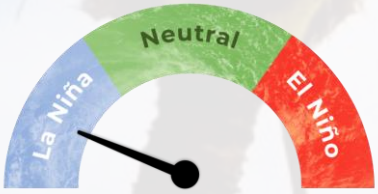
The Island Climate Update

ENSO Watch
November 2020

Recent



Current ENSO

La Niña became established in the tropical Pacific during October 2020.

Sea surface temperatures (SSTs) were cooler than average in the central and eastern equatorial Pacific Ocean.

The Southern Oscillation Index (SOI) was +0.4 in October (neutral). The 3-month average SOI was +0.8 (on the La Niña side of neutral).

Forecast

96% chance for **La Niña** conditions continuing during **November 2020-January 2021.**

Chance for **La Niña** conditions during **February-April 2021.** **59%**

La Niña

ENSO situation summary

During October, the NINO3.4 Index anomaly (central Pacific) was -0.86˚C. The NINO 1+2 Index (eastern Pacific) was -0.56°C. Upper-oceanic heat content continued to decrease in the east-central part of the Pacific basin. Heat content continued to be higher than normal in the western Pacific. Overall, the pattern is consistent with La Niña conditions.

Trade winds during October continued to be stronger than normal across the equatorial Pacific, causing additional cooling of the sea surface in the west-central part of the basin. Trade winds are expected to continue to be stronger than normal, particularly in the west-central Pacific (e.g. Kiribati, Nauru), into austral summer. This will encourage additional cooling of SSTs with La Niña experiencing a peak in December or January.

Rainfall and convection were well below normal in the west-central Pacific, near and west of the International Dateline, during October. The South Pacific Convergence Zone was displaced to the south, consistent with La Niña. The potential for landslides and river flooding is higher than normal this coming wet season in the off-equatorial South Pacific, especially when a tropical disturbance follows a prolonged period of wetter than normal conditions.

Based on the consensus from international models, the probability for La Niña conditions is 96% for the November 2020-January 2021 period. For the February-April 2021 period, the probability for La Niña is 59% and 40% for ENSO-neutral conditions.

Based on the observations and forecast guidance, La Niña conditions have been met.

The Island Climate Update bulletin is currently being produced by NIWA in association with the Pacific Island Meteorological Services and other supporting meteorological organisations.
The Island Climate Update is prepared as soon as possible following the end of the month, once the data and information are received from the Pacific Island meteorological services. Delays in data collection and communication occasionally arise. While every effort is made to verify observational data, NIWA does not guarantee the accuracy and reliability of the analysis and forecast information presented, and accepts no liability for any losses incurred through the use of this advisory and its contents.

For more information see: https://www.niwa.co.nz/pacific-rim/publications https://www.facebook.com/IslandClimateUpdate/

NIWA
Taihoro Nukurangi

The Island Climate Update

Rain Watch
November 2020

Rainfall outlook for November 2020 – January 2021

Forecast

Below normal rainfall for Nauru, Kiribati (Gilbert, Phoenix and Line Islands), Tuvalu, Tokelau, Northern Cook Islands, Marquesas, Tuamotu Archipelago, and Pitcairn Islands.

Near or below normal rainfall for Papua New Guinea.

Near or above normal rainfall for Society Islands.

Above normal rainfall for Northern Marianas, Guam, Palau, Federated States of Micronesia, Marshall Islands, Solomon Islands, New Caledonia, Vanuatu (North and South), Fiji, Wallis and Futuna, Tonga, Samoa, American Samoa, Niue, Southern Cook Islands, and Austral Islands.

Rainfall outlook table for November 2020 – January 2021

ISLAND	PROBABILITY (%)			OUTLOOK	CONFIDENCE
	Below	Normal	Above		
FSM	3	7	90	ABOVE	High
Southern Cook Islands	7	7	86	ABOVE	Moderate-High
Fiji	9	10	81	ABOVE	Moderate-High
Vanuatu South	10	14	76	ABOVE	Moderate-High
Palau	10	14	76	ABOVE	Moderate
Wallis & Futuna	13	13	74	ABOVE	Moderate
Tonga	9	20	71	ABOVE	Moderate-High
American Samoa	15	15	70	ABOVE	Moderate
Vanuatu North	13	18	69	ABOVE	Moderate-High
Niue	13	19	68	ABOVE	Moderate-High
New Caledonia	12	22	66	ABOVE	Moderate-High
Samoa	15	19	66	ABOVE	Moderate
Austral Islands	15	22	63	ABOVE	Moderate-High
Marshall Islands	17	21	62	ABOVE	High
Solomon Islands	22	28	50	ABOVE	Moderate-High
Northern Marianas	19	32	49	ABOVE	High
Guam	23	32	45	ABOVE	High
Society Islands	28	35	37	AVG - ABOVE	Moderate-High
Papua New Guinea	43	32	25	AVG - BELOW	High
Pitcairn Islands	53	27	20	BELOW	Moderate-High
Tuamotu Islands	73	14	13	BELOW	Moderate-High
Northern Cook Islands	79	13	8	BELOW	Moderate-High
Tuvalu	84	8	8	BELOW	Moderate
Tokelau	84	9	7	BELOW	Moderate
Nauru	96	2	2	BELOW	High
Marquesas	93	6	1	BELOW	High
Kiribati: Gilbert Islands	98	1	1	BELOW	High
Kiribati: Phoenix Islands	100	0	0	BELOW	High
Kiribati: Line Islands	100	0	0	BELOW	High

Note: Rainfall estimates for Pacific Islands for the next three months are given in terms of tercile probabilities (e.g. 20:30:50). These are derived from the averages of several global climate models. They correspond to the odds of the observed rainfall being in the lowest one third of the distribution, the middle one third, or the highest one third of the distribution. For the long term average, it is equally likely (33% chance) that conditions in any of the three terciles will occur. *If conditions are climatology, we expect an equal chance of the rainfall being in any tercile.

The Island Climate Update bulletin is currently being produced by NIWA in association with the Pacific Island Meteorological Services and other supporting meteorological organisations.
The Island Climate Update is prepared as soon as possible following the end of the month, once the data and information are received from the Pacific Island meteorological services. Delays in data collection and communication occasionally arise. While every effort is made to verify observational data, NIWA does not guarantee the accuracy and reliability of the analysis and forecast information presented, and accepts no liability for any losses incurred through the use of this advisory and its contents.

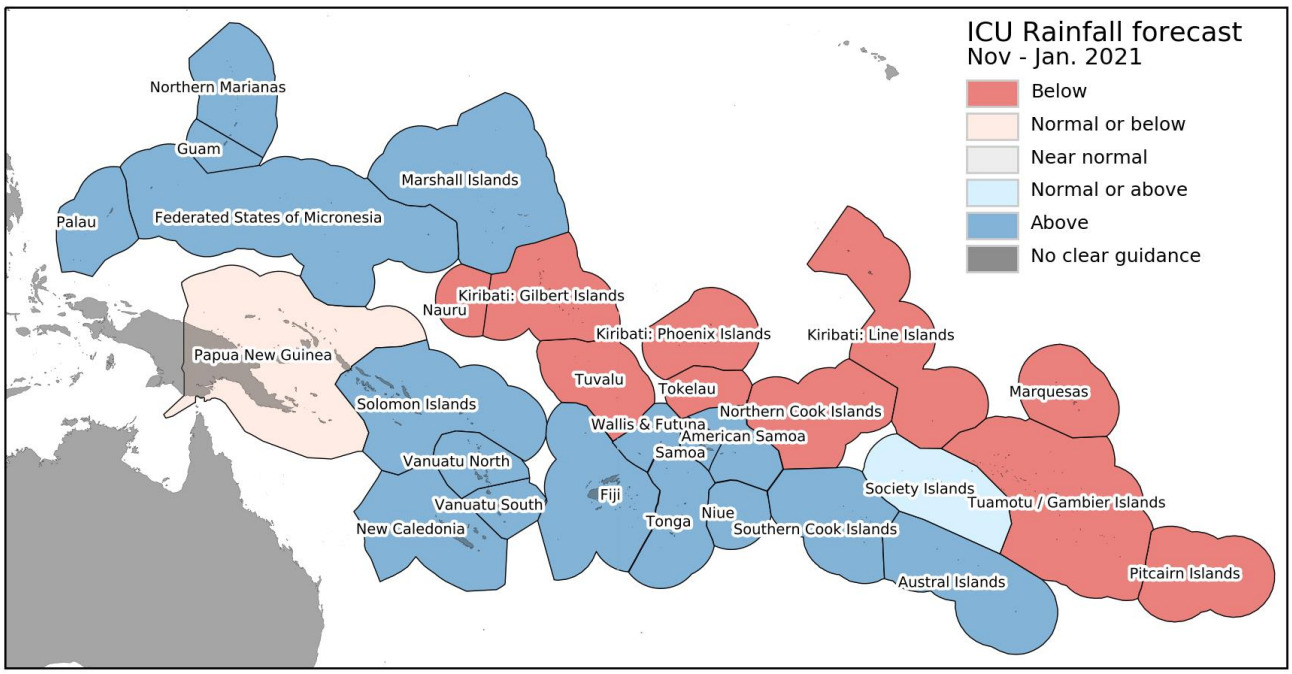
For more information see: https://www.niwa.co.nz/pacific-rim/publications https://www.facebook.com/IslandClimateUpdate/

NIWA
Taihoro Nukurangi

The Island Climate Update

Drought Watch
November 2020

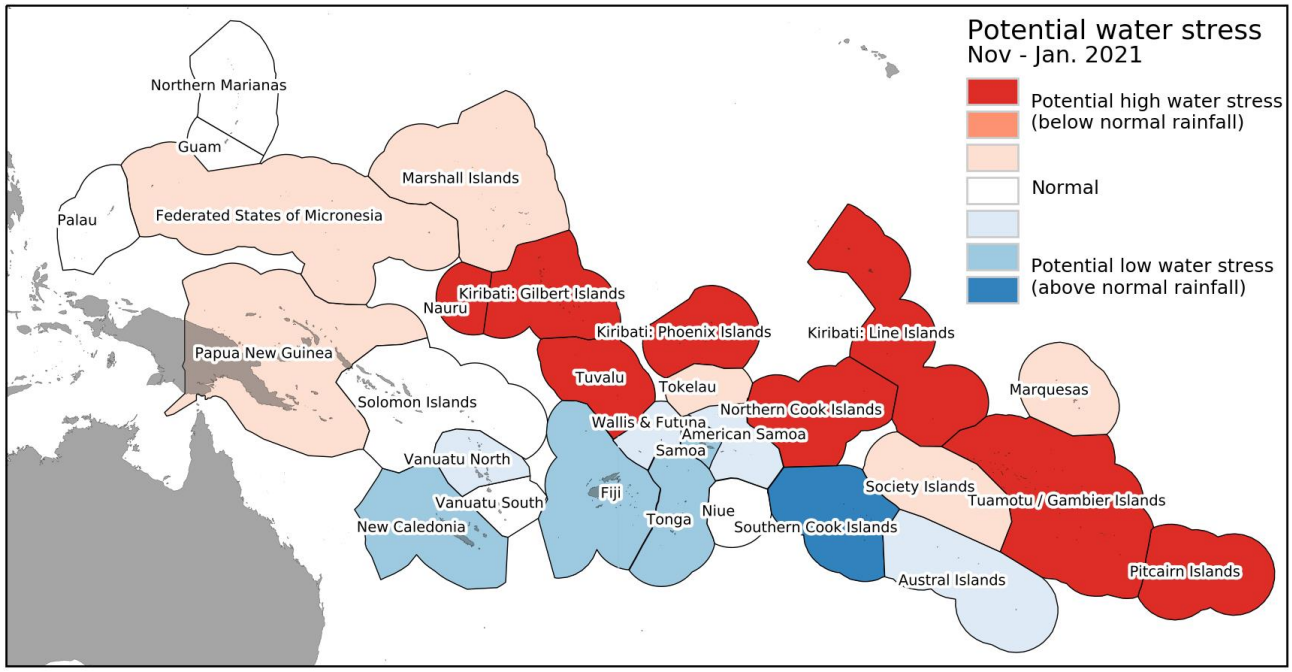
November 2020 – January 2021 rainfall forecast



Regional drought potential advisory

Based on rainfall anomaly classification over the past six months and forecast rainfall anomaly classification over the next 3 months

Water stress has receded for some countries in the southern part of the Pacific Region, but many of the countries in the northern and eastern part of the Pacific Region may still expect high water stress over the next three months, including **Nauru, Kiribati (Gilbert, Phoenix and Line Islands), Tuvalu, Northern Cook Islands, Tuamotu/Gambier Islands and Pitcairn Islands.** These countries have received low rainfall over part of the past six months, and dry conditions are forecast for the next three-month period.



The Island Climate Update bulletin is currently being produced by NIWA in association with the Pacific Island Meteorological Services and other supporting meteorological organisations.

The Island Climate Update is prepared as soon as possible following the end of the month, once the data and information are received from the Pacific Island meteorological services. Delays in data collection and communication occasionally arise. While every effort is made to verify observational data, NIWA does not guarantee the accuracy and reliability of the analysis and forecast information presented, and accepts no liability for any losses incurred through the use of this advisory and its contents.

For more information see: https://www.niwa.co.nz/pacific-rim/publications https://www.facebook.com/IslandClimateUpdate/

NIWA
Taihoro Nukurangi