



**REPUBLIC OF MALAWI**  
**MINISTRY OF NATURAL RESOURCES**  
**DEPARTMENT OF CLIMATE CHANGE AND METEOROLOGICAL SERVICES**  
**STRONG EL NIÑO IMPACTS OVER MALAWI**

**What is El Niño?**

El Niño is a climate phenomenon characterized by **unusually warm** sea surface temperatures in the central and eastern tropical Pacific Ocean. It alters global atmospheric circulation patterns and significantly influences weather conditions around the globe. It is largely associated with below normal rainfall in South Africa and above normal rainfall in Eastern Africa. Apparently, Malawi lies in between, hence the impact varies in each season.

**Historical Influence of Strong El Niño Events on Malawi and Major Weather Impacts in Malawi**

The previous strong El Niño years are **1982/83, 1997/98, 2015/16, and 2023/24**. The impacts have been different but generally the seasons were associated with;

**Seasonal onset:** delayed and erratic coupled with false onsets were experienced over most areas of the country.

**Prolonged dry spells:** the number of consecutive dry days and spells largely increased during strong El Niño events.

**Extreme weather events:** Occurrence of sporadic intense rainfall were also experienced especially in Central and Southern parts of the country.

**Seasonal total rainfall amounts:** strong El Niño events often suppress rainfall over much of Malawi, particularly during the main agricultural season (November–March). There is **12%** chance of below normal rainfall during October-December and the risk increases to **62%** during January-March sub-season.

**Warmer than normal temperatures:** El Niño conditions are frequently linked to warmer than usual temperature conditions, that exacerbates the impact of dry spells.

**Potential Impacts:**

**Agricultural and food security impacts:** Agriculture in Malawi is highly rain-fed and therefore vulnerable to El Niño-induced rainfall deficits.

Potential impacts include reduced maize and other crop yields, increased crop failure risk, reduced household income, and increased food insecurity and humanitarian needs. **For instance, during 2023/2024 season maize production dropped by 22.7% as per Agricultural Production Estimate Survey. Consequently 4.2 million Malawians faced high acute food shortage as per Malawi Vulnerability assessment report of July 2024.**

**Water resource stress:** reduced rainfall leads to declining water availability in rivers, reservoirs, and groundwater systems consequently leading to reduced water shortages for domestic and irrigation use, and increased competition for water resources.

**Areas commonly most affected:**

Southern Malawi – High risk: **The region requires a dual-proactive planning: preparedness for below normal rainfall and prolonged dry spells alongside resilience measures for sudden intense downpours.**

Central Malawi- Significant risk: **The region needs contingency planning that account for both extended dry spells and isolated intense rainfall events.**

Northern Malawi – Moderate risk: **Major concern for this region is early season (October-December) drought risk that may disrupt the optimal planting window.**

While the analysis draws on historical strong El-Niño events, every season remains unique. Therefore, a comprehensive seasonal outlook for 2026/2027 season will be released in September where all the factors that influence Malawi weather will be factored in.

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