Below Normal –Momote, Kavieng Above Normal – Port Moresby, Nadzab, Misima Little guidance - Madang	Very Low - Low
Samoa	Outlook offers little guidance as the chance of AN/NN/BN are similar.	Moderate
Solomon Islands	Below Normal – Taro Is., Munda, Auki Above Normal – Honiara, Henderson Little guidance – Kirakira, Santa Cruz	Very Low - Low
Tonga	Above Normal	Very Low - Low
Tokelau	Below Normal	Low
Tuvalu	Below Normal	Very Low - Moderate
Vanuatu	Above Normal	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.*

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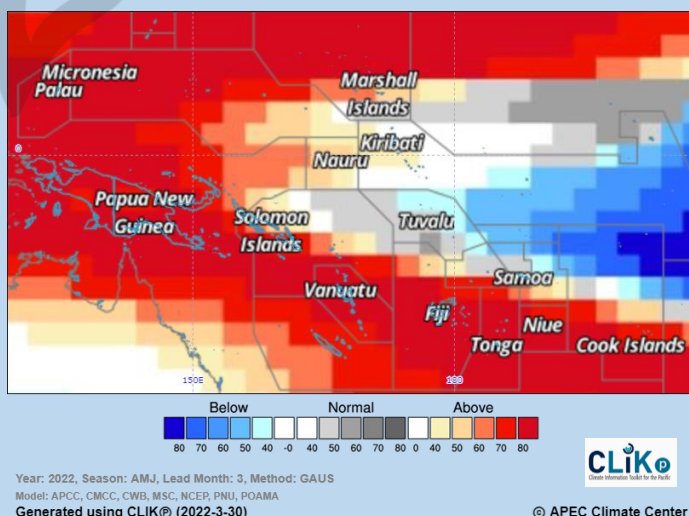## CLIK℗ Temperature Forecast (AMJ)

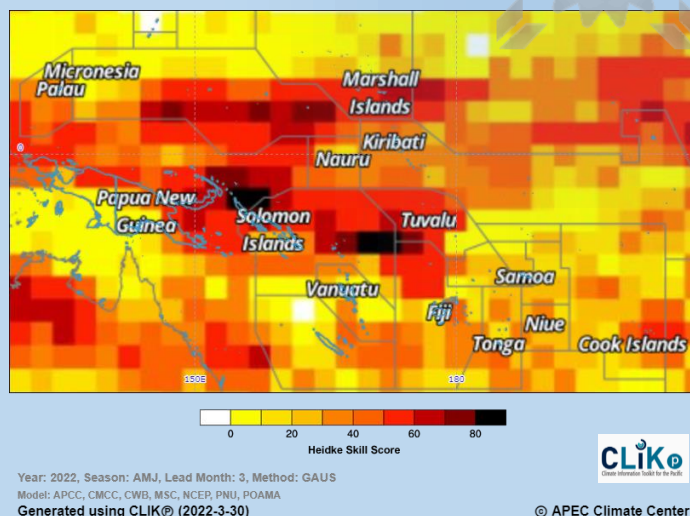*Figure 3: MME Temperature Forecast for the Pacific Islands – AMJ 2022 period*

Figure 4: Air Temperature Forecast Skill for the Pacific Islands – AMJ 2022 period

Country	Air Temperature Outlook	Skill
Cook Islands	Above Normal (Rarotonga) Below Normal (Penrhyn)	Low - Moderate
FSM	Above Normal	Very Low - High
Fiji	Above Normal	Very Low – High
Kiribati	Above Normal – Tarawa/Butaritari Below Normal – Kiritimati/Kanton	Moderate
Marshall Islands	Above Normal	High
Nauru	Above Normal	Low
Niue	Above Normal	Low
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	Below Normal	Low
Tuvalu	Below Normal - Funafuti, Nanumea Normal – Nui, Niulakita	Very Low – High
Vanuatu	Above Normal	Very 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

CONTACT INFORMATION:

For more information, please contact Mr. Tile Tofaeono, Climate Prediction Services Coordinator, SPREP tilet@sprep.org

PO Box 240, Apia, Samoa
E: sprep@sprep.org
T: +685 21929
F: +685 20231
W: www.sprep.org

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