

Republic of Korea-Pacific Islands Climate Prediction Services Project Summary: March to May 2021 (MAM)

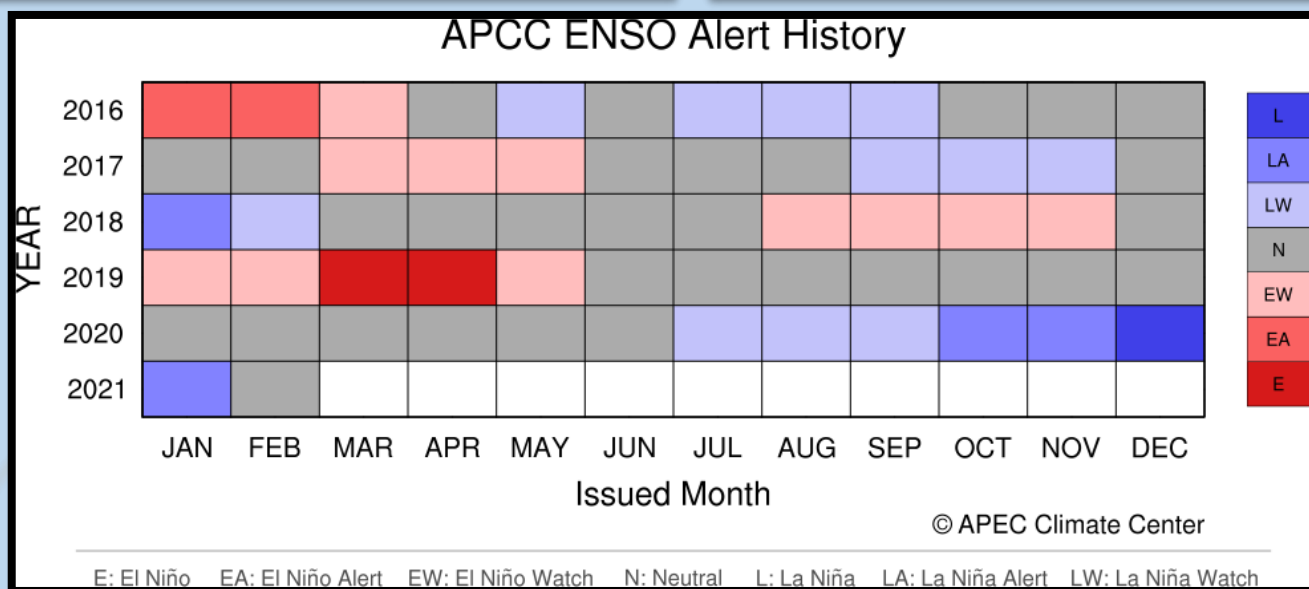
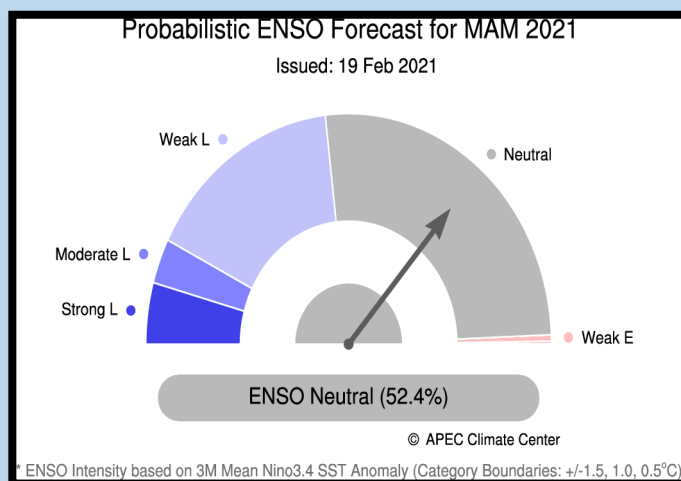
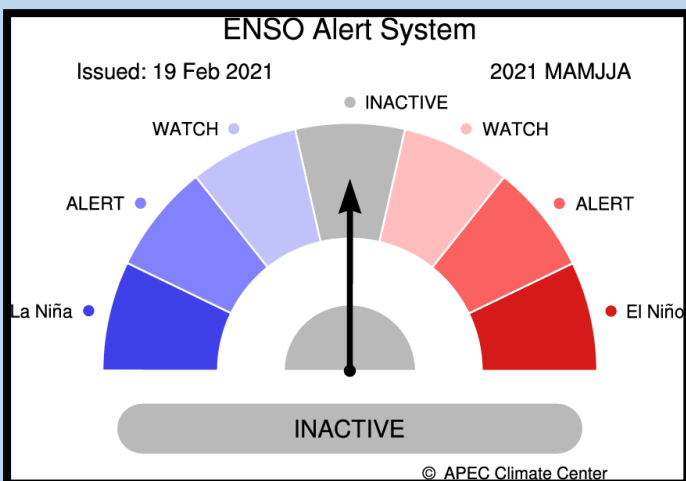
2021-02 Edition



Climate Outlook for March ~ August 2021

- The APCC ENSO outlook suggests “INACTIVE”.
- The prevailing ENSO phase is expected to be neutral. The intensity of negative SST anomalies along the equatorial Pacific is expected to be gradually weakened, which corresponds to a negative Niño3.4 index around -0.5°C during the boreal spring and a transition to neutral phase during the boreal summer. In summary, based on the running 3-month mean Niño3.4 index, the APCC ENSO outlook suggests a greater than 50% chance of ENSO neutral conditions during March – August 2021. The chance of La Niña conditions is expected to gradually decrease during the period.
- Please see <https://apcc21.org/ser/enso.do?lang=en> for more information

ENSO





RAINFALL OUTLOOK

| Model | PICASO | CLIK® |
|---------------------|---|--|
| Status | COUNTRY (Area) | |
| Above Normal | Cook Is - (Rarotonga) Fiji – (Udu Point, Nabouwalu, Nadi Airport, Suva, Ono-i-lau) FSM – (Yap, Pohnpei, Chuuk) Marshall Is. – (Majuro, Kwajalein) Niue – (Hanan Airport) Palau – (Koror) PNG – (Madang, Port Moresby, Momote, Misima, Nadzab) Samoa – (Apia, Afiamalu, Lauli'i) Solomon Is – (Honiara, Henderson, Kirakira, Taro Is., Munda, Auki) Tonga – (Nukualofa, Lupepau'u, Haapai, Niuafoou) Vanuatu – (Sola, Pekoa, Lamap, Bauerfield, Port Vila, White Grass, Aneityum) | Cook Is – (Rarotonga) Fiji – (Suva, Nadi, Ono-i-lau, Nabowalu, Udu Point) FSM Marshall Is Niue Palau PNG – (Misima, Port Moresby, Nadzab) Solomon Is – (Honiara, Henderson) Tonga – (Nukualofa, Haapai, Lupepauu) Vanuatu |
| Normal | Kiribati – (Butaritari) | Samoa Tonga – (Niuafo'ou, Keppel Mata'aho) |
| Below Normal | Cook Is - (Penrhyn) Fiji – (Rotuma) Kiribati – (Tarawa, Kanton, Kiritimati) Nauru PNG – (Kavieng) Samoa – (Faleolo) Solomon Is – (Santa Cruz) Tonga – Keppel Mata'aho Tuvalu – (Funafuti, Nui, Nanumea, Niulakita) | Cook Is - (Penrhyn) Fiji – (Rotuma) Kiribati Nauru PNG – (Madang, Kavieng, Momote) Solomon Is – (Munda, Taro Island, Auki, KiraKira, Santa Cruz) Tuvalu – (Nui, Nanumea, Funafuti, Niulakita) 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 , Samoa , Solomon Is. , Tonga , Vanuatu . |
| Normal | Tokelau , Tuvalu . |
| Below Normal | Cook Is (northern group), Kiribati - (Kanton, Kiritimati). |

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

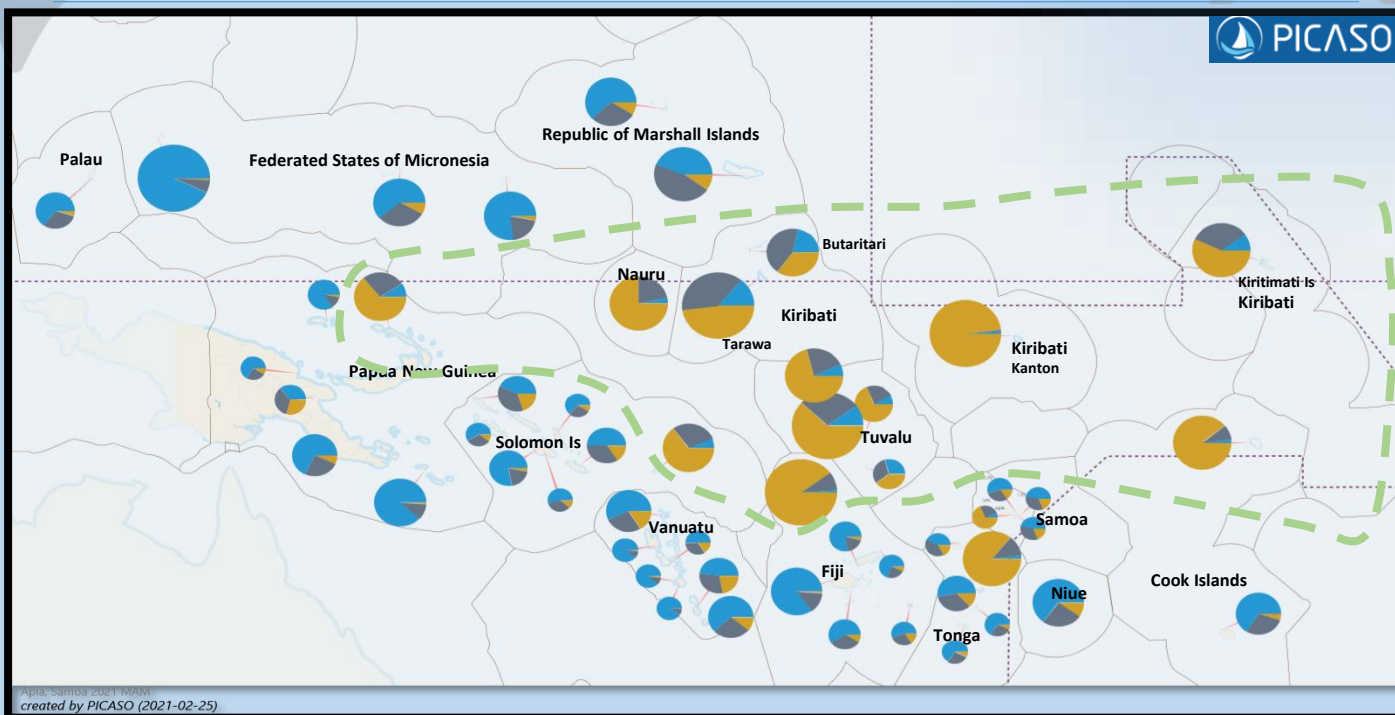


Figure 1: Regional outlook map of the Pacific. In general, all stations within the green-dash line is anticipated to have Below Normal (BN) rainfall. Normal (N) to Above Normal (AN) rainfall is predicted for stations above and below the green line. (Note: the larger the pie chart the higher the forecast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

OUTLOOK TABLE BY COUNTRY

| Station | Tercile Probability | | | Verification Score (LEPS) | | Verification Score (HSS) | | Hit/NearMiss/Miss | | |
|-------------------------|---------------------|-----|-----|---------------------------|-------|--------------------------|-------|-------------------|---|---|
| | KEY | BN | N | AN | | | | | | |
| Cook Islands | | | | | | | | | | |
| Penitryn | 89% | | | 9% | 33.2 | Very High | 70 | 9 | 6 | 0 |
| Rarotonga | 5% | 29% | | 66% | 10.4 | Good | 0 | 5 | 7 | 3 |
| Fiji | | | | | | | | | | |
| Rotuma | 90% | | | 9% | 36.1 | Excellent | 35.7 | 8 | 4 | 2 |
| Udu Point | 7% | 24% | | 69% | -20.7 | Very Low | -12.5 | 3 | 4 | 5 |
| Nabouwalu | 4% | 19% | | 77% | 2.9 | Low | 12.5 | 5 | 5 | 2 |
| Nadi Airport | 14% | | | 85% | 19.4 | High | 3.6 | 5 | 8 | 1 |
| Suva | 9% | 32% | | 59% | 3.3 | Low | 3.6 | 5 | 5 | 4 |
| Ono I Lau | 16% | 28% | | 56% | -44.7 | Very Low | -26.9 | 2 | 3 | 8 |
| Kiribati | | | | | | | | | | |
| Kiritimati | 57% | | 33% | 10% | 25.1 | Very High | 46.4 | 9 | 4 | 1 |
| Butaritari | 35% | | 43% | 22% | 22.6 | High | 20 | 7 | 6 | 2 |
| Tarawa | 48% | | 38% | 14% | 36.8 | Excellent | 40 | 9 | 6 | 0 |
| Kanton | 98% | | | | 48.8 | Excellent | 14.3 | 6 | 8 | 0 |
| Marshall Islands | | | | | | | | | | |
| Kinjalain Bucholz Aaf | 9% | 29% | | 62% | 20.4 | High | 35 | 8 | 7 | 0 |
| Majuro | 10% | 46% | | 44% | 33.8 | Very High | 20 | 7 | 7 | 1 |

Republic of Korea-Pacific Islands

Climate Prediction Services Project

PICASO Regional Rainfall Forecast (MAM)

| Station | Tercile Probability | | | | Verification Score (LEPS) | | Verification Score (HSS) | | Hit/NearMiss/Miss | | |
|--|---------------------|-----|-----|----|---------------------------|-----------|--------------------------|--|-------------------|----|---|
| | KEY | BN | N | AN | | | | | | | |
| Micronesia | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Chuuk WSO AP | 8% | 31% | 61% | | 21.3 | High | 50 | | 10 | 3 | 2 |
| <input checked="" type="checkbox"/> Pohnpei | 3% | 20% | 77% | | 15.6 | High | 20 | | 7 | 6 | 2 |
| <input checked="" type="checkbox"/> Yap Island WSO Airport | 6% | 93% | | | 58.5 | Excellent | 90 | | 14 | 1 | 0 |
| Niue | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Hanan Airport | 10% | 25% | 65% | | 22.7 | High | 50 | | 10 | 4 | 1 |
| Palau | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Koror | 5% | 30% | 65% | | 6.8 | Moderate | 14.3 | | 6 | 6 | 2 |
| Papua New Guinea | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Madang | 9% | 25% | 66% | | -12.1 | Very Low | -28.6 | | 2 | 6 | 6 |
| <input checked="" type="checkbox"/> Port Moresby | 7% | 25% | 68% | | 11.6 | Good | 40 | | 9 | 5 | 1 |
| <input checked="" type="checkbox"/> Momote | 3% | 13% | 84% | | 1.6 | Low | 20 | | 7 | 3 | 5 |
| <input checked="" type="checkbox"/> Nadzab | 29% | 35% | 36% | | 3.9 | Low | 5 | | 4 | 9 | 2 |
| <input checked="" type="checkbox"/> Kavieng | 64% | 27% | 9% | | 15.3 | High | 5 | | 5 | 8 | 2 |
| <input checked="" type="checkbox"/> Misima | 11% | 88% | | | 19 | High | 0 | | 5 | 10 | 0 |
| Samoa | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Afiamalu | 19% | 35% | 46% | | -15.7 | Very Low | -15 | | 2 | 7 | 6 |
| <input checked="" type="checkbox"/> Laulili | 19% | 34% | 47% | | -13.8 | Very Low | -28.6 | | 2 | 7 | 5 |
| <input checked="" type="checkbox"/> Faleolo | 69% | 25% | 6% | | -17 | Very Low | -10 | | 4 | 4 | 7 |
| <input checked="" type="checkbox"/> Apia | 15% | 30% | 55% | | -10.9 | Very Low | 10 | | 4 | 5 | 6 |
| Solomon Islands | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Taro Island | 20% | 37% | 43% | | 7.6 | Moderate | 10 | | 6 | 6 | 3 |
| <input checked="" type="checkbox"/> Munda | 10% | 31% | 59% | | -16.1 | Very Low | -20 | | 3 | 6 | 6 |
| <input checked="" type="checkbox"/> Auki | 9% | 27% | 64% | | -9 | Very Low | -15 | | 2 | 9 | 4 |
| <input checked="" type="checkbox"/> Honiara | 3% | 19% | 78% | | 5.7 | Moderate | 10 | | 6 | 5 | 4 |
| <input checked="" type="checkbox"/> Honiara Henderson | 11% | 35% | 54% | | -11 | Very Low | 5 | | 5 | 7 | 3 |
| <input checked="" type="checkbox"/> Kira Kira | 16% | 34% | 50% | | 6.7 | Moderate | 5 | | 4 | 7 | 4 |
| <input checked="" type="checkbox"/> Santa Cruz | 65% | 29% | 6% | | 17.5 | High | 0 | | 5 | 7 | 3 |
| Tonga | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Nukunono | 17% | 40% | 43% | | -8.3 | Very Low | 0 | | 5 | 8 | 2 |
| <input checked="" type="checkbox"/> KeppelMata'aho Airport | 86% | 12% | | | 28.6 | Very High | 60 | | 11 | 2 | 2 |
| <input checked="" type="checkbox"/> Lupepa'u | 13% | 34% | 53% | | 8.3 | Moderate | 50 | | 9 | 5 | 1 |
| <input checked="" type="checkbox"/> Haapai | 7% | 27% | 66% | | -4.1 | Very Low | 0 | | 5 | 5 | 5 |
| <input checked="" type="checkbox"/> Nuku'alofa | 7% | 27% | 66% | | -13 | Very Low | -30 | | 2 | 9 | 4 |
| Tuvalu | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Nanumea | 71% | 22% | 7% | | 27.8 | Very High | 60 | | 11 | 3 | 1 |
| <input checked="" type="checkbox"/> Nui | 62% | 28% | 10% | | 35.6 | Excellent | 55 | | 10 | 3 | 2 |
| <input checked="" type="checkbox"/> Funafuti | 69% | 23% | 8% | | 7.5 | Moderate | 10 | | 6 | 6 | 3 |
| <input checked="" type="checkbox"/> Niulakita | 40% | 31% | 29% | | 3.5 | Low | 40 | | 7 | 5 | 3 |
| Vanuatu | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Sola (Vanua Lava) | 16% | 27% | 57% | | 11.1 | Good | 4.5 | | 4 | 4 | 3 |
| <input checked="" type="checkbox"/> Pekoa Airport (Santo) | 10% | 89% | | | -9.6 | Very Low | -10 | | 4 | 7 | 4 |
| <input checked="" type="checkbox"/> Lamap (Malekula) | 16% | 34% | 50% | | -0.3 | Very Low | 25 | | 7 | 4 | 4 |
| <input checked="" type="checkbox"/> Bauerfield (Efate) | 10% | 88% | | | -1 | Very Low | 0 | | 5 | 6 | 4 |
| <input checked="" type="checkbox"/> Port Vila | 8% | 91% | | | -14 | Very Low | -30 | | 2 | 8 | 5 |
| <input checked="" type="checkbox"/> White Grass Airport | 22% | 30% | 48% | | 6.3 | Moderate | 25 | | 7 | 5 | 2 |
| <input checked="" type="checkbox"/> Anietyum | 11% | 27% | 62% | | 14.7 | Good | 40 | | 9 | 2 | 4 |

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

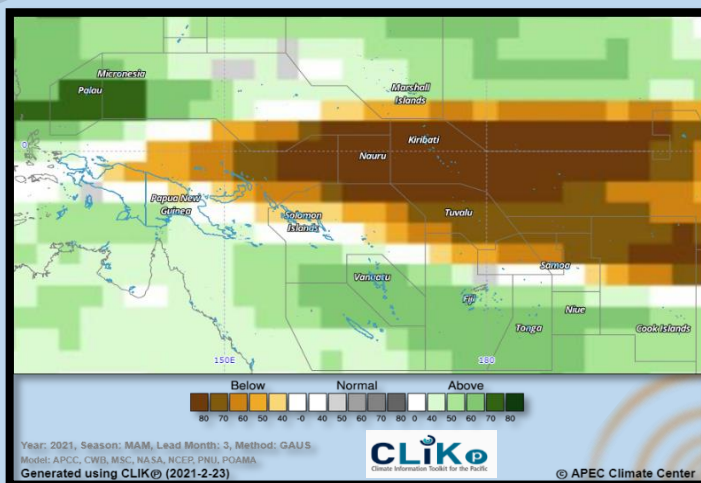


Figure 1: MME Rainfall Forecast for the Pacific Islands – MAM 2021 period

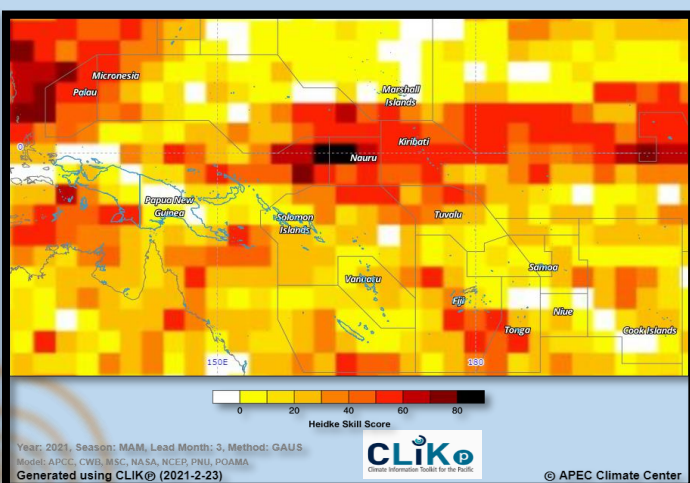


Figure 2: Rainfall Forecast Skill for the Pacific Islands – MAM 2021 period

| Country | Rainfall Outlook | Skill |
|------------------|---|--|
| Cook Islands | Below Normal for northern Islands Normal – Above Normal elsewhere | Low |
| FSM | Above Normal | Very Low – High |
| Fiji | Above Normal except for Rotuma | Low - High |
| Kiribati | Below Normal | High |
| Marshall Islands | Above Normal | Very Low |
| Nauru | Below Normal | High |
| Niue | Above Normal | Low |
| Palau | Above Normal | High |
| PNG | Above Normal (Nadzab/Port Moresby/Misima) Below Normal (Madang/Momote/Kavieng) | Very Low/Low/High Very Low /Moderate/High |
| Samoa | Normal | Very Low |
| Solomon Islands | Above Normal (Honiara/Henderson) Below Normal elsewhere | Very Low - Low |
| Tonga | Normal - Above Normal | Very Low - Low |
| Tokelau | Below Normal | Low |
| Tuvalu | Below Normal | Very Low - Moderate |
| 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® Temperature Forecast (MAM)

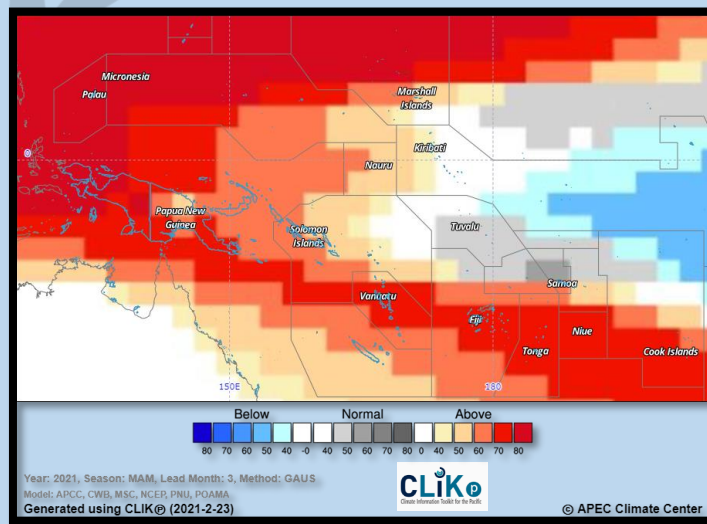


Figure 3: MME Temperature Forecast for the Pacific Islands – MAM 2021 period

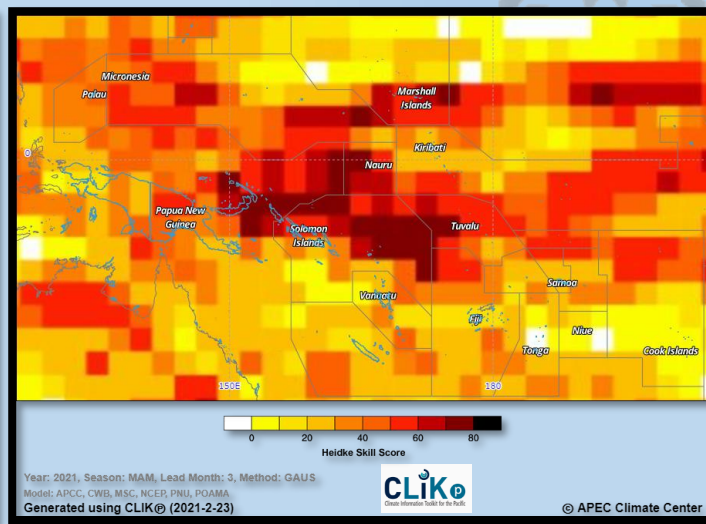


Figure 4: Air Temperature Forecast Skill for the Pacific Islands – MAM 2021 period

| Country | Air Temperature Outlook | Skill |
|------------------|--|---------------------|
| Cook Islands | Below Normal (north) Above Normal (south) | Low - Moderate |
| FSM | Above Normal | Low - Moderate |
| Fiji | Above Normal | Low - High |
| Kiribati | Above Normal (Tarawa/Butaritari) Below Normal (Kanton/Kiritimati) | Low Moderate |
| 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 | Low - High |
| Tonga | Above Normal | Very Low - Moderate |
| Tokelau | Normal | Moderate - High |
| Tuvalu | Normal | Low - High |
| Vanuatu | Above Normal | Very Low - Moderate |

Table 2: Temperature Outlook and Skill for the Pacific Islands.

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

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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