

Update on the 2026 Seasonal Forecast for West Africa and the Sahel, October, 2026

AGRHYMET RCC-WAS Technical Note No. 4: Withdrawal of the monsoon in the Sahel and concentration of rains towards the Gulf of Guinea, against a backdrop of strong El Niño

- The end of the rainy season is expected to be contrasted in West Africa and the Sahel, with rainfall deficits in the west and wetter conditions in the central and eastern part, in a context of strong El Niño.
- The gradual withdrawal of the monsoon should boost the onset of the dry season in the Sahel and the concentration of rainfall towards the Gulf of Guinea.
- Above-normal temperatures are expected to persist over much of the region, increasing the risk of water and heat stress, while localized flooding remains possible.
- Strengthening agro-hydro-climatic monitoring, early warning systems and anticipatory measures remains essential to limit the impacts on populations, agriculture and water resources.

Introduction

The 2026 rainy season in West Africa and the Sahel is taking place in a particularly dynamic climatic and oceanic context, marked by significant sea surface temperature anomalies across several tropical ocean basins. The maintenance of an El Niño in the equatorial Pacific, the evolution of the Indian Ocean Dipole (IOD) and the warming observed in the tropical North Atlantic and the Mediterranean Sea are competitively influencing tropical

atmospheric circulation, moisture transport and the evolution of the West African monsoon.

At the end of the rainy season in the Sahel, the monitoring of these oceanic forcings is of paramount importance in order to assess rainfall, hydrological and temperature forecasts for the coming months. In this context, AGRHYMET RCC-WAS has updated its seasonal forecasts in September 2026 for the periods October-November-December (NDO), November-December-January (NDJ) and 2026/2027, using an objective approach that integrates recent observations and results from the main climate prediction systems.

This technical note analyses the current state of the main ocean basins and their likely evolution, and then presents the outlook for the remaining period of the 2026 season in terms of precipitation and temperature. It aims to provide regional services, as well as stakeholders in climate-sensitive sectors, with updated information to strengthen the monitoring, preparedness and management of hydroclimatic risks.

Observed precipitation conditions

From 10 April to 6 October 2026, the rainfall situation in West Africa and the Sahel is characterized by a high spatial variability in rainfall, with alternating deficit, normal and surplus conditions (Figure 1).

- **Western Sahel:** contrasting conditions with localized deficits in Mali and localise above normal conditions in Mauritania and Senegal.
- **Central Sahel:** Rainfall is generally close to normal to above normal in Burkina Faso, western Niger and south.
- **Eastern Sahel:** particularly marked by deficits in Chad, eastern and north-central Niger.
- **Gulf of Guinea countries:** conditions were generally close to normal to locally above normal, with some deficits in Guinea, Sierra Leone and Liberia.

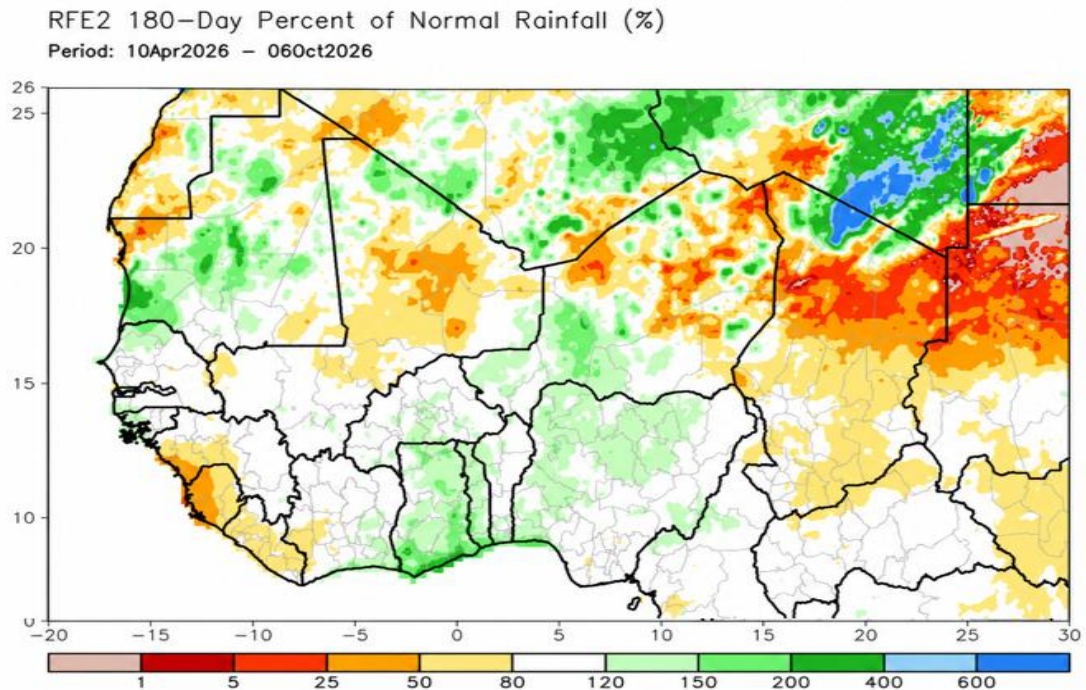


Figure 1: Total precipitation is compared to the 1991–2020 normal in West Africa and the Sahel as of 10 October (Source : RFE2)

Evolution of El Niño and major ocean basins

The current configuration of sea surface temperature (SST) anomalies, for the period from 6 September to 3 October 2026, highlights an oceanic situation characterized by a marked warming of the central and eastern equatorial Pacific, positive anomalies in the North tropical Atlantic, the Mediterranean and the Indian Ocean.

In the equatorial Pacific, warm anomalies extend from the central Pacific to the South American coasts. The strongest anomalies, locally reaching +3 to +4 °C. This situation confirms the continuation of a strong El Niño episode. This is likely to significantly modify the tropical ocean and atmospheric circulation, the location of the main areas of high convection and the interactions between the Pacific Ocean and other tropical regions. For West Africa and the Sahel, these changes can affect the upper-level circulation, the convergence of humidity and the spatial distribution of precipitation. However, the regional monsoon response does not depend only on ENSO and can be significantly modulated by the conditions observed in the Atlantic, Mediterranean and Indian Oceans.

In the tropical Atlantic, SSTs remain globally above the 1991-2020 normal. Positive anomalies of the order of +0.5 to +1.5 °C, locally larger, are observed over a large part of

the tropical and northern subtropical Atlantic. Conversely, in the equatorial Atlantic and the Gulf of Guinea, anomalies are generally weaker and spatially more heterogeneous, with several areas close to normal.

The **Mediterranean** Sea also has significant and relatively widespread positive anomalies, especially in its central and eastern parts, with values that can locally reach about +1 to +2 °C. The persistent warming of the Mediterranean can enhance evaporation and increase the amount of water vapour available in the lower atmospheric layers.

In the Indian Ocean, SST anomalies are also mostly positive, but with a relatively heterogeneous spatial structure.

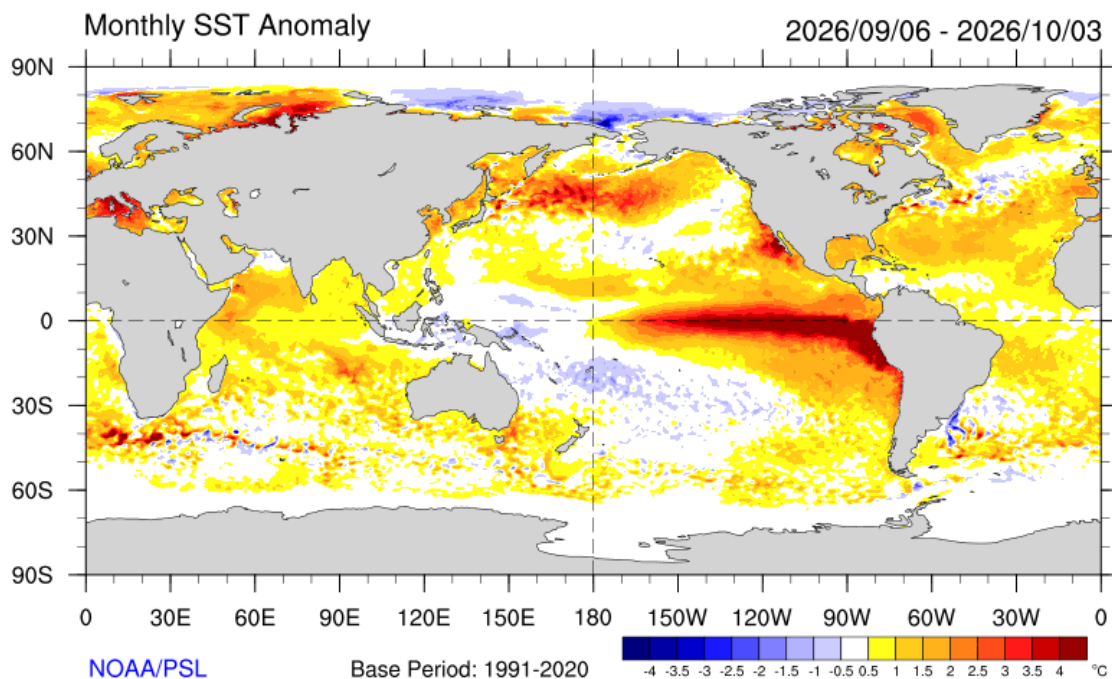


Figure 2: Sea surface temperature anomalies from 06 September to 03 October 2026 compared to the 1991–2020 reference period (Source: NOAA/PSL)

Outlook for the remainder of the 2026/2027 rainy season

The consolidated seasonal forecasts, initialized in September 2026, show consistency with the gradual retreat of the monsoon and rainfall signal to the coastal regions of the Gulf of Guinea during the October–November–December (OND) 2026 and November–December–January (NDJ) 2026/2027 seasons.

The October–November–December (OND) 2026 season is expected to be characterized by a marked spatial contrast between the west, where a drier signal is expected, and the

center, and the east, where conditions would be more favorable for near-to above-average precipitation.

- In the western part of the region, below-average rainfall is expected in parts of Senegal, Guinea, Sierra Leone and Liberia. This deficit signal could reflect a faster decrease in rainfall and a relatively early end to the rainy season in these areas.
- In southern Mali, Burkina Faso, northern Côte d'Ivoire, Ghana, Togo and Benin, cumulative rainfall is expected to be generally close to average to locally above near normal.
- A clearly wet signal is also expected over a large part of central and northern Nigeria, as well as locally over parts of the Gulf of Guinea.

For the November–December–January (NDJ) 2026/2027 season, climatic conditions will be mainly marked by the gradual withdrawal of the West African monsoon and the installation of the dry season in the Sahel and Sudanian areas. Rainfall is therefore expected to be mainly concentrated on the coastal band of the Gulf of Guinea.

- In the western part of this coastal band, particularly in Guinea, Sierra Leone and Liberia, rainfall conditions are expected to be generally close to average;
- On the other hand, below-average rainfall is expected in central and eastern Nigeria, particularly in several areas of Ghana, Togo and Benin, and more pronounced in southern Nigeria.

For the temperature outlook, the OND 2026 season is expected to be warmer than normal over almost all of West Africa and the Sahel, with a particularly robust signal over the central and eastern Sahel. This configuration portends an increased risk of persistently high temperatures and heat stress, especially at the beginning of the dry season, with possible implications for health, agriculture, livestock, water and energy demand (Figure 5).

Consolidated Forecast OctNovDec-2026 (Initialized in September 2026)

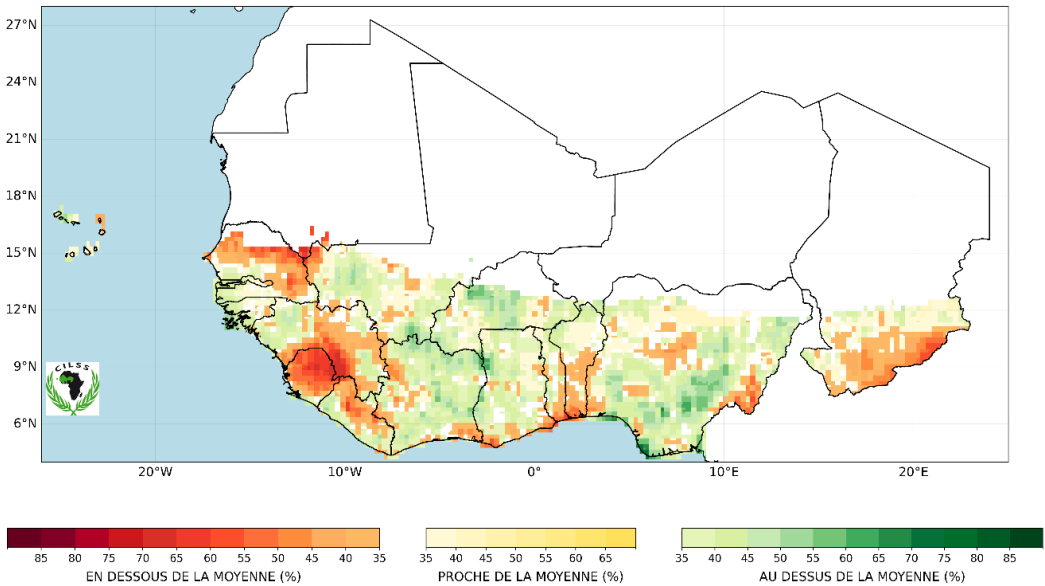


Figure 3 : Seasonal forecasts for October–November–December 2026

Consolidated Forecast NovDecJan-2026 (Initialized in September 2026)

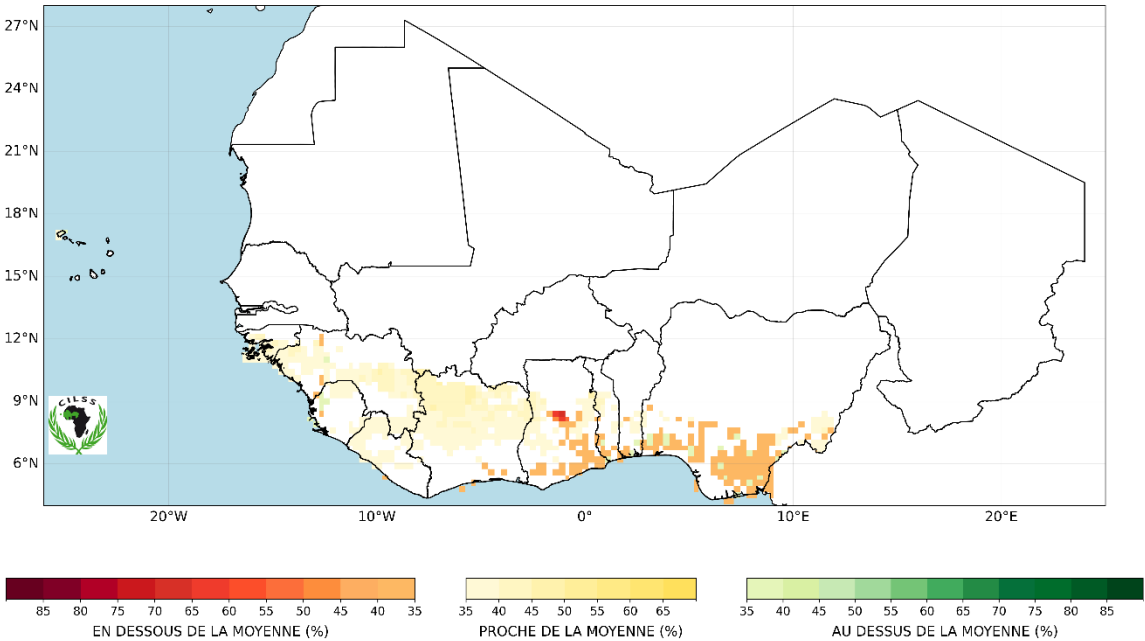


Figure 3 : Seasonal forecasts for November–December–January 2026/27

Consolidated Temperature Forecast OctNovDec-2026 (Initialized in September 2026)

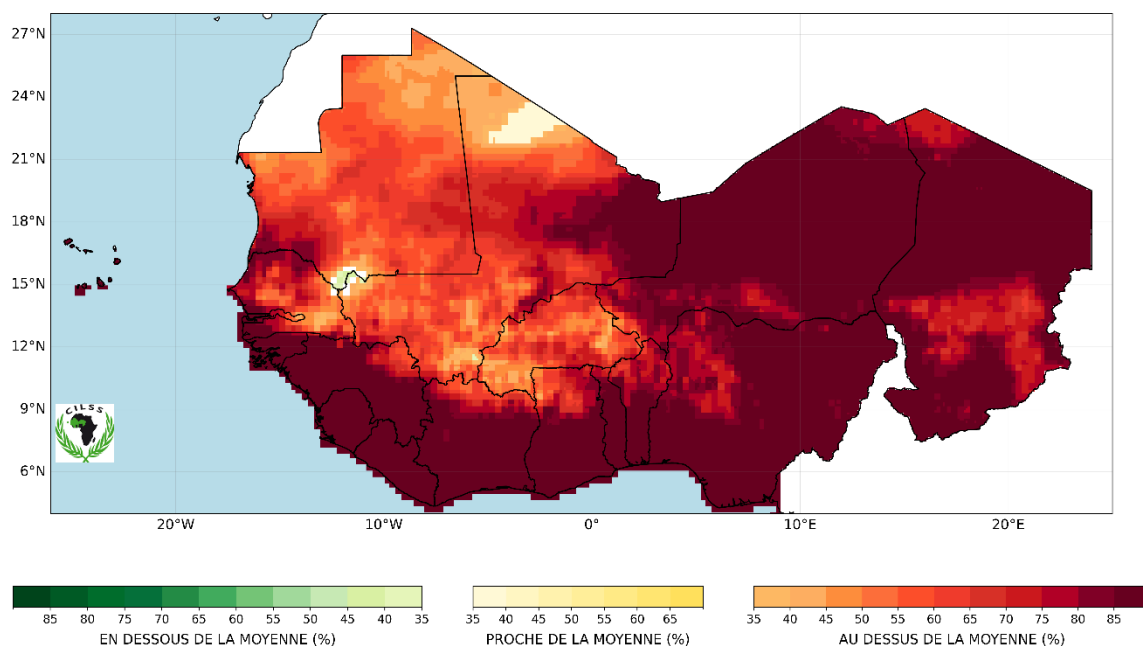


Figure 5: Seasonal temperature forecast for October–November–December 2026, AGRHYMET RCC-WAS September update

Potential impacts

The expected impacts in West Africa and the Sahel are expected to be contrasted across areas, due to the combined effect of the gradual retreat of the monsoon, rainfall anomalies and above-average temperatures.

- **Western region** : The expected rainfall deficit could lead to an earlier end to the rainy season, late-cycle crop water stress, lower soil moisture, pasture moisture, and water resources, and an increased risk of bushfires.
- **Central Sahel and Sudanian areas**: Near to above-average rains could be favorable for late-cycle crops, but late or intense rains could disrupt harvesting, drying, and storage, and maintain local flood risks.
- **Gulf of Guinea countries** : Localized rainfall surpluses during OND could maintain risks of runoff, flash floods and flooding. In NDJ, the expected deficit in Ghana, Togo, Benin and especially southern Nigeria could accentuate soil drying and irrigation needs.

- Higher-than-normal heat over much of the region could increase evapotranspiration, human and animal heat stress, pressure on water resources and energy demand.

Conclusion

The climate outlook for OND 2026 and NDJ 2026/2027 points out a contrasting end to the rainy season in West Africa, with a faster retreat of the monsoon in the west, wetter conditions in places in the centre and east, and then a gradual concentration of rainfall towards the Gulf of Guinea. At the same time, above-average temperatures are expected to persist over much of the region.

This pattern could lead to opposing impacts in different areas, ranging from water stress and early drying in deficit areas to the risks of intense rainfall and localized flooding in wetter areas. Persistent heat could also exacerbate pressures on water resources, agriculture, livestock, health and energy.

In this context, it will be essential to strengthen hydrometeorological and agrometeorological monitoring, including monsoon retreat, dry spells, intense rainfall, floods and heat events, in order to anticipate impacts and adapt preparedness and response measures.

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