



# Tuvalu Meteorological Service Early Action Rainfall Watch:



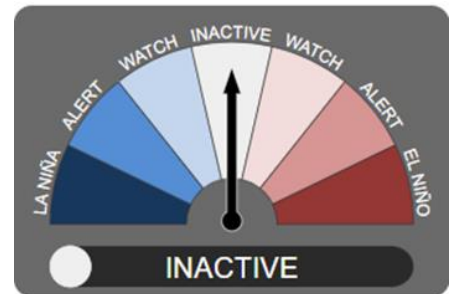
**Purpose:** The Early Action Rainfall Watch provides a summary of recent rainfall patterns, particularly the status of drought and the rainfall outlook for the coming months. The status and outlook will be revised on a monthly basis. Contact the Tuvalu Meteorological Service (TMS) for further information.

## SUMMARY

### “ENSO remains Neutral conditions”

- The El Niño–Southern Oscillation (ENSO) remains neutral, with sea surface temperatures (SSTs) in the central equatorial Pacific Ocean at ENSO-neutral levels. Atmospheric indices, such as those related to patterns of surface pressure, cloud and trade winds, are broadly consistent with an ENSO-neutral state.
- Of the 6 other climate models surveyed, only one model suggests SSTs in the tropical Pacific are likely to exceed the La Niña threshold (below  $-0.8\text{ }^{\circ}\text{C}$ ) throughout December to February, which is sufficient time to be classified as a La Niña event.
- In the Neutral conditions, Tuvalu is expected to be below average rainfall for the next three months.

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## RAINFALL STATUS:

- ❖ For **October 2024**, it was **Very Dry** over Nanumea, Nanumaga, and Niutao. **No Extreme** existed at Nui, Vaitupu, Nukufetau, Funafuti, and Niulakita, while **Very Wet** over Nukulaelae.
- ❖ From **August to October 2024** (3 months), it was **No extreme** over Nanumea, Nanumaga, Niutao, Nui, and Niulakita. **Very Wet to Seriously Wet** for most parts of Vaitupu, Nukufetau, Funafuti, and Nukulaelae,
- ❖ Over the past six months, from **May to October 2024**, **No Extreme** existed at Nanumea, Nanumaga, and Niutao. **Very Wet to Seriously Wet** most existed over Nui, Vaitupu, Nukufetau, Funafuti, Nukulaelae, and Niulakita.
- ❖ **November 2023 to October 2024** (12 months), it was **No Extreme** over Tuvalu.

## Rainfall OUTLOOK:

- **Very High Chance to High Chance of Very Dry** conditions predicted for **December 2024** over Nanumea, Nanumaga, Niutao, Nui, Vaitupu, and Funafuti. There is a **Medium Chance of Very Dry** expected for Nukulaelae and a **Low Chance of Extreme** at Niulakita.
- **December 2024 to February 2025**, expected to be a **Very High Chance to High Chance of Very Dry conditions** over Nanumea, Nanumaga, Niutao, Nui, Vaitupu, and Nukufetau. **Medium Chance of Very Dry** stretching over Nukulaelae, but a **Low Chance of Extreme** over Niulakita.

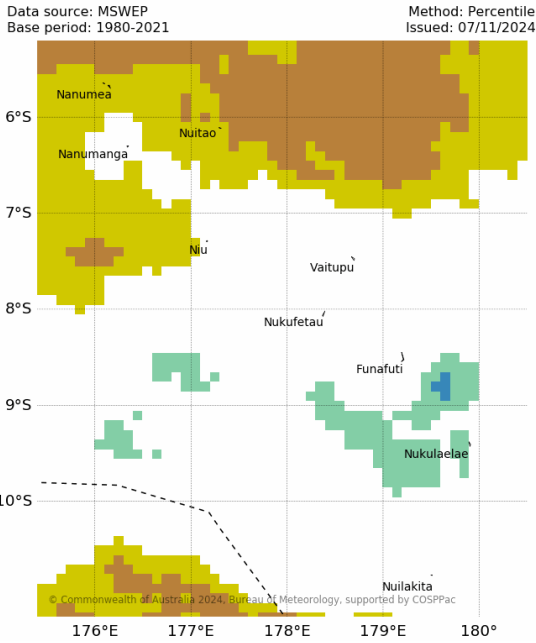
# Rainfall observed for the last month, 3-months, 6-months and 12-months

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.

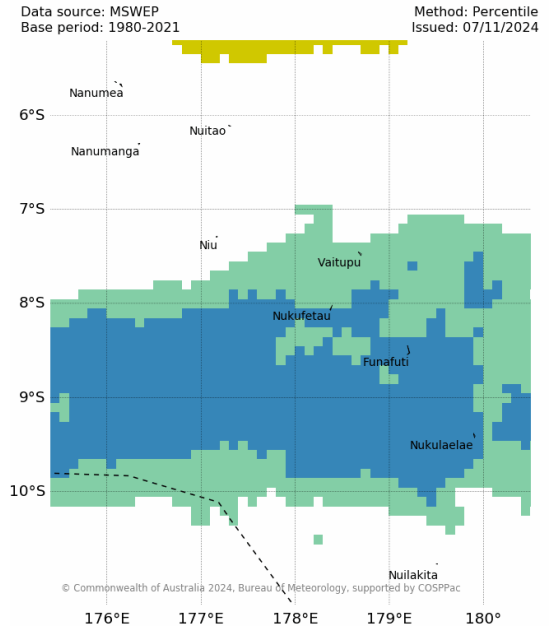
Past Rainfall Status						Very Dry/Wet Rainfall Outlook	
1-month October 2024	3-months August to October 2024	6-months May to October 2024	12-months November 2023 to October 2024		Tuvalu Islands	December 2024 Chance of extreme	December 2024 to February 2025 Chance of extreme
Very Dry	No Extreme	No Extreme	No Extreme		Nanumea	Very High Chance of Very Dry	Very High Chance of Very Dry
Very Dry	No Extreme	No Extreme	No Extreme		Nanumaga	Very High Chance of Very Dry	Very High Chance of Very Dry
Very Dry	No Extreme	No Extreme	No Extreme		Niutao	Very High Chance of Very Dry	Very High Chance of Very Dry
No Extreme	No Extreme	Very Wet	No Extreme		Nui	Very High Chance of Very Dry	Very High Chance of Very Dry
No Extreme	Very Wet	Very Wet	No Extreme		Vaitupu	Very High Chance of Very Dry	Very High Chance of Very Dry
No Extreme	Seriously Wet	Seriously Wet	No Extreme		Nukufetau	Very High Chance of Very Dry	High Chance of Very Dry
No Extreme	Seriously Wet	Very Wet	No Extreme		Funafuti	High Chance of Very Dry	High Chance of Very Dry
Very Wet	Seriously Wet	Seriously Wet	No Extreme		Nukulaelae	Medium Chance of Very Dry	Medium Chance of Very Dry
No Extreme	No Extreme	Seriously Wet	No Extreme		Niulakita	Low Chance of Extreme	Low Chance of Extreme

# ACCESS-S Rainfall Summary for October 2024.

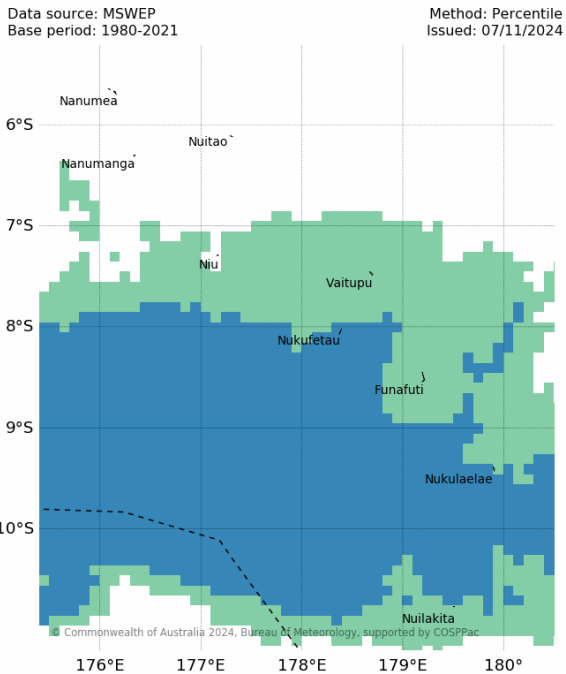
Rainfall status for October 2024



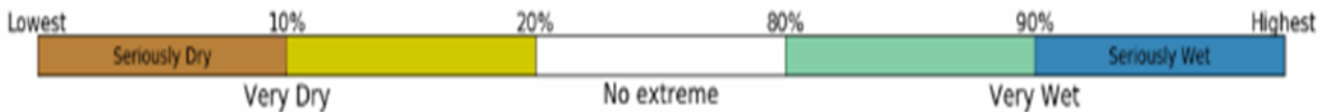
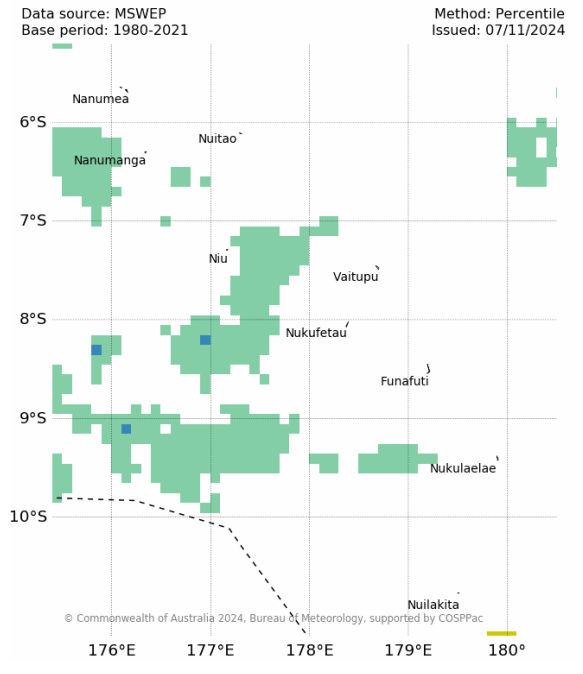
3-month rainfall status to end of October 2024



6-month rainfall status to end of October 2024



12-month rainfall status to end of October 2024



## **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. 1000galloons) 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.

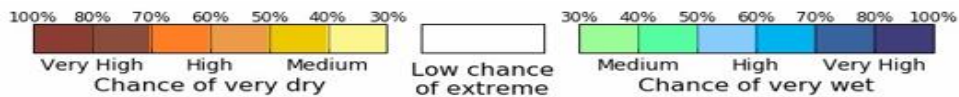
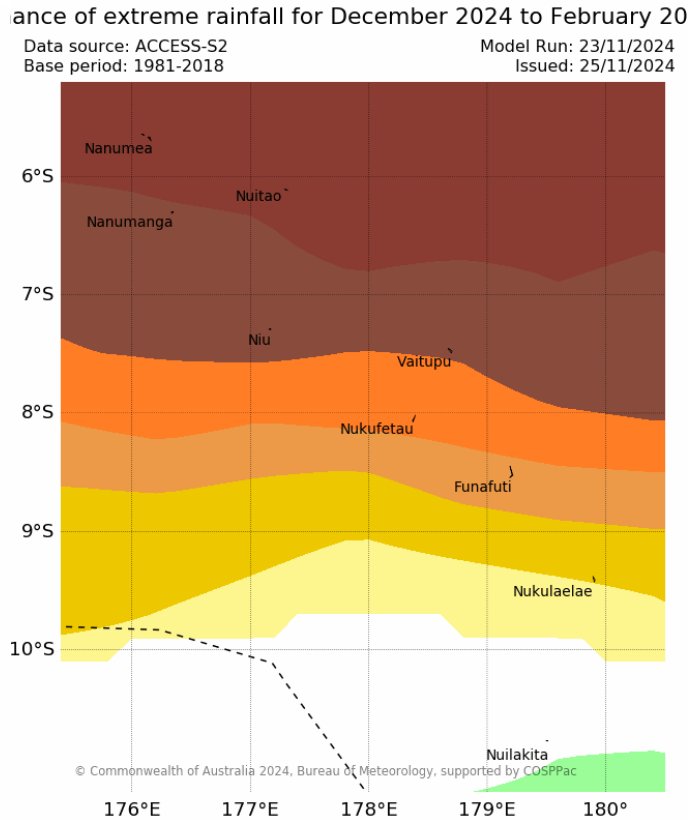
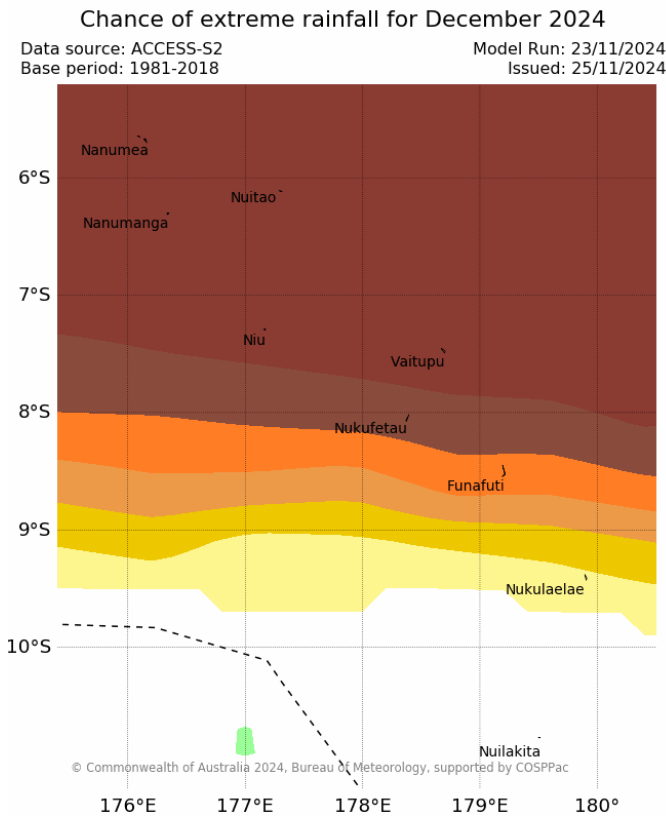
**2 – months** period is most relevant for bottle gourd,pawpaw, banana, chicken, pigs and community cisterns. The following secondary social-economic and health impacts have been associated with drought at the 2-months period. Community gatherings stopped, increased in community disputes over water,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

**3 – months** period is most relevant for pumpkins, groundwater, and ponds. The following secondary social-economic and health impacts have been associated with drought at the 3-month period. Crimes increase e.g. water stealing, government offices closing, 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, interisland shipping delays, and entry of visitors to Tuvalu is restricted.

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

# Very Dry/Wet Rainfall Outlooks for December 2024, and December 2024 to February 2025



## 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:

Chief Meteorological Officer, Ministry of Public Works, Infrastructure, Water, Meteorology and Disaster, Vaiaku, Funafuti, Tuvalu.

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