



# Tuvalu Meteorological Service Early Action Rainfall Watch:



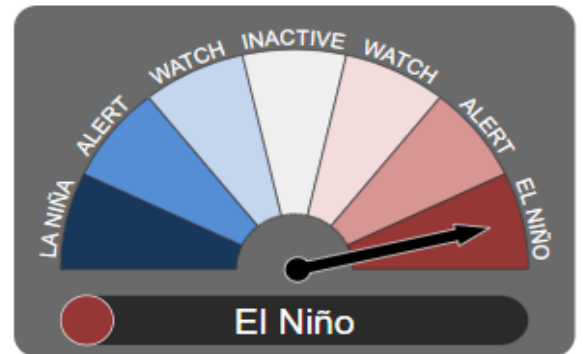
**Purpose:** The Early Action Rainfall Watch provides a summary of recent rainfall patterns, particularly the status of drought and the rainfall outlook for the coming months. The status and outlook will be revised on a monthly basis. Contact the Tuvalu Meteorological Service (TMS) for further information.

## SUMMARY

***Issued: 26/12/2023***

### “El Niño continues “

- ❖ El Niño continued and will likely remain in place during the next three months.
- ❖ In the atmosphere, cloud, wind and pressure patterns are consistent with El Niño conditions.
- ❖ Climate model forecasts indicate some further warming of the central to eastern Pacific is likely, with SSTs remaining above El Niño thresholds.



### RAINFALL STATUS:

For the month of November 2023, it was **Seriously Wet** in Niutao.

**Very wet** existed Nanumea, Nanumaga, Nui and Vaitupu. While **No Extreme** at Nukufetau, Funafuti, Nukulaelae and Niulakita.

Over September to November (3Months), **Seriously Wet** at Nanumaga and Niutao. **Very Wet** in Nanumea, Nui, and Vaitupu. **No Extreme** stretching over Nukufetau, Funafuti, Nukulaelae and Niulakita.

Over the past six months, June to November, **No Extreme** most stretching around Tuvalu.

December 2022 to November 2023 (12months), it was **Very dry** existed Nanumea, Nui, Vaitupu and Nukufetau. **Seriously dry** at Nukulaelae and Niulakita. While **No Extreme** at Nanumaga, Niutao, and Funafuti.

### Rainfall OUTLOOK:

**Medium chance of very wet** conditions predicted for January over Nanumea, Nanumaga and Niutao. **Low chance of extreme** at Nui, Vaitupu, Nukufetau, Funafuti, Nukulaelae, and Niulakita.

January to March 2024, expected to be **Medium Chance of very wet** over Tuvalu.

# Rainfall observed for the last month, 3-months, 6-months and 12-months

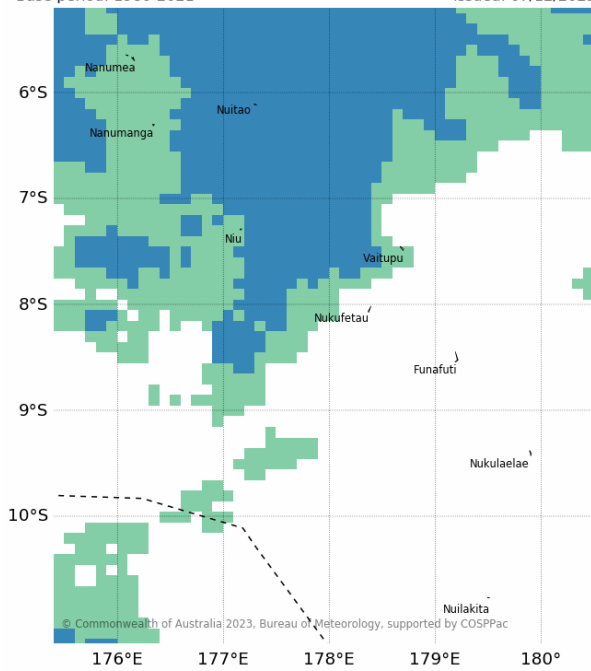
The table below provides information on rainfall received over specific periods in the last 12 months, whether a station is in drought or a very wet period (opposite of drought). If a station is in drought warning, this indicates an increased chances of drought in the coming months, especially when approaching the dry season. The time periods are associated with different drought impacts presented below the tables.

Past Rainfall Status					Very Dry/Wet Rainfall Outlook		
1-month November 2023	3-months September to November 2023	6-months June to November 2023	12-months December 2022 to November 2023		Tuvalu Islands	January 2024 Chance of extreme	January to March 2024 Chance of extreme
Very Wet	Very Wet	No Extreme	Very Dry		<b>Nanumea</b>	Medium Chance of very wet	Medium Chance of very wet
Very Wet	Seriously Wet	No Extreme	No Extreme		<b>Nanumaga</b>	Medium chance of very wet	Medium Chance of very wet
Seriously Wet	Seriously Wet	No Extreme	No Extreme		<b>Niutao</b>	Medium Chance of very wet	Medium Chance of very wet
Very Wet	Very Wet	No Extreme	Very Dry		<b>Nui</b>	Low chance of extreme	Medium Chance of very wet
Very Wet	Very Wet	No Extreme	Very Dry		<b>Vaitupu</b>	Low Chance of Extreme	Medium Chance of very wet
No Extreme	Very Wet	No Extreme	Very Dry		<b>Nukufetau</b>	Low Chance of Extreme	Medium Chance of very wet
No Extreme	No Extreme	No Extreme	No Extreme		<b>Funafuti</b>	Low Chance of extreme	Medium Chance of very wet
No Extreme	No Extreme	No Extreme	Seriously Dry		<b>Nukulaelae</b>	Low Chance of extreme	Medium Chance of very wet
No Extreme	No Extreme	No Extreme	Seriously Dry		<b>Niulakita</b>	Low chance of extreme	Medium Chance of very wet

# ACCESS-S Rainfall Summary for November, 2023.

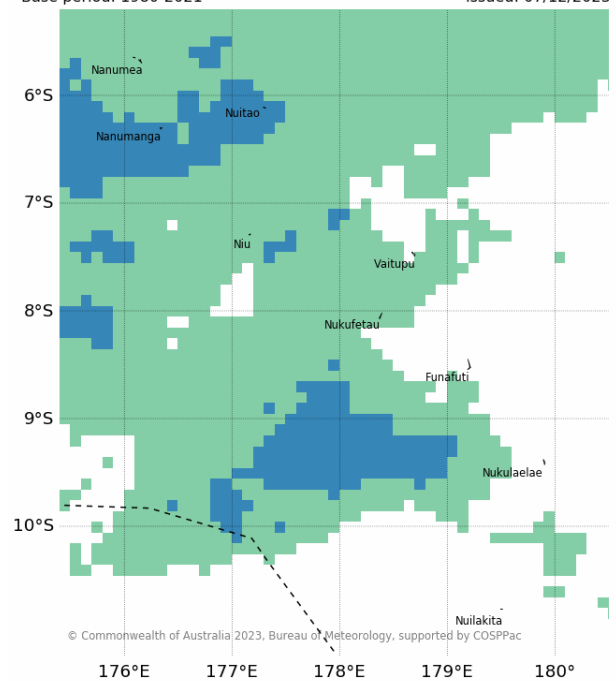
Rainfall status for November 2023

Data source: MSWEP  
Base period: 1980-2021  
Method: Percentile  
Issued: 07/12/2023



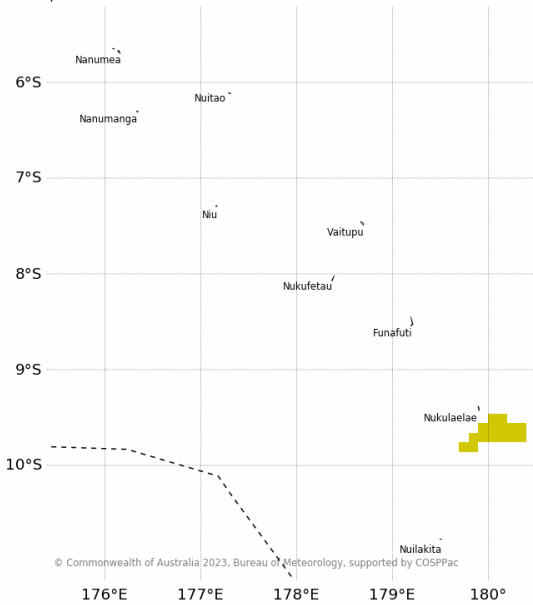
3-month rainfall status to end of November 2023

Data source: MSWEP  
Base period: 1980-2021  
Method: Percentile  
Issued: 07/12/2023



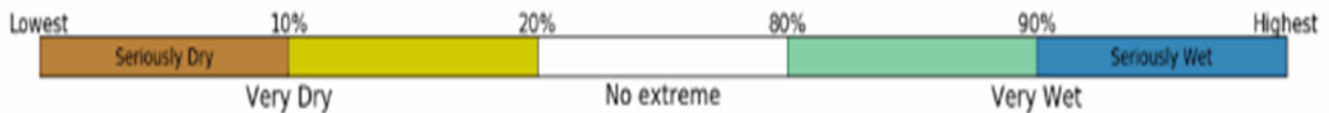
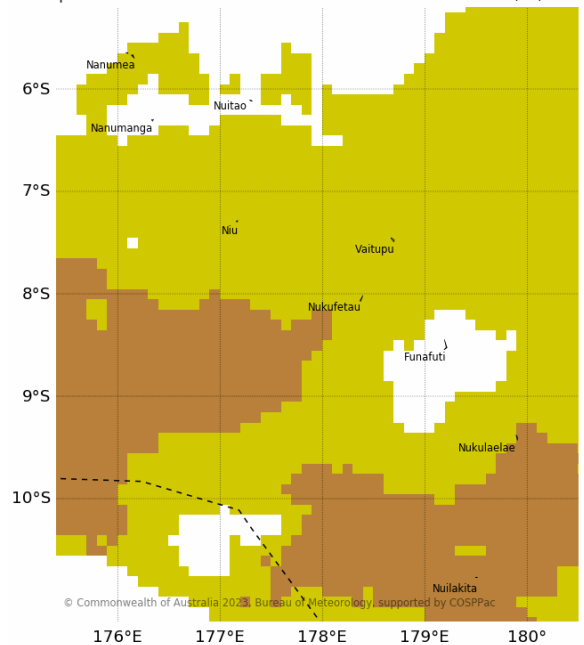
6-month rainfall status to end of November 2023

Data source: MSWEP  
Base period: 1980-2021  
Method: Percentile  
Issued: 07/12/2023



12-month rainfall status to end of November 2023

Data source: MSWEP  
Base period: 1980-2021  
Method: Percentile  
Issued: 07/12/2023



## **Time periods and impacts:**

**1 – month** period is most relevant for shallow rooted crops ( e.g. eggplant, cabbage, tomatoes, spring onions, watermelons, cucumber), small water tanks (e.g. 1000gallons) and household water cisterns. The following secondary health and social-economic have been associated with drought at the 1-month period. Diarrhoea, skin rash, cough and fever, red eye, desalination plant (increased power demand and higher water costs for households), health of babies and elderly people declines, schools close and construction stops.

**2 – months** period is most relevant for bottle gourd, pawpaw, banana, chicken, pigs and community cisterns. The following secondary social-economic and health impacts have been associated with drought at the 2-months period. Community gatherings stop, increased in community disputes over water and limited or no employment.

**3 – months** period is most relevant for pumpkin, groundwater and ponds. The following secondary social-economic and health impacts have been associated with drought at the 3-months period. Crimes increase e.g. water stealing, government offices close and national events postponed.

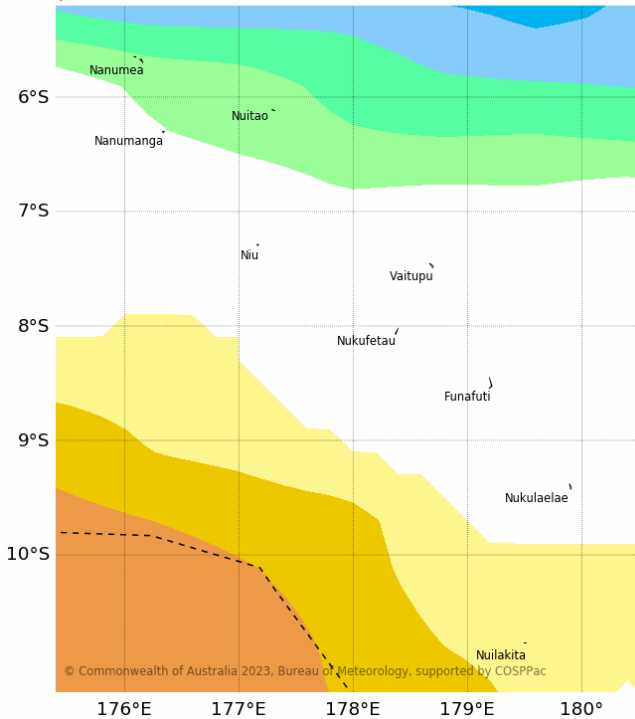
**6 – months** period is most relevant for large trees (e.g. breadfruits, pulaka, taro). The following secondary social-economic and health impacts have been associated with drought at the 6-months periods. Meteorological balloon flights stop, interislands shipping delays, entry of visitors to Tuvalu restricted.

**12- months** period is most relevant for felo, dragon fruits, pandanus, coconuts and ofega.

# Very dry/Wet Rainfall Outlooks for December, and Decemebr 2023 to January 2024

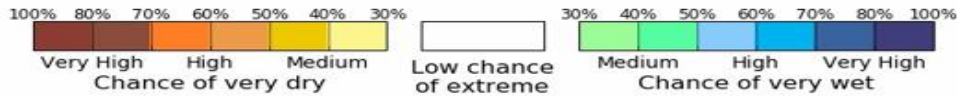
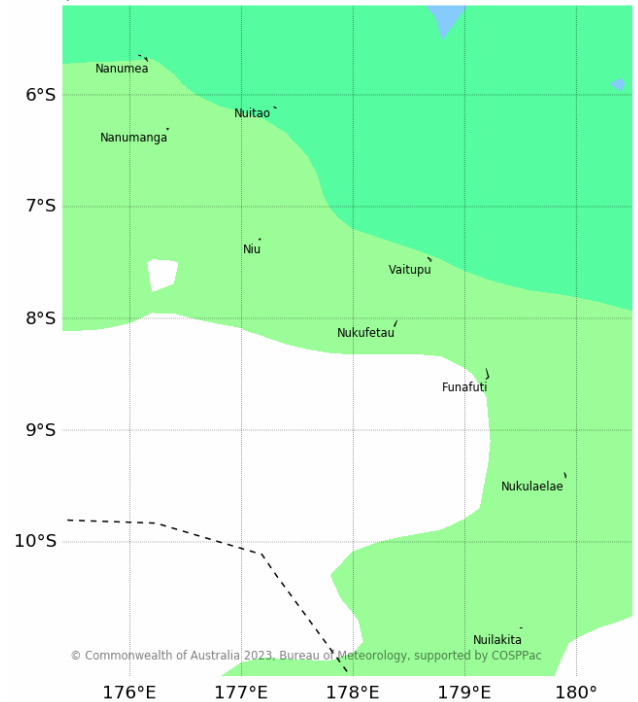
Chance of extreme rainfall for 20 December 2023 to 2 January 2024

Data source: ACCESS-S2  
Base period: 1981-2018  
Model Run: 13/12/2023  
Issued: 15/12/2023



Chance of extreme rainfall for January to March 2024

Data source: ACCESS-S2  
Base period: 1981-2018  
Model Run: 13/12/2023  
Issued: 15/12/2023



## Outlook Status

The outlook provides the likelihood of receiving above normal to normal rainfall over the next three months and the following three months. The outlook does not indicate the amount of rainfall that may be received, how intense the rain may be in any one event, nor how it may vary from month to month.

## Rainfall Status

- Estimates of moisture/water stress is based on recent rainfall compared with historical observations using the Percentile (Decile) Index.

- *Definitions:* "Very Dry" = rainfall in the lowest 20% of the historical record for that location and season, "Very Wet" = rainfall in the highest 20% for that location and season, "Seriously Dry" = rainfall in the lowest 10% of the historical record for that location and season, "Seriously Wet" = rainfall in the highest 10% for that location and season.

Contact Tuvalu Meteorological Service for further information:

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