



# Tuvalu Meteorological Service Early Action Rainfall Watch:



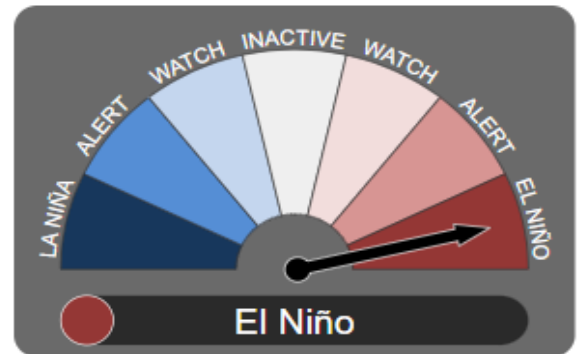
**Purpose:** The Early Action Rainfall Watch provides a summary of recent rainfall patterns, particularly the status of drought and the rainfall outlook for the coming months. The status and outlook will be revised on a monthly basis. Contact the Tuvalu Meteorological Service (TMS) for further information.

## SUMMARY

***Issued: 26/10/2023***

**“EL NINO Southern Oscillation (ENSO) is currently EL NINO state”**

- ❖ El Niño has officially arrived.
- ❖ Central and eastern Pacific sea surface temperatures (SSTs) currently exceed El Niño thresholds.
- ❖ Cloud patterns over the Pacific reflect El Niño.
- ❖ Climate models indicate this El Niño is likely to persist until at least the end of February.



## **RAINFALL STATUS:**

For the month of September 2023, it was **No Extreme** in Nanumea, Nanumaga, Nui, Nukufetau. **Very wet** existed at Funafuti, Nukulaelae and Niulakita.

Over July to September (3Months), it was **No Extreme** over the group of Tuvalu.

Over the past six months, April to September 2023, it was a **Very Dry** at Nanumea, Nanumaga, Niutao, Nui, Vaitupu, Nukufetau, Nukulaelae and Niulakita. **No Extreme** existed at Funafuti.

October 2022 to September 2023 (12months), it was **Very dry** existed Nanumea, Nanumaga, Niutao, and Funafuti. **Seriously dry** stretching over Nui, Vaitupu, Nukufetau, Nukulaelae and Niulakita.

## **Rainfall OUTLOOK:**

**High** chance of very wet conditions predicted for November and November 2023 to January 2024 over Nanumea, Nanumaga, Niutao and Nui, while **Medium** chance of very wet at Vaitupu, Nukufetau, Funafuti, Nukulaelae and Niulakita.

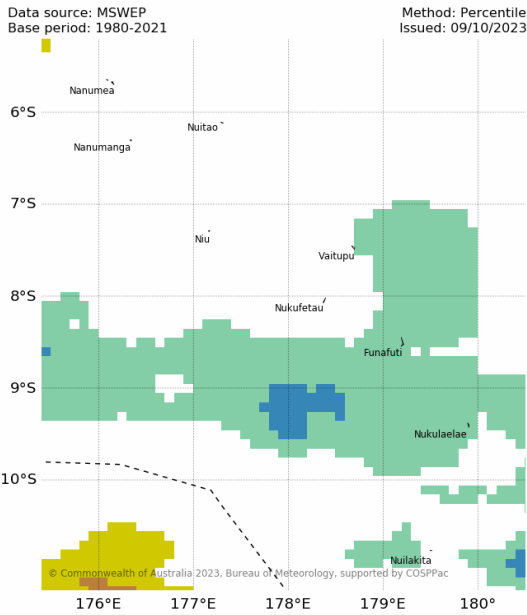
# Rainfall observed for the last month, 3-months, 6-months and 12-months

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.

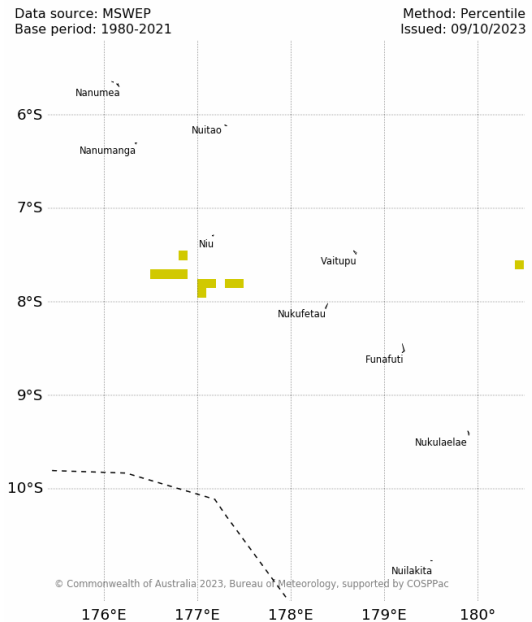
Past Rainfall Status					Very Dry/Wet Rainfall Outlook		
1-month September 2023	3-months July to September 2023	6-months April to September 2023	12-months October 2022 to Septemebr 2023		Tuvalu Islands	November 2023 Chance of extreme	November 2023 to January 2024 Chance of extreme
No Extreme	No Extreme	Very Dry	Very Dry		Nanumea	High Chance of very wet	High Chance of very wet
No Extreme	No Extreme	Very Dry	Very Dry		Nanumaga	High Chance of very wet	High Chance of very wet
No Extreme	No Extreme	Very Dry	Very Dry		Niutao	High Chance of very wet	High Chance of very wet
No Extreme	No Extreme	Very Dry	Seriously Dry		Nui	High Chance of very wet	High Chance of very wet
Very Wet	No Extreme	Very Dry	Seriously Dry		Vaitupu	Medium Chance of very wet	Medium Chance of very wet
No Extreme	No Extreme	Very Dry	Seriously Dry		Nukufetau	Medium Chance of very wet	Medium Chance of very wet
Very Wet	No Extreme	No Extreme	Very Dry		Funafuti	Medium Chance of very wet	Medium Chance of very wet
Very Wet	No Extreme	Very Dry	Seriously Dry		Nukulaelae	Medium Chance of very wet	Medium Chance of very wet
Very Wet	No Extreme	Very Dry	Seriously Dry		Niulakita	Medium Chance of very wet	Medium Chance of very wet

# ACCESS-S Rainfall Summary for September, 2023.

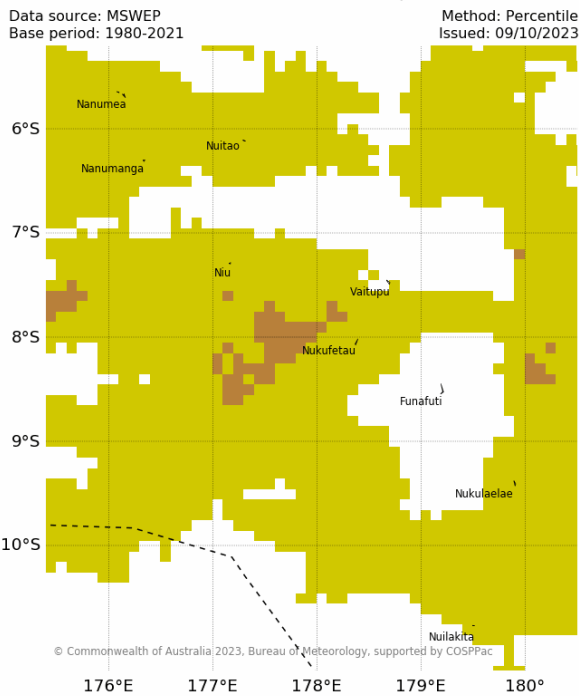
Rainfall status for September 2023



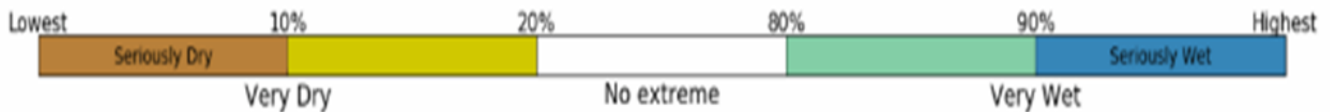
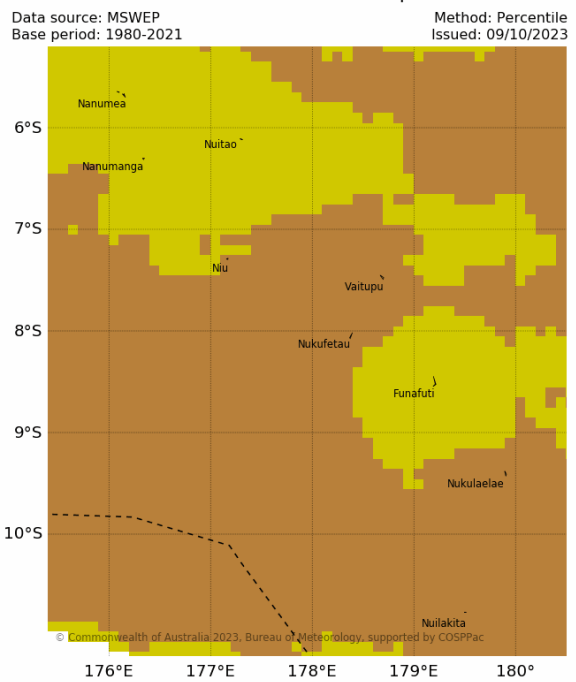
3-month rainfall status to end of September 2023



6-month rainfall status to end of September 2023



12-month rainfall status to end of September 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.

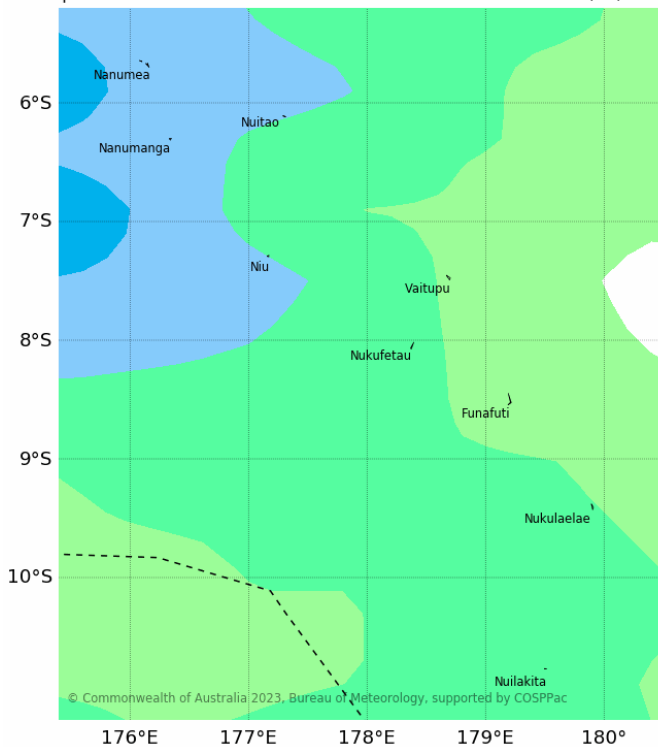
**6 – months** period is most relevant for large trees (e.g. breadfruits, pulaka, taro). The following secondary social-economic and health impacts have been associated with drought at the 6-months periods. Meteorological balloon flights stop, interislands shipping delays, entry of visitors to Tuvalu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

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

# Very dry/Wet Rainfall Outlooks for November, and November to January 2024

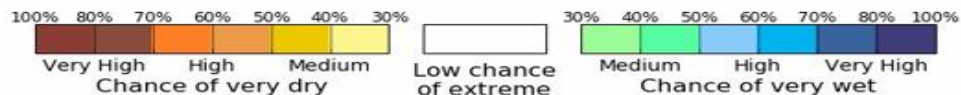
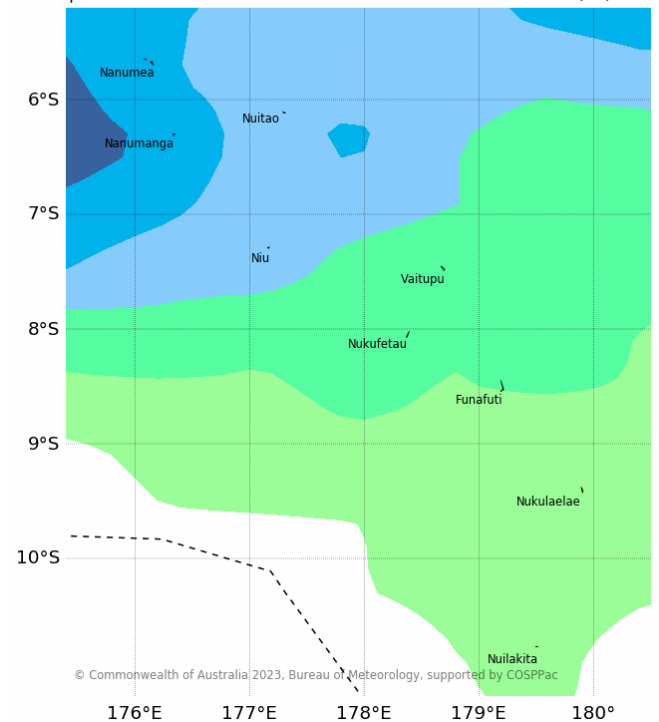
Chance of extreme rainfall for November 2023

Data source: ACCESS-S2 Model Run: 13/10/2023  
 Base period: 1981-2018 Issued: 15/10/2023



Chance of extreme rainfall for November 2023 to January 2024

Data source: ACCESS-S2 Model Run: 13/10/2023  
 Base period: 1981-2018 Issued: 15/10/2023



## 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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