

Republic of Korea-Pacific Islands Climate Prediction Services Project

Summary: January to March 2021 (JFM)

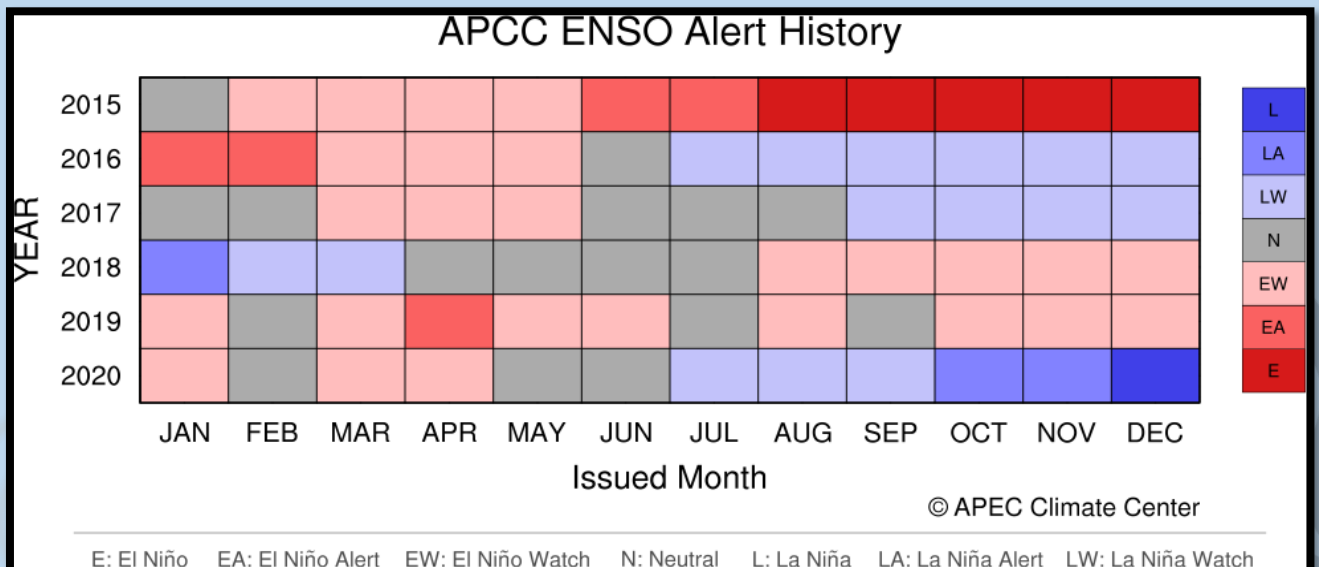
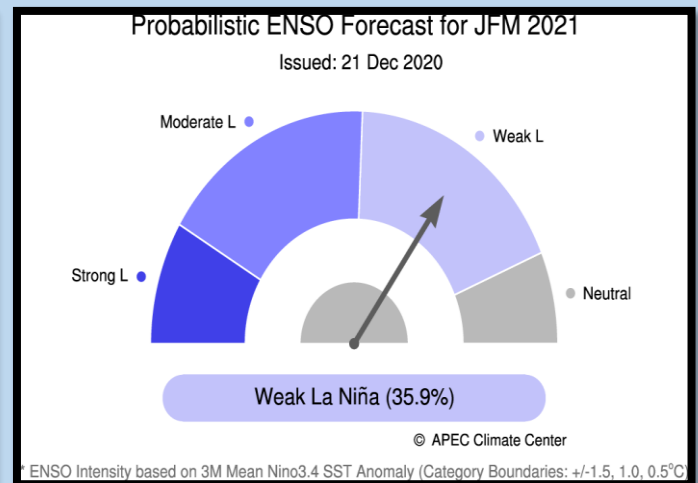
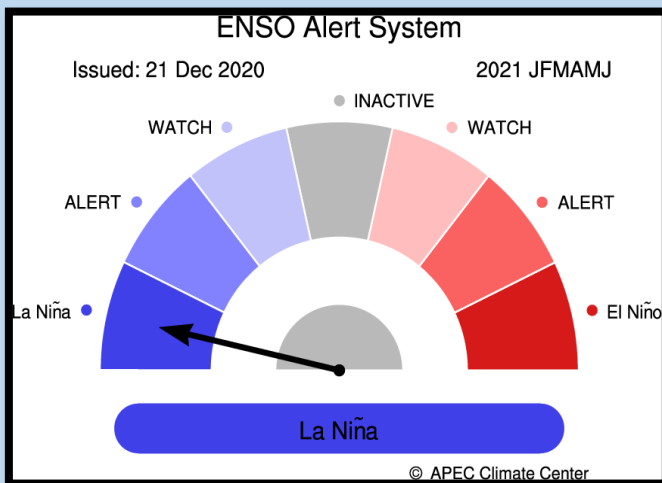
2020-12 Edition



Climate Outlook for January ~ June 2021

- The APCC ENSO outlook suggests “La Niña”.
- The prevailing ENSO phase is expected to be negative. Negative SST anomalies along the equatorial Pacific are predicted during January-June 2021. Along with these spatial distributions, most of the dynamical coupled models predict negative Nino3.4 index which is expected to gradually increase from -1.3°C to -0.4°C through the whole forecast period.
- In summary, based on the running 3-month mean Nino3.4 index, the APCC ENSO outlook suggests La Niña conditions (~87% chance) with weak intensity are dominant during January-March 2021. The conditions are expected to gradually decrease, and a 48% chance of neutral conditions is expected during April-June 2021
- Please see <https://apcc21.org/ser/enso.do?lang=en> for more information

ENSO



PICASO & CLIK® Summary: January to March 2021 (JFM)

RAINFALL OUTLOOK

Status	COUNTRY (Area)
	PICASO
Above Normal	Cook Is - (Rarotonga), Fiji – (Udu Point, Rotuma, Nabouwalu, Nadi Airport, Suva, Ono-i-lau), Marshall Is. – (Majuro, Kwajalein), FSM – (Yap, Pohnpei, Chuuk), Niue – (Hanan Airport), Palau – (Koror), PNG – (Port Moresby, Misima,), Samoa – (Apia, Lauli'i), Solomon Is – (Auki, Honiara, Henderson, Kirakira, Santa Cruz), Tonga , Tuvalu – (Niulakita), Vanuatu .
Normal	Samoa – (Lauli'i)
Below Normal	Cook Is - (Penrhyn), Fiji – (Suva, Ono-i-lau), Kiribati , Nauru , PNG – (Madang, Kavieng, Momote, Nadzab), Samoa – (Afiamalu, *Faleolo), Solomon Is – (Taro Is., Munda), Tuvalu – (Funafuti, Nui, Nanumea)
	CLIK®
Above Normal	Cook Is – (Ratotonga), FSM , Fiji , Marshall Is – (Majuro, Kwajalein), Niue , Palau , PNG – (Misima, Port Moresby), Samoa , Solomon Is , Tonga , Vanuatu – (Aneityum, Peko, Sola, Whitegrass, Bauerfield, Lamap, Port Vila, Sola)
Normal	Tuvalu - (Niulakita)
Below Normal	Cook Is - (Penrhyn), Kiribati , Nauru , PNG – (Nadzab, Kavieng, Momote), Tuvalu – (Nui, Nanumea, Funafuti), Tokelau

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

TEMPERATURE OUTLOOK

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

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

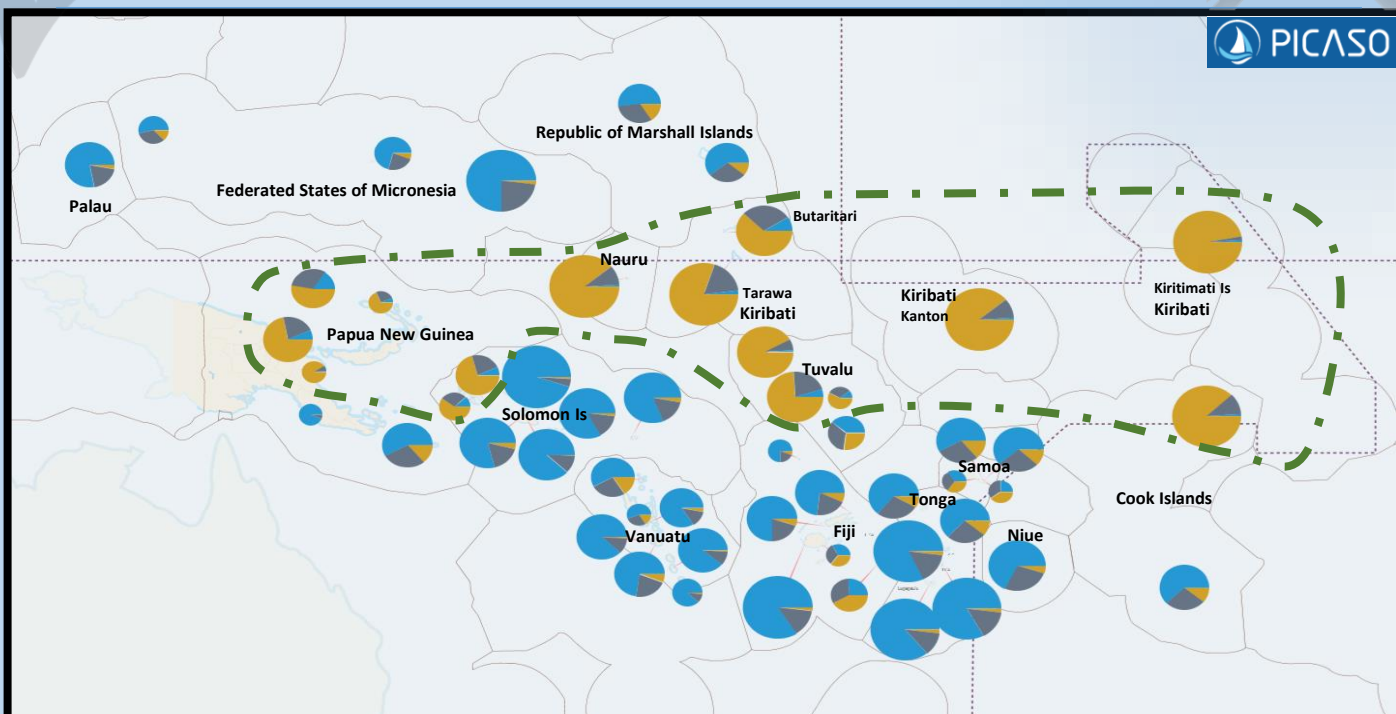


Figure 1: Regional outlook map of the Pacific. In general, all stations within the green-dash line is anticipated to have Below Normal (BN) rainfall. Normal (N) to Above Normal (AN) rainfall is predicted for stations above and below the green line. (Note: the larger the pie chart the higher the forecast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

OUTLOOK TABLE BY COUNTRY

Station	Tercile Probability				Verification Score (LEPS)		Verification Score (HSS)		Hit/NearMiss/Miss		
	KEY	BN	N	AN							
Cook Islands											
Penrhyn		88%		11%	38.4	Excellent	46.4		9	5	0
Rarotonga	11%	27%	62%		19.9	High	35.7		8	5	1
Fiji											
Rotuma	6	19%	75%		-20.4	Very Low	-28.6		2	8	4
Udu Point	7	20%	73%		18.7	High	45.5		7	3	1
Nabouwalu	5	20%	75%		22.4	High	59.1		8	2	1
Nadi Airport	14%		84%		41.4	Excellent	67.9		11	2	1
Suva		35%	32%	33%	-1.9	Very Low	-28.6		2	5	7
Ono I Lau		42%	32%	26%	7.5	Moderate	30.8		7	2	4
Kiribati											
Kiritimati		97%			58.8	Excellent	57.1		10	4	0
Butaritari		62%	29%	9%	26.5	Very High	51.8		9	3	2
Tarawa		80%	18%		55.6	Excellent	57.1		10	4	0
Kanton		89%		10%	52.4	Excellent	46.4		9	5	0
Marshall Islands											
Kwajalein-Bucholz Aaf	16%	32%	52%		14	Good	41.1		7	3	3
Majuro	11%	28%	61%		10.9	Good	-7.1		4	8	2

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



Station	Terile Probability				Verification Score (LEPS)		Verification Score (HSS)		Hit/NearMiss/Miss		
	KEY	BN	N	AN							
Micronesia											
✓ Chuuk WSO AP	6	23%	71%		5.7	Moderate	25		7	2	5
✓ Pohnpei		23%	75%		36.5	Excellent	51.8		9	5	0
✓ Yap Island WSO Airport	13%	33%	54%		2.9	Low	14.3		6	4	4
Niue											
✓ Hanan Airport	1	27%	68%		25.4	Very High	62.5		9	3	2
Palau											
✓ Koror		19%	78%		23.9	High	14.3		6	6	2
Papua New Guinea											
✓ Madang		72%	21%	7	21.6	High	25		6	5	2
✓ Port Moresby	1		94%		2.1	Low	3.6		4	5	4
✓ Momote		53%	31%	16%	10.3	Good	35.7		8	4	1
✓ Nadzab		91%	8%		-19.1	Very Low	-17.9		3	3	7
✓ Kavieng		69%	25%	6	0.3	Low	14.3		5	2	6
✓ Misima		14%	28%	58%	6	Moderate	14.3		6	6	1
Samoa											
✓ Afiamalu		40%	35%	25%	-5.5	Very Low	-23.2		2	7	5
✓ Laulili	129	27%	61%		16.1	High	42.3		8	2	3
✓ Faleolo		35%	31%	34%	-0.5	Very Low	-7.1		1	3	10
✓ Apia		14%	28%	58%	16.4	High	46.4		9	4	1
Solomon Islands											
✓ Taro Island		71%	22%	7	14.6	Good	19.6		6	5	3
✓ Munda		60%	28%	129	4.6	Low	19.6		5	6	3
✓ Auki			95%		36.4	Excellent	25		7	7	0
✓ Honiara		17%	79%		30.1	Very High	35.7		8	5	1
✓ Honiara Henderson	11%		88%		27.5	Very High	46.4		9	3	2
✓ Kira Kira		15%	83%		34.4	Very High	35.7		8	5	1
✓ Santa Cruz		16%	81%		33	Very High	35.7		8	6	0
Tonga											
✓ Niuafuou	8%	28%	64%		16.1	High	14.3		6	7	1
✓ KeppelMata'aho Airport	11%	26%	63%		21.7	High	48.1		8	3	2
✓ Lupepau'u		16%	82%		36	Excellent	35.7		8	5	1
✓ Haapai		15%	83%		39.3	Excellent	57.1		10	3	1
✓ Nuku'alofa	129		86%		39.5	Excellent	25		7	7	0
Tuvalu											
✓ Nanumea		92%	7%		33.7	Very High	35.7		8	5	1
✓ Nui		74%	21%	1	28.2	Very High	35.7		8	4	2
✓ Funafuti		58%	31%	11%	-11.3	Very Low	-28.6		2	7	5
✓ Niulakita		27%	34%	39%	5.5	Moderate	8.9		5	4	5
Vanuatu											
✓ Sola (Vanua Lava)		16%	26%	58%	10.4	Good	4.5		4	5	2
✓ Pekoa Airport (Santo)		16%	28%	56%	-0.9	Very Low	14.3		6	2	6
✓ Lamap (Malekula)		13%	84%		13.5	Good	35.7		8	4	2
✓ Bauerfield (Efate)	11%		88%		19	High	8.9		5	7	2
✓ Port Vila	6	21%	73%		17.8	High	14.3		6	5	3
✓ White Grass Airport	10		89%		24.3	High	25		7	5	2
✓ Aneityum	10		88%		3.3	Low	3.6		5	5	4

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

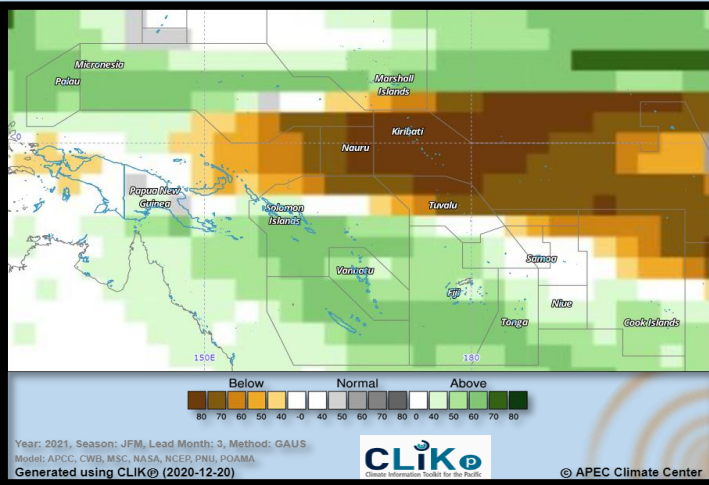


Figure 1: MME Rainfall Forecast for the Pacific Islands – JFM 2021 period

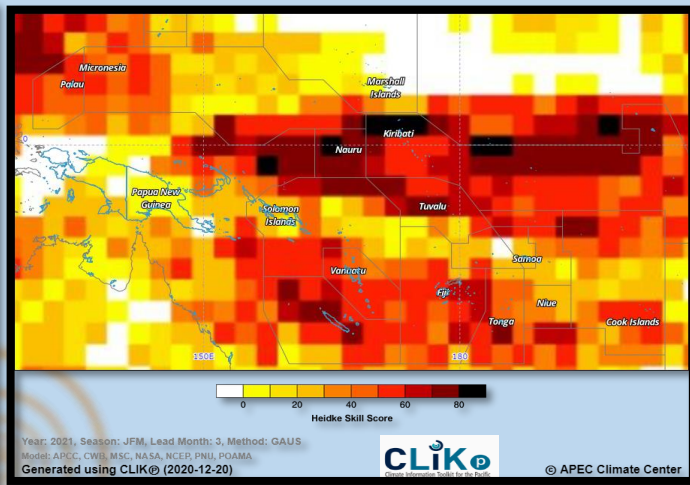


Figure 2: Rainfall Forecast Skill for the Pacific Islands – JFM 2021 period

Country	Rainfall Outlook	Skill
Cook Islands	Below Normal for northern Islands Normal – Above Normal elsewhere	Moderate - High
FSM	Above Normal	Moderate - High
Fiji	Above Normal	Moderate - High
Kiribati	Below Normal	High
Marshall Islands	Normal - Above Normal (central & Northern) Below Normal (Southern)	Very Low - Low
Nauru	Below Normal	High
Niue	Normal to Above Normal	Moderate
Palau	Above Normal	High
PNG	Normal – Above Normal (Port Moresby/Misima) Normal to Below Normal (Nadzab/Momote/Kavieng)	Moderate – High Low - Moderate
Samoa	Normal - Above Normal	Low - Moderate
Solomon Islands	Normal – Above Normal	Moderate - High
Tonga	Normal - Above Normal	Moderate – High
Tokelau	Below Normal	High
Tuvalu	Normal – Below Normal	Moderate – High
Vanuatu	Above Normal	Moderate - 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 (JFM)

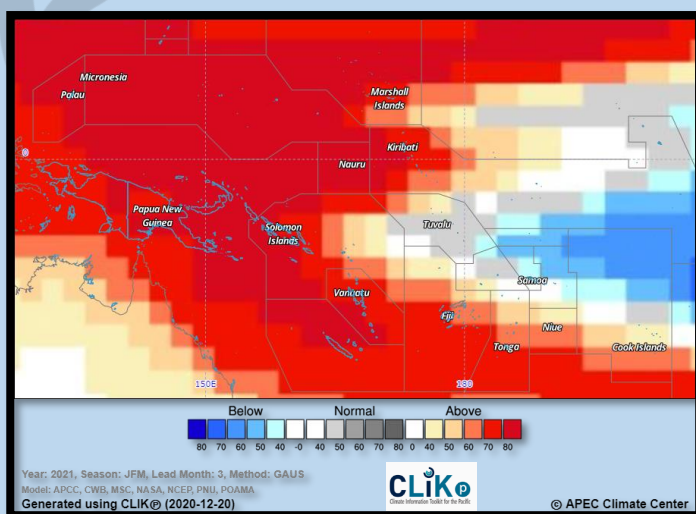


Figure 3: MME Temperature Forecast for the Pacific Islands – JFM 2021 period

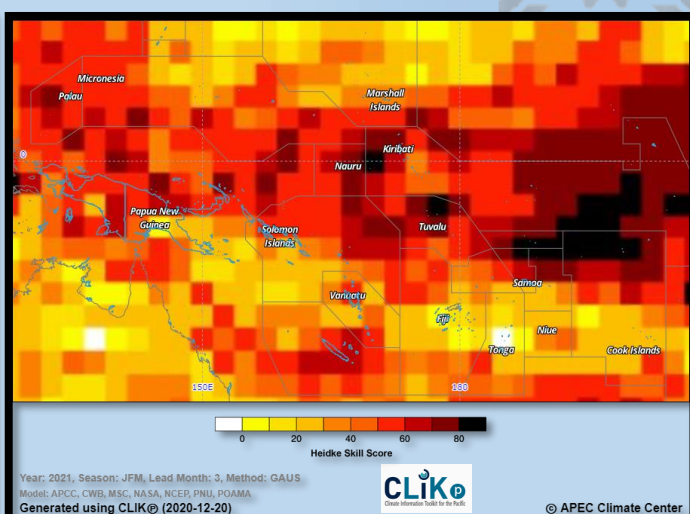


Figure 4: Air Temperature Forecast Skill for the Pacific Islands – JFM 2021 period

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