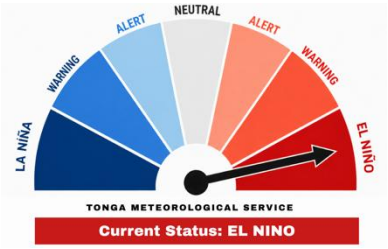
# Tonga Meteorological Service
# Meteorological Drought Outlook

The Meteorological Drought Outlook provides sector managers with a summary of recent rainfall patterns, particularly meteorological drought and the rainfall outlook for the coming months.

**Issued: 9th November 2026**

## Current El Niño-Southern Oscillation (ENSO) status:

The current strong El Niño continues to strengthen in the Pacific. Warming will continue in the tropical Pacific over the next month and is expected to peak in December. Forecasts also indicate that this will be a very strong El Niño event, likely the strongest since reliable records began in 1950. El Niño conditions typically lead to below-average rainfall and the possibility of prolonged drought in Tonga.




## Overall summary:

For the past month (October 2026), **Dry to Seriously Dry** conditions were observed across the country. Niuafo'ou in the north is now in Meteorological Drought Declaration and Vava'u in drought warning. Tongatapu, 'Eua, Ha'apai and Niuatoputapu remain in Meteorological Drought Declaration. Looking at accumulated rainfall over the last three months (August to October 2026), **Very Dry to Seriously Dry** conditions persist for all of Tonga.

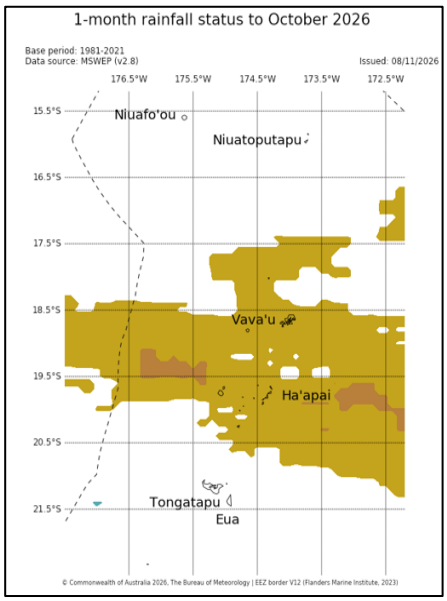
Rainfall outlooks for the next three months (November to January) continue to indicate there is a **very high chance for Very Dry** conditons for all of Tonga. It should be noted that forecast skill for November ranges from low to high and for the seasonal period November to January is mostly high for all of Tonga.

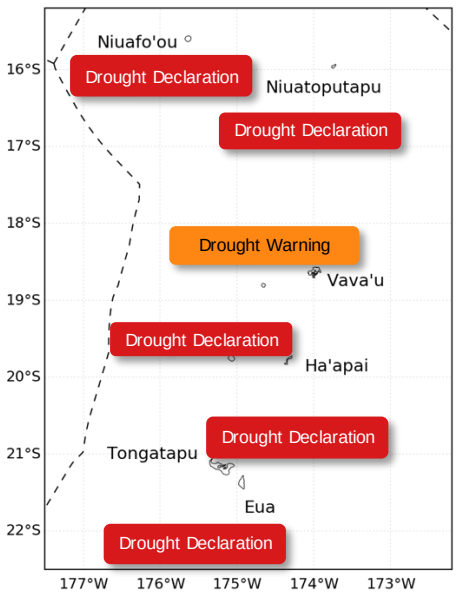
## Rainfall and Meteorological Drought Status:

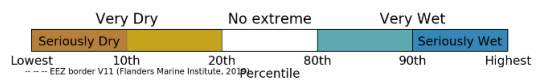
For the past month (October 2026), **Dry to Seriously Dry** conditions were observed across the country.

For the past three month period (August to October 2026), **Very Dry** conditions persist across northern island groups and Vava'u while Seriously Dry conditions persist over Ha'apai and southern island groups. Niuafo'ou is now upgraded to Meteorological Drought Declaration while Vava'u is now in Meteorological Drought Warning. The meteorological drought status for the remaining islands remains unchanged. Meteorological drought focuses only on precipitation and is defined as the extent of dryness when compared with some normal or average amount, and the duration of this dry period.

## Rainfall Monitoring for the past month and meteorological drought status maps:






Based on the three month period of rainfall data **to the end of October**, Niuafo'ou is now in Meteorological Drought Declaration and Vava'u is now on Meteorological Drought Warning status. Ha'apai, Tongatapu, 'Eua, and Niuatoputapu remain in Meteorological Drought Declaration.

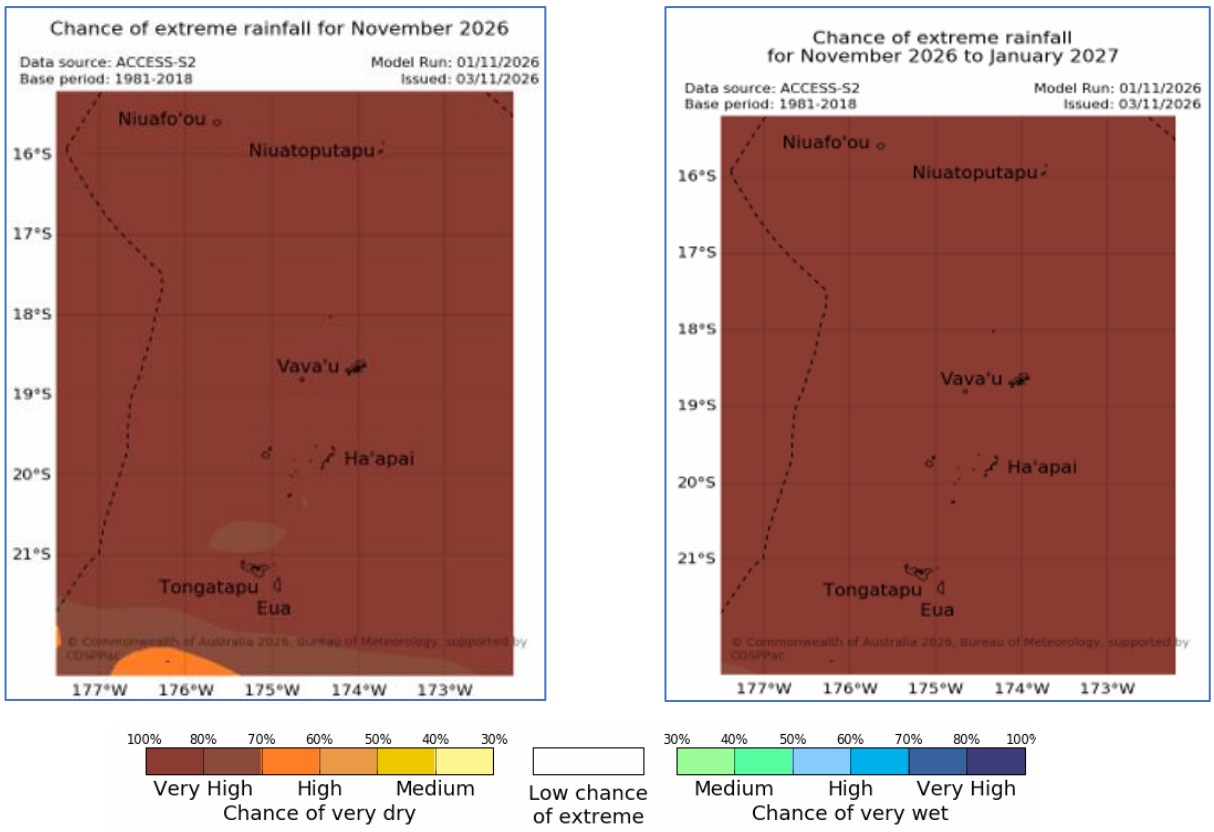
| Island Group | Met. Drought Status | Alert Levels |
|---|---|---|
| Niuafo'ou | Drought Decralation | **Drought Alert:** Three month rainfall observations within 25th to 40th percentile |
| Niuatoputapu | Drought Declaration | |
| Vava'u | Drought Warning | **Drought Warning:** Three month observations within 10th to 25th percentile |
| Ha'apai | Drought Declaration | |
| Tongatapu | Drought Declaration | **Drought Declaration:** Three month rainfal observations less than the 10th percentile |
| 'Eua | Drought Declaration | |

## Rainfall Outlook (for very dry conditions):

Looking at the monthly rainfall outlook for November, there remains a very high chance (80 – 100%) of very dry conditions for all of Tonga.

For the seasonal outlook for November 2026 to January 2027**,** there also remains a very high chance (80 – 100%) of very dry conditions for all of Tonga.

**Rainfall Outlooks Charts:**




***Disclaimer: "These maps are used for illustrative purposes only and does not represent any official endorsement or acceptance of those boundaries by the Government of the Kingdom of Tonga".***

Contact the Tonga Meteorological Service, Matatoa, for further information; Phone: +676 7400098
Website: https://met.gov.to/ Email: metstaff@met.gov.to

## Meteorological Drought Outlook:

The Tonga Meteorological Services Meteorological Drought Outlook is calculated using the current drought status of each island group and the chance of very dry conditions over each island group.

| Island Group | Current Met. Drought Status | Outlook for Status by end November | Outlook for Status by end December | Outlook for Status by end January |
|---|---|---|---|---|
| Niuafo'ou | Drought Declaration | Drought Declaration | Drought Declaration | Drought Declaration |
| Niuatoputapu | Drought Declaration | Drought Declaration | Drought Declaration | Drought Declaration |
| Vava'u | Drought Warning | Drought Declaration | Drought Declaration | Drought Declaration |
| Ha'apai | Drought Declaration | Drought Declaration | Drought Declaration | Drought Declaration |
| Tongatapu | Drought Declaration | Drought Declaration | Drought Declaration | Drought Declaration |
| ‘Eua | Drought Declaration | Drought Declaration | Drought Declaration | Drought Declaration |

Past accuracy for monthly rainfall outlooks in November is **high** across northern island groups and low to moderate across central and southern island groups.

Past accuracy for seaonal rainfall outlooks for November 2026 to January 2027 is **mostly high** for all island groups.

## Impacts

The following primary agricultural and hydrological variables may be impacted after the specified period of below- or above-average rainfall. Note that the periods are estimates only. Allow for uncertainty associated with island size, topography, geology and soil type. Contact the relevant sector offices for further information on impacts.

| Tonga | | | | |
|---|---|---|---|---|
| Sector | 1-month period most relevant for | 3-month period most relevant for | 6-month period most relevant for | 12-month period most relevant for |
| Water | Reduced or empty water tanks. | Reduced or empty water tanks.<br>Depleted groundwater (Tongatapu).<br>Limited water cycle processes – less evaporation.<br>Higher operational cost in pumping water.<br>Increased cost for drinking water. | Bore/well water dries up.<br>Limited water cycle processes – less evaporation.<br>Increased cost for drinking water.<br>Depleted groundwater. | Population migration (reduced evapotranspiration – deforestation).<br>Depleted groundwater.<br>Increased water salinity. |
| Agriculture | Reduced soil moisture.<br>Yams affected.<br>Competing demands for water for household, agriculture, livestock.<br>Impacts on poultry, reduced lettuce, tomato, watermelon (and vegetables in general). | Reduced crop production: yams, cassava and taros are affected, and less breadfruit and pineapples – immature fruits and less yield, less but sweeter watermelon.<br>Reduced kava growth.<br>Increased prices for crops.<br>High irrigations demand.<br>Impacts on cattle and pigs. | Livelihood and food security affected.<br>Reduced yield (yams, taro and cassava).<br>Young trees (bananas and breadfruits) dying.<br>Hybrid crops affected.<br>Impact on livestock (e.g. cows) – reduced pasture availability and increased demand for drinking water).<br>Increase in pests and diseases.<br>Coconut fruits (reduced quality and less bountiful).<br>Increase in pests and diseases. | Coconut fruits (reduced quality and less bountiful).<br>Increase in pests and diseases.<br>Limited replanting options (Niuatoputapu, Ha’apai, Tongatapu), unable to replant. |

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| | | | Limited replanting options (Niuatoputapu, Ha'apai, Tongatapu), unable to replant. | |
| Health | Dehydration leading to skin disease and nose bleeding.<br>Fever, vomiting<br>Asthma (hard to breathe during prolonged drought)<br>Vulnerable people have less access to water<br>Lack of water for sanitation and hygiene – increased infectious diseases.<br>Reduced water supply in out islands – impacts people with disability.<br>Lack of water for hygiene and sanitation for pregnant women, infants, newborn babies, and new mothers. | Typhoid, diarrhoea, lung disease.<br>Asthma (hard to breathe during prolonged drought<br>Lack of water for sanitation and hygiene.<br>Dehydration.<br>Reduced water supply in out islands – impacts people with disability.<br>Matakovi (red eye).<br><br>Mental health – increased social stress.<br><br>Hospitals and Emergency Centres running out of water.<br><br>Psychological and counselling | Mental health – increased social stress.<br><br>Hospitals and Emergency Centres running out of water.<br><br>Psychological and counselling | Mental health – increased social stress. |
| Socio-Economic | Disruption to household incomes and livelihood.<br>Operational demands for drought response increase.<br>Human relief responses increase.<br><br>Increased solar production.<br><br>Increase online drought relief scams<br><br>Increased stress leading to increased domestic violence and neglect to children's health,<br><br>Increased water thefts | **Education:** *Outer islands* school water reduced.<br>Reduced students' focus and performance (hunger, malnutrition and lack of hygiene).<br>Lower attendance and dropouts, and school closures.<br>Half day programmes only, operates from home.<br><br>**Defence**: Need more human resources for water facilities and reallocations of resources: ships/boats/equipment; manpower for new tasks/mission; operation cost (fuel, ration and deployment).<br><br>Increased likelihood of Declaration of State of Emergency – support to Civil Authority by conducting HADR<br><br>Increased risk of wildfires<br><br>Increased shipping cost | **Education**: Schools on *main islands (Tongatapu, Hap'apai,* Vava'u*)* are impacted.<br>Reduced students' focus and performance (hunger, malnutrition and lack of hygiene).<br><br>**Defence**: Need more human resources for water facilities and reallocations of resources: ships/boats/equipment; manpower for new tasks/mission; operation cost (fuel, ration and deployment).<br><br>Increased risk of wild fires<br><br>Increased shipping cost<br><br>Fire Services – requires use of seawater. | **Education**: Relocation of students from small islands to main island. |

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| | | Disruptive power supply: limited water for cooling the equipment<br><br>Fire Services – requires use of seawater. | | |