Republic of Korea-Pacific Islands Climate Prediction Services Project

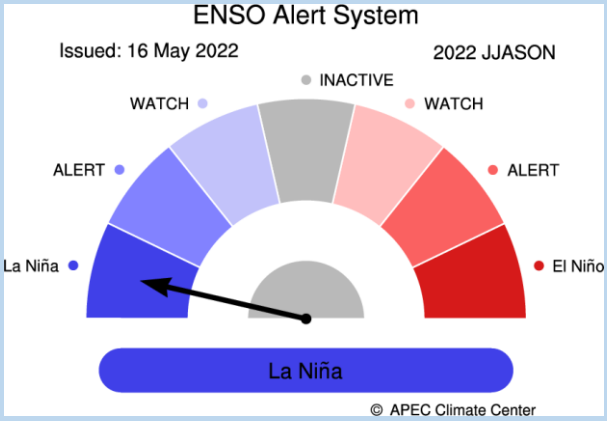
Summary: June to August 2022 (JJA)

Climate Outlook for June ~ November 2022

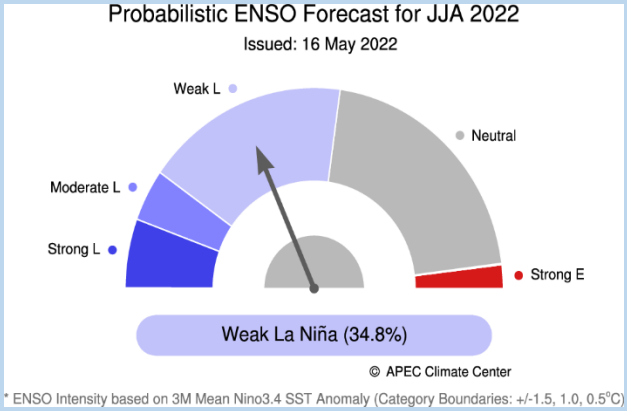
- The APCC ENSO Alert suggests “La Niña” for June – November 2022. In April 2022, negative sea surface temperature anomalies were observed over the central and eastern tropical Pacific. The Niño3.4 index is expected to be below -0.5°C through the whole forecast period, which suggests La Niña conditions. Based on the running 3-month mean Niño3.4 index, the latest APCC ENSO outlook suggests an around 50% to 54% chance of La Niña conditions with weak intensity for the whole forecast period.
- 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 May – October 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

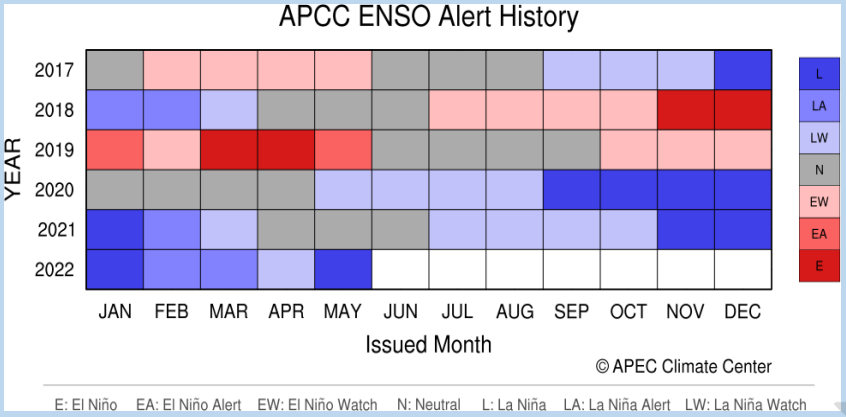
Current Status



ENSO Forecast



ENSO Alert History



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

Republic of Korea-Pacific Islands Climate Prediction Services Project

PICASO & CLIK® Summary

RAINFALL OUTLOOK

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

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

Republic of Korea-Pacific Islands Climate Prediction Services Project

PICASO Regional Rainfall Forecast (JJA)

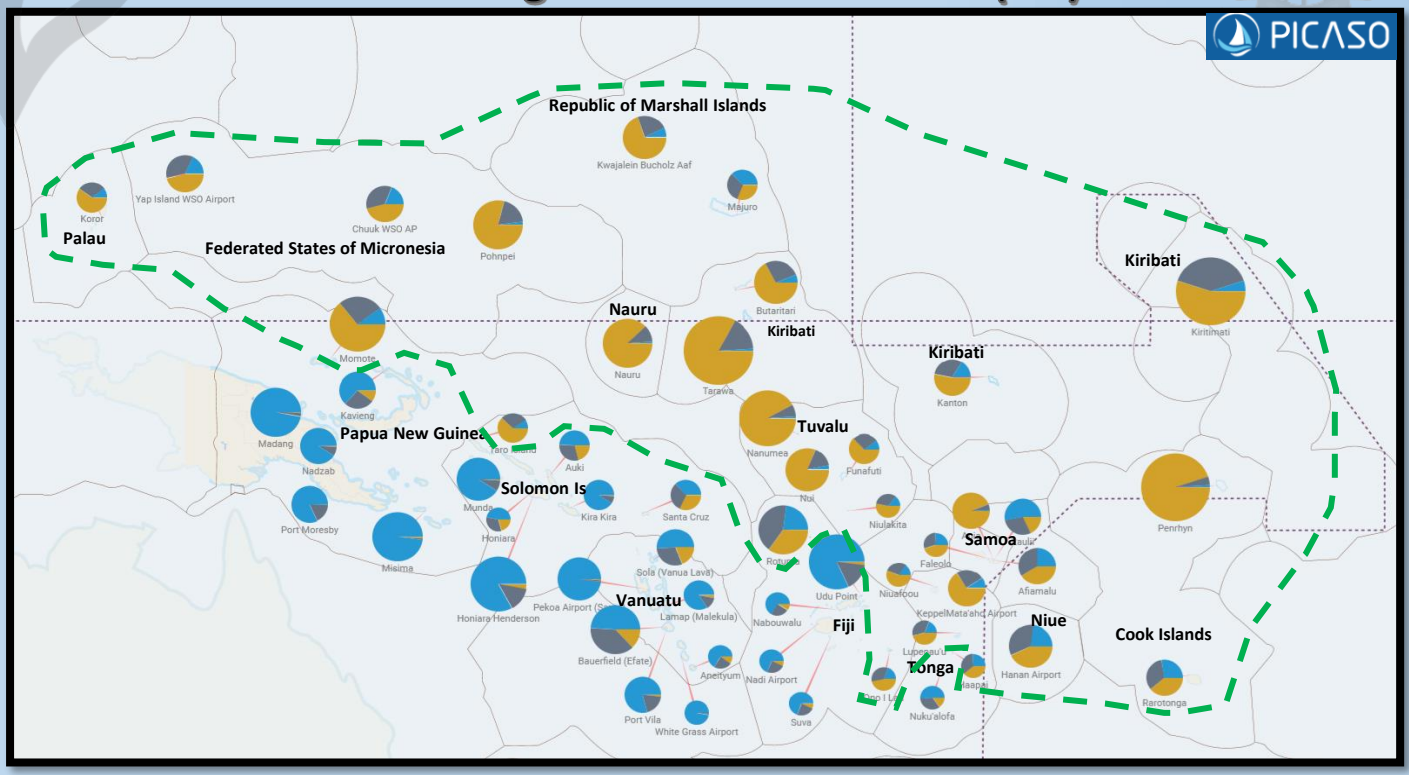


Figure 1: Regional outlook map of the Pacific. In general, all stations enclose within the green-dash line anticipated to have Below Normal (BN) rainfall. Normal (N) to Above Normal (AN) rainfall is predicted for stations outside the green-dashed line. *(Note: the larger the pie chart the higher the 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	95%			-	49.6	Excellent	53.1	11	5	0
Rarotonga	39%	33%		28%	6.6	Moderate	6.3	6	2	8
Fiji										
Rotuma	35%	42%		23%	19.8	High	53.1	11	3	2
Udu Point	16%	82%			28.6	Very High	19.2	6	6	1
Nabouwalu	99	25%	66%		-5.1	Very Low	-2.3	2	7	2
Nadi Airport	7	24%	69%		-10.7	Very Low	-3.1	5	5	6
Suva	7	23%	70%		-3.4	Very Low	-21.9	3	5	8
Ono I Lau	47%	34%		19%	-1.2	Very Low	15	6	6	3
Kiribati										
Kiritimati	55%	40%		5	37.3	Excellent	62.5	12	4	0
Butaritari	67%	27%		6	12.5	Good	10	6	6	3
Tarawa	83%	16%			51.3	Excellent	43.8	10	6	0
Kanton	53%	31%		16%	8.9	Moderate	7.7	5	5	3
Marshall Islands										
Kwajalein Bucholz Aaf	70%	23%		7	14.9	Good	29.7	7	6	3
Majuro	31%	32%		37%	2.5	Low	85.9	10	2	4

Republic of Korea-Pacific Islands Climate Prediction Services Project

PICASO Regional Rainfall Forecast (JJA)

PICASO

Station	Tercile Probability				Verification Score (LEPS)		Verification Score (HSS)		Hit/NearMiss/Miss		
	KEY	BN	N	AN							
Micronesia											
Chuuk WSO AP		46%	35%	19%	6.4	Moderate	6.3		6	4	6
Pohnpei			79%	19%	17.2	High	-12.5		4	11	1
Yap Island WSO Airport		46%	36%	18%	6	Moderate	29.7		7	5	4
Nauru											
Nauru			88%	11%	15.9	High	35.7		4	2	1
Niue											
Hanan Airport		43%	34%	23%	10.5	Good	20.3		6	8	2
Palau											
Koror		60%	30%	10	3.9	Low	-3.1		5	6	5
Papua New Guinea											
Madang			97%		21.5	High	25		7	6	1
Port Moresby		17%	82%		7.1	Moderate	-3.1		5	9	2
Momote		64%	26%	10	25.9	Very High	62.5		12	3	1
Nadzab		8%	91%		5.1	Moderate	6.3		6	6	4
Kavieng		10	27%	63%	8.9	Moderate	15.6		7	3	6
Misima			98%		20.6	High	6.3		6	9	1
Samoa											
Afiamalu		41%	34%	25%	6.4	Moderate	10.9		5	7	4
Laulii		18%	29%	53%	7.8	Moderate	43.8		10	3	3
Faleolo		45%	29%	26%	-2.1	Very Low	15.6		5	4	7
Apia			94%		5.1	Moderate	6.3		6	5	5
Solomon Islands											
Taro Island		62%	29%	9%	4.5	Low	0		5	9	1
Munda		8%	91%		12.3	Good	15.6		7	6	3
Auki		21%	30%	49%	2.9	Low	-3.1		5	8	3
Honiara		21%	32%	47%	-1.6	Very Low	10.9		6	5	5
Honiara Henderson		14%	83%		25.6	Very High	40		9	4	2
Kira Kira		8%	91%		4.6	Low	6.3		3	12	1
Santa Cruz		32%	31%	37%	3.1	Low	6.3		6	7	3
Tonga											
Niuafoou		56%	29%	15%	-6.5	Very Low	6.3		4	6	6
KeppelMata'aho Airport		66%	25%	9%	8.5	Moderate	-12.5		4	10	2
Lupepau'u		46%	35%	19%	-1.2	Very Low	1.6		5	6	5
Haapai		39%	35%	26%	-9.4	Very Low	-21.9		3	7	6
Nuku'alofa		15%	34%	51%	-9.1	Very Low	-12.5		4	9	3
Tuvalu											
Nanumea			92%	7%	26.4	Very High	34.4		9	5	2
Nui			81%	16%	10.5	Good	15.6		7	6	3
Funafuti		63%	27%	10	4.8	Low	-3.1		5	6	5
Niulakita		53%	33%	14%	-3.9	Very Low	-7.8		3	9	4
Vanuatu											
Sola (Vanua Lava)		19%	30%	51%	5.5	Moderate	53.8		9	2	2
Pekoa Airport (Santo)			98%		12.6	Good	34.4		9	1	6
Lamap (Malekula)		13%	84%		2.6	Low	0		5	7	3
Bauerfield (Efate)		13%	38%	49%	17.1	High	34.4		9	4	3
Port Vila		19%	79%		6.9	Moderate	6.3		6	8	2
White Grass Airport			97%		-30.8	Very Low	-21.9		3	3	10
Aneityum		10	23%	67%	-12.9	Very Low	-9.4		4	6	6

Republic of Korea-Pacific Islands Climate Prediction Services Project

CLIK® Rainfall Forecast (JJA)

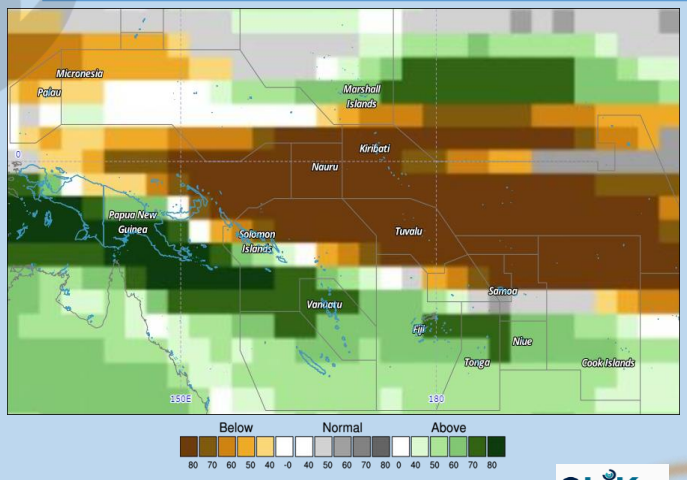


Figure 1: MME Rainfall Forecast for the Pacific Islands – JJA 2022 period

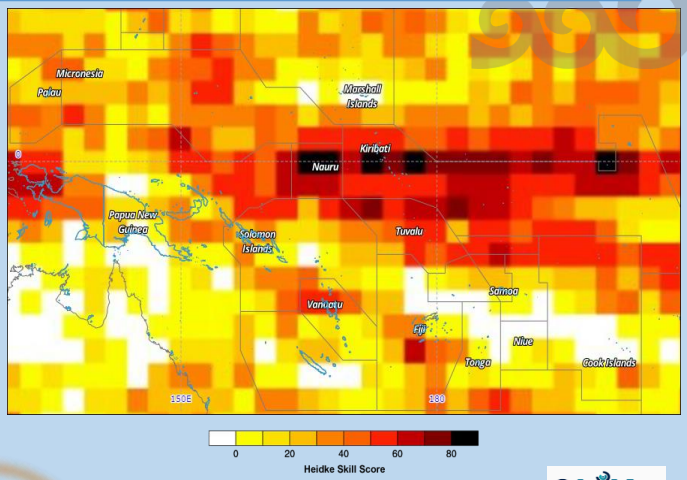


Figure 2: Rainfall Forecast Skill for the Pacific Islands – JJA 2022 period

Country	Rainfall Outlook	Skill
Cook Islands	Below Normal - Penrhyn Above Normal - Rarotonga	Very Low - Moderate
FSM	Above Normal – Pohnpei Below Normal – Yap Little guidance (Climatology) – Chuuk	Low – High
Fiji	Above Normal except Rotuma (N)	Very Low - Moderate
Kiribati	Below Normal	Moderate - High
Marshall Islands	Above Normal	Very Low
Nauru	Below Normal	High
Niue	Above Normal	Very Low
Palau	Below Normal	Low
PNG	Below Normal –Momote, Kavieng Above Normal – Port Moresby, Nadzab, Misima, Madang	Very Low - Low
Samoa	Normal	Very Low
Solomon Islands	Below Normal – Taro Is., Munda, Auki, Above Normal – Honiara, Kirakira, Henderson Little guidance (Climatology) – Santa Cruz	Very Low - Moderate
Tonga	Above Normal – Ha'apai, Lupepau'u, Nukualofa Normal – Keppel Mata'aho, Niuafoo'u	Very Low - Moderate
Tokelau	Below Normal	High
Tuvalu	Below Normal	Moderate - High
Vanuatu	Above Normal	Very Low - High

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 (JJA)

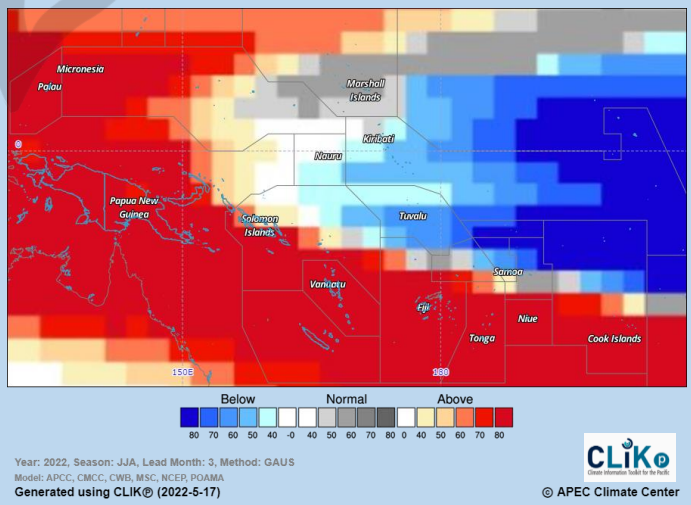


Figure 3: *MME Temperature Forecast for the Pacific Islands – JJA 2022 period*

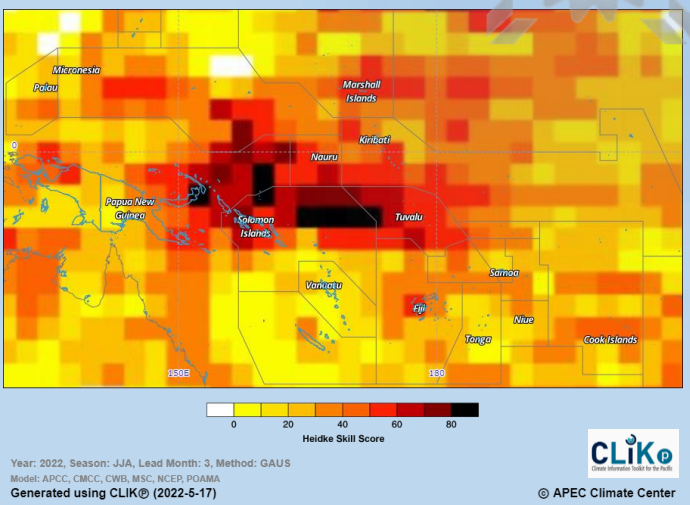


Figure 4: *Air Temperature Forecast Skill for the Pacific Islands – JJA 2022 period*

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

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

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