



# Solomon Islands Meteorological Service

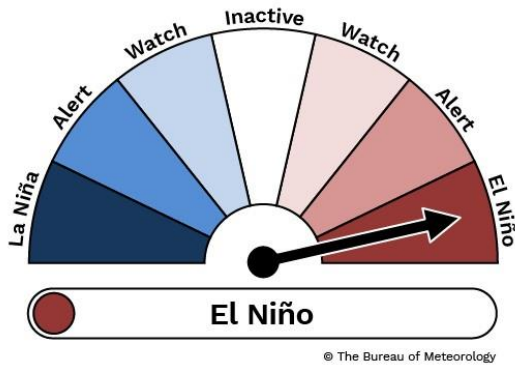
## Early Action Rainfall Watch



The Early Action Rainfall (EAR) Watch provides sector managers with a brief summary of recent rainfall patterns, particularly for drought monitoring and the rainfall outlook for the coming months.

**Issued: Monday, 17 October 2023**

### El Nino Southern Oscillation (ENSO) Update:



El is now declared.

#### El Niño Conditions:

- Less Rainfall
- Strong westerly winds

#### La Niña Conditions:

- More Rainfall
- Strong easterly winds

### RAINFALL STATUS AND OUTLOOK.

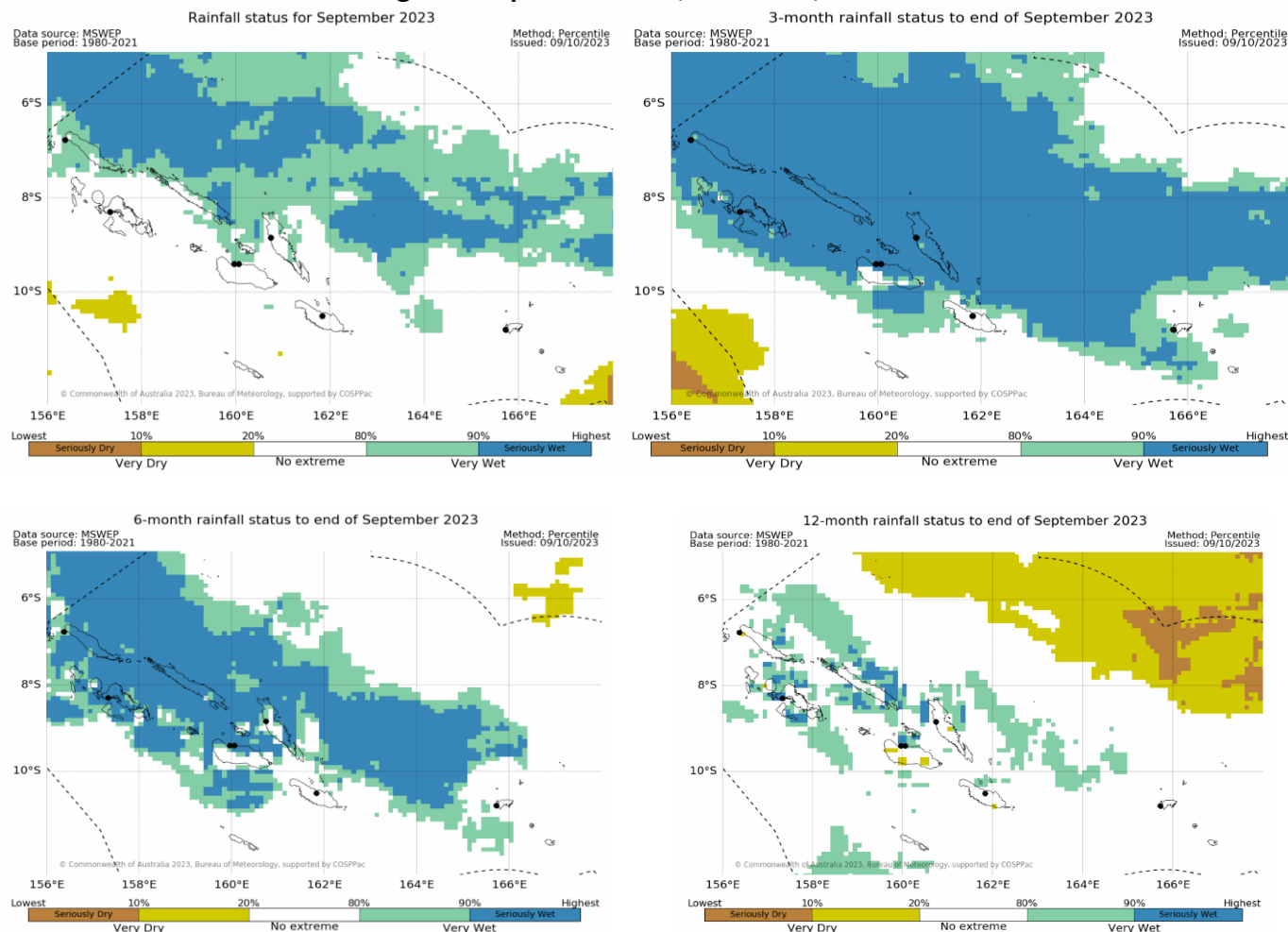
#### Rainfall status to September 2023:

A seriously wet condition existed for Auki, Henderson, Honiara, Munda and Taro for the last 3-months. Also Henderson, Honiara and Munda for the 6-months period and Munda for the 12-months period. A very wet condition exists for Taro in the 1-month period, Auki and Taro for the 6-months period and Henderson and Honiara for the 12-months period.

#### Rainfall status for the last 1-month, 3-months, 6-months, and 12-months.

Status	1-month September 2023	3-months July to September 2023	6-months April to September 2023	12-months October 2022 to September 2023
Seriously Wet		Auki, Henderson, Honiara, Munda and Taro	Henderson, Honiara and Munda	Munda
Very Wet	Taro		Auki and Taro	Henderson, Honiara
No Alert	Auki, Henderson, Honiara, Kirakira, Lata, Munda and Tinggoa	Kirakira, Lata and Tinggoa	Kirakira, Lata and Tinggoa	Auki, Kirakira, Lata, Taro and Tinggoa
Very Dry				
Seriously Dry				

# Rainfall monitoring for the past 1-month, 3-months, 6-months and 12-months



## Impacts

Different past rainfall time scales impact on sectors. The impacts are estimate only. Allow for uncertainty associated with island size, topography, geology and soil type. Contact the relevant sector offices for further information on impacts.

Sectors	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	small watertanks (e.g. 44-gallon drums, 5000L watertank), small streams, shallow wells	bore holes, ground water, small wells, small streams and rivers	medium water sources (e.g. boreholes, springs, medium rivers, wells, large watertanks)	large water sources (e.g. large rivers, springs, bore holes, artisan wells). Water contamination
Food Security	shallow rooted agricultural crops (e.g. island cabbage, chinese cabbage, tomato, beans), kumara, cassava. Increases in pests and diseases.	root crops (e.g. yam, taro, pana, cassava, sweet potato, kumala), banana, cabbage, tomato, traditional vegetables, small livestock, pasture. Low water in fish ponds	Shortage of cash crops (e.g. banana, young coconut, root crops, taro, yam, cassava, cocoa, kava, pana, sugarcane, lemon, grapefruit, orange trees, nut trees, pineapple, coffee), livestock (e.g. goats, horse, cattle), honey bees. Low water table impacts fish food	large trees (e.g. oil palm, coconuts, edu, kakake, cocoa, noni, breadfruit, mango). Reduced fish reproduction in fish ponds
Socio-economic, environment and health	water-borne diseases, mosquito-borne diseases (e.g. malaria),	water-borne diseases (e.g. hepatitis, typhoid), mosquito-borne diseases (e.g. malaria),	eye disease, water-borne diseases (e.g. dysentery), skin disease (hookworm) Mental health.	Water pollution (e.g., algae bloom) Forced migration.

	respiratory diseases (e.g. cough), Mental stress	respiratory diseases (e.g. cough), skin disease, open defecation, malnutrition, and starvation.  Schools and provincial hospitals closed down. Increase in domestic violence. Inflation, increase in government spending.	Wildlife migration (e.g., birds, snakes, butterflies, etc.), bush fires  Disputes over resources. Interruption to inter-island shipping. Hydro-power generation affected (disruption of essential services) Relocation of villages.	High mortality, increases in crime (theft, looting etc.), increase workload (domestic chores e.g., water collections). Increase in poverty.
--	---	---	--	--

**Rainfall Outlook:**

**November 2023:**

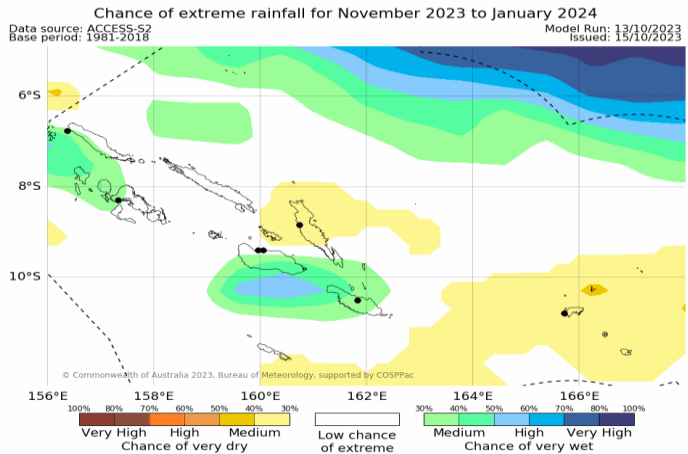
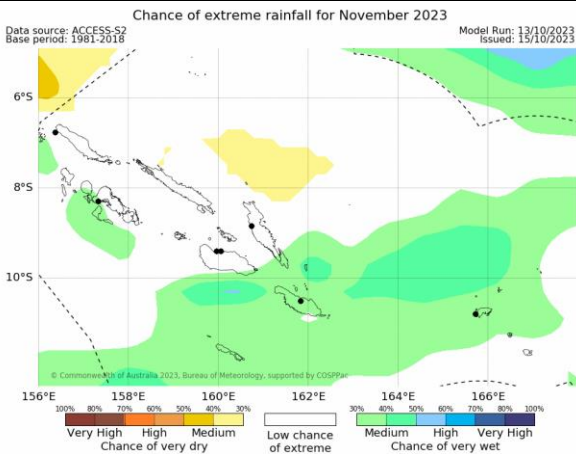
A medium chance of very wet condition is likely for Munda, Kirakira, Lata and Tinggoa.

**November 2023 to January 2024:**

A medium chance of very dry condition is likely for Auki and Lata.

**Rainfall Outlooks for October and October to December 2023**

Status		1-month Outlook November 2023	3-months Outlook November 2023 to January 2024
Chance of Very Wet	Very High		
	High		
	Medium	Munda, Kirakira, Lata and Tinggoa	Munda, Taro, Kirakira
Low chance of extreme		Auki, Henderson, Honiara and Taro.	Honiara, Henderson and Tinggoa
Chance of Very Dry	Medium		Auki and Lata
	High		
	Very High		



## Rainfall status

Estimates of moisture/water stress are based on recent rainfall compared with historical observations using the Percentile (Decile) Index. The Percentile Index is used to assess the rainfall status from the MSWEP dataset. MSWEP is a global precipitation product that combines rain gauges, satellite and reanalysis data to a 0.1° resolution. Seriously Dry is defined as drought assessed by rainfall data only. A site is assigned 'No Alert' when rainfall has been near normal or slightly above or below normal for the period(s) in question. The 3-, 6- and 12-month timescales can accurately predict drought.

## Rainfall Outlook (month and season)

The chance of extremes outlook maps presents the likelihood of Very Wet or Very Dry conditions. They are displayed by the chance that the outlook will result in rainfall in the top or bottom 20% of historical observations for the selected outlook period. Where there is white shading, it is less likely there will be either Very Wet or Very Dry conditions, rainfall is likely to be close to normal in this case. A very high chance of Very Dry (Very Wet) conditions is associated with the highest likelihood of rainfall being in the lowest (highest) 20% on record. A medium chance of Very Dry (Very Wet) conditions is associated with a lower but reasonable chance of rainfall being in the lowest (highest) 20% on record. The outlooks have been produced using the Australian Bureau of Meteorology ACCESS-S2 model.

## Glossary

1. **ENSO** - El Nino Southern Oscillation.
2. **La Nina** – extensive ocean cooling at the Central and Eastern Pacific – associated with wetter than normal conditions.
3. **El Nino** – extensive ocean warming the Central and Eastern Pacific – associated with drier than normal conditions.
4. **Past Rainfall** – rainfall that are observed in the past 1, 3, 6 and 12 months.
5. **Quintile** – base on a chance of extreme rainfall (very dry or very wet) using 5 category predictions.
6. **Very Dry** – rainfall in the lowest 20% of the historical record for that location and time period.
7. **Very Wet** – rainfall in the highest 20% of the historical record for that location and time period.
8. **Seriously Dry** – rainfall in the lowest 10% of the historical record for that location and time period.
9. **Seriously Wet** – rainfall in the highest 10% of the historical record for that location and time period.
10. **Chance of Very Dry** – percent chance of rainfall in the lowest 20% of the historical record for that location and month/season.
11. **Chance of Very Wet** – percent chance of rainfall in the highest 20% of the historical record for that location and month/season.
12. **Medium, High and Very High** – refer to the percent probability level where Very High has the highest confidence and represents the range 70% and above.

---

**Contact the Solomon Islands Meteorological Service for further information.**

The Director  
Solomon Islands Meteorological Service Division  
Ministry of Environment, Climate Change, Disaster Management and Meteorology  
P.O Box 21  
Honiara  
SOLOMON ISLANDS  
Phone: 24241 Fax: 23029  
Email: david.hiba@met.gov.sb  
**Website: <http://www.met.gov.sb>**