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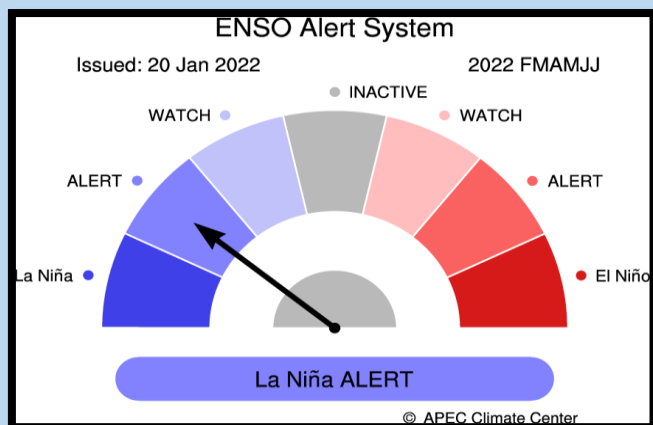## Summary: February to April 2022 (FMA)

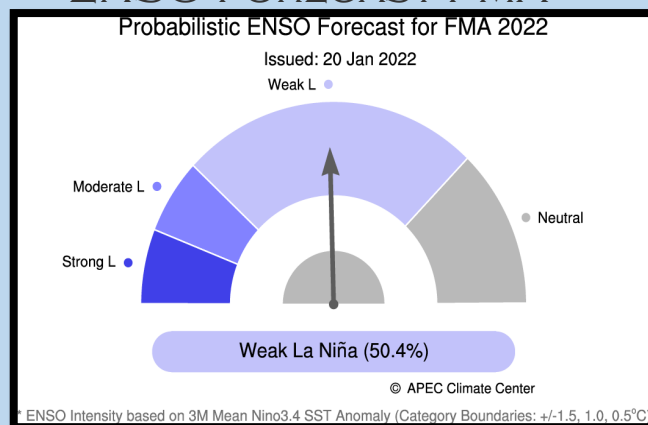## Climate Outlook for February ~ July 2022

- The APCC ENSO Alert suggests "La Niña ALERT" for February – July 2022. During December 2021, negative sea surface temperature anomalies were observed over the central and eastern equatorial Pacific. The Niño3.4 index is expected to be -1.1°C and gradually increase to 0.1°C through the forecast period. Based on the running 3-month mean Niño3.4 index, the latest APCC ENSO outlook suggests an around 74% chance of La Niña conditions with weak intensity for February – April 2022, which gradually decreases. Meanwhile, ENSO-neutral conditions are likely to be gradually increasing and then dominant (~58%) during May – July 2022.
- Strongly enhanced probability for above normal temperatures is predicted for Micronesia and Melanesia (excluding equatorial region), and southern Polynesia for February – July 2022.
- Strongly enhanced probability for above normal precipitation is predicted for the Pacific Islands (excluding equatorial regions) for the same period.
- Please see https://apcc21.org/ser/outlook.do?lang=en for more information.
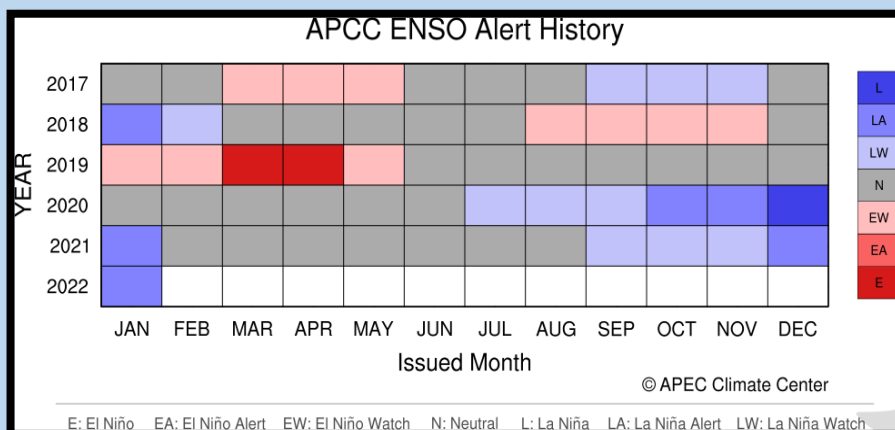
ENSO

CURRENT STATUS

ENSO FORECAST FMA

ENSO ALERT HISTORY

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

RAINFALL OUTLOOK

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

Note: ***** *indicate stations that have <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, Tuvalu** (Nanumea)**, Vanuatu**.
Normal	**Kiribati (**Kiritimati, Kanton**), Tuvalu -** (Nui, Niulakita, Funafuti)**, Tokelau**
Below Normal	**Cook Is (**Penrhyn, northern group**)**

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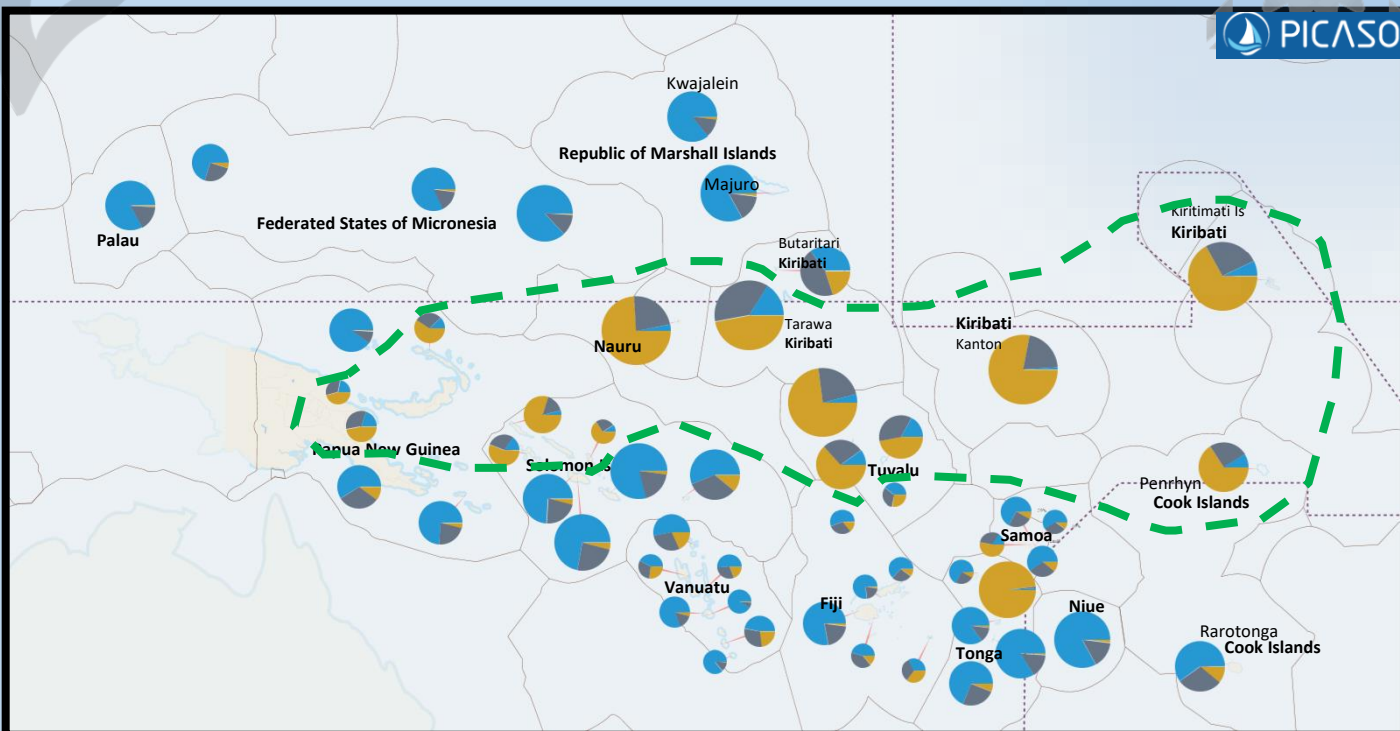### PICASO Regional Rainfall Forecast (FMA)

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	66%		25%	99	22.5	High	71.9	13	2	1
Rarotonga	11%	29%	60%		19.1	High	6.3	6	7	3
Fiji										
Rotuma	14%	30%	56%		-8.7	Very Low	-12.5	4	5	7
Udu Point	10	27%	63%		-4.1	Very Low	3.6	3	7	4
Nabouwalu	20%	77%			-9.7	Very Low	31.2	6	1	5
Nadi Airport	20%	78%			11.3	Good	25	8	5	3
Suva	14%	40%	46%		-4.5	Very Low	-21.9	3	12	1
Ono I Lau	35%	33%	32%		-0.3	Very Low	6.3	6	6	4
Kiribati										
Kiritimati	67%		26%	7	37.5	Excellent	43.8	10	5	1
Butaritari	20%	45%	35%		15.7	High	39.1	8	5	3
Tarawa	47%	37%	16%		45.2	Excellent	90.6	15	1	0
Kanton	78%		21%		48	Excellent	60	11	4	0
Marshall Islands										
Kwajalein Bucholz Aaf	12%	86%			16.4	High	25	8	6	2
Majuro	15%	83%			31.4	Very High	34.4	9	7	0

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

Station	Tercile Probability			Verification Score (LEPS)		Verification Score (HSS)	Hit	NearMiss	Miss
Micronesia	KEY	BN / N	AN						
Chuuk WSO AP	16%		82%	14.8	Good	15.6	7	5	4
Pohnpei	12%		87%	25.9	Very High	6.3	6	10	0
Yap Island WSO Airport		25%	70%	7.2	Moderate	15.6	7	3	6
Nauru									
Nauru		74%	23%	53.2	Excellent	43.8	5	3	0
Niue									
Hanan Airport	15%		83%	29.4	Very High	29.7	8	7	1
Palau									
Koror	16%		83%	22.5	High	30	8	6	1
Papua New Guinea									
Madang	46%	32%	22%	-1.7	Very Low	20.3	6	3	7
Port Moresby	10%	31%	59%	14.5	Good	43.8	10	3	3
Momote	9%		90%	11.8	Good	-3.1	5	9	2
Nadzab	47%	33%	20%	2.6	Low	-3.1	5	9	2
Kavieng	59%	29%	12%	2.7	Low	20.3	7	5	4
Misima	22%		74%	12.2	Good	15.6	7	6	3
Samoa									
Afiamalu	11%	29%	60%	-3.1	Low	-3.1	5	8	3
Laulii	10%	31%	59%	-7.6	Very Low	-30	2	8	5
Faleolo	53%	31%	16%	-20.8	Very Low	-3.1	5	2	9
Apia	8%	25%	67%	3	Low	34.4	9	4	3
Solomon Islands									
Taro Island		80%	16%	9	Moderate	-3.1	5	9	2
Munda	56%	29%	15%	2.5	Low	15.6	5	7	4
Auki	65%	26%	9%	-2.3	Very Low	10.9	5	6	5
Honiara	22%		74%	17.2	High	25	8	5	3
Honiara Henderson	24%		72%	26.3	Very High	34.4	9	6	1
Kira Kira	19%		79%	29.6	Very High	25	8	7	1
Santa Cruz	11%	33%	56%	18.4	High	43.8	10	5	1
Tonga									
Niuafoou	8%	24%	68%	-11	Very Low	10.9	6	3	7
KeppelMata'aho Airport		98%		34.3	Very High	29.7	7	8	1
Lupepau'u	13%		85%	9	Moderate	6.3	6	8	2
Haapai	15%		84%	15.3	High	15.6	7	7	2
Nuku'alofa	6%	25%	69%	10	Good	29.7	8	4	4
Tuvalu									
Nanumea		73%	23%	41.9	Excellent	53.1	11	4	1
Nui	63%	27%	10%	18.8	High	34.4	9	5	2
Funafuti	47%	36%	17%	10.3	Good	15.6	7	7	2
Niulakita	28%	32%	40%	-3.8	Very Low	-3.1	5	3	8
Vanuatu									
Sola (Vanua Lava)	18%	29%	53%	8.4	Moderate	0	4	7	1
Pekoa Airport (Santo)	27%	31%	42%	-3.9	Very Low	-12.5	4	8	4
Lamap (Malekula)	19%	30%	51%	-5.8	Very Low	1.6	4	7	5
Bauerfield (Efate)	15%		81%	2.5	Low	6.3	6	5	5
Port Vila	7%		92%	-7.4	Very Low	6.3	6	4	6
White Grass Airport	23%	30%	47%	4.3	Low	30	8	4	3
Aneityum	12%		86%	-16.9	Very Low	-21.9	3	8	5

Republic of Korea-Pacific Islands
Climate Prediction Services Project
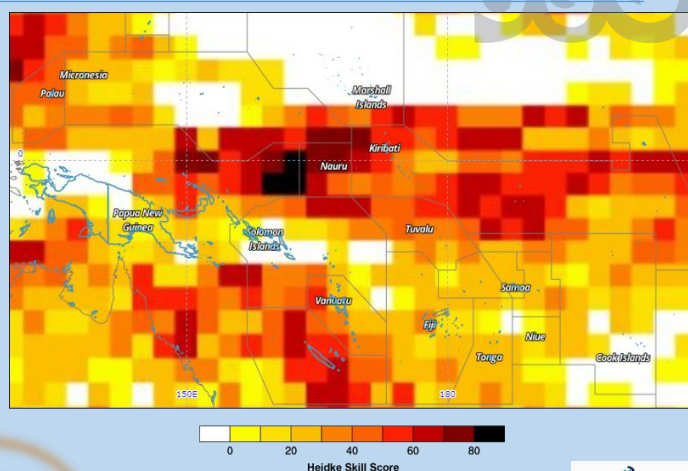## CLIK® Rainfall Forecast (FMA)
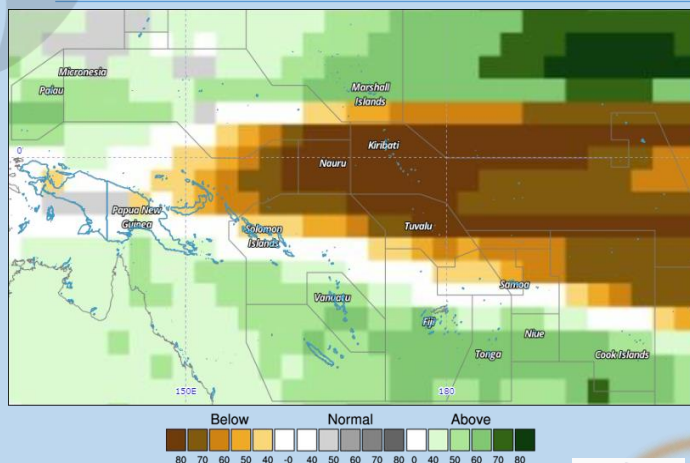
Year: 2022, Season: FMA, Lead Month: 3, Method: GAUS
Model: APCC, CMCC, CWB, NASA, NCEP, PNU, POAMA
Generated using CLIK® (2022-1-26)
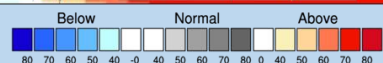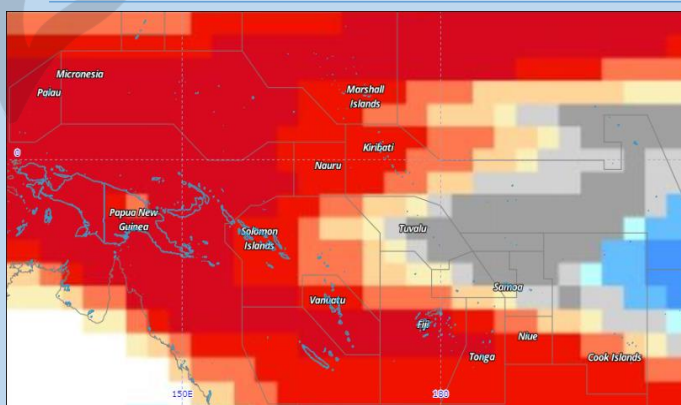
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Figure 1: *MME Rainfall Forecast for the Pacific Islands – FMA 2022 period*
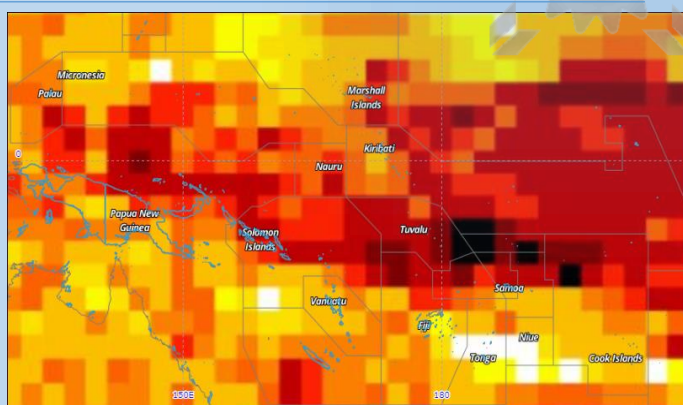

Year: 2022, Season: FMA, Lead Month: 3, Method: GAUS
Model: APCC, CMCC, CWB, NASA, NCEP, PNU, POAMA
Generated using CLIK® (2022-1-26)

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

Country	Rainfall Outlook	Skill
Cook Islands	Below Normal - Penrhyn Above Normal - Rarotonga	Very Low - Moderate
FSM	Above Normal	Very Low - Low
Fiji	Above Normal	Low - Moderate
Kiribati	Below Normal	High
Marshall Islands	Above Normal	Very Low
Nauru	Below Normal	Very High
Niue	Above Normal	Low
Palau	Above Normal	Moderate
PNG	Below Normal – Nadzab, Momote, Kavieng, Madang Above Normal – Port Moresby, Misima	Low - High
Samoa	Outlook offers little guidance as the chance of AN/NN/BN are similar.	Low
Solomon Islands	Below Normal – Taro Is., Munda, Auki Note – Outlook offers little guidance elsewhere.	Very Low - Low
Tonga	Above Normal – Nukualofa, Hapai, Lupepauu Normal – Kepel Mataaho, Niuafoou	Low
Tokelau	Below Normal	Low
Tuvalu	Below Normal	Low - Moderate
Vanuatu	Above Normal	Moderate

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 (FMA)

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

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

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

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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