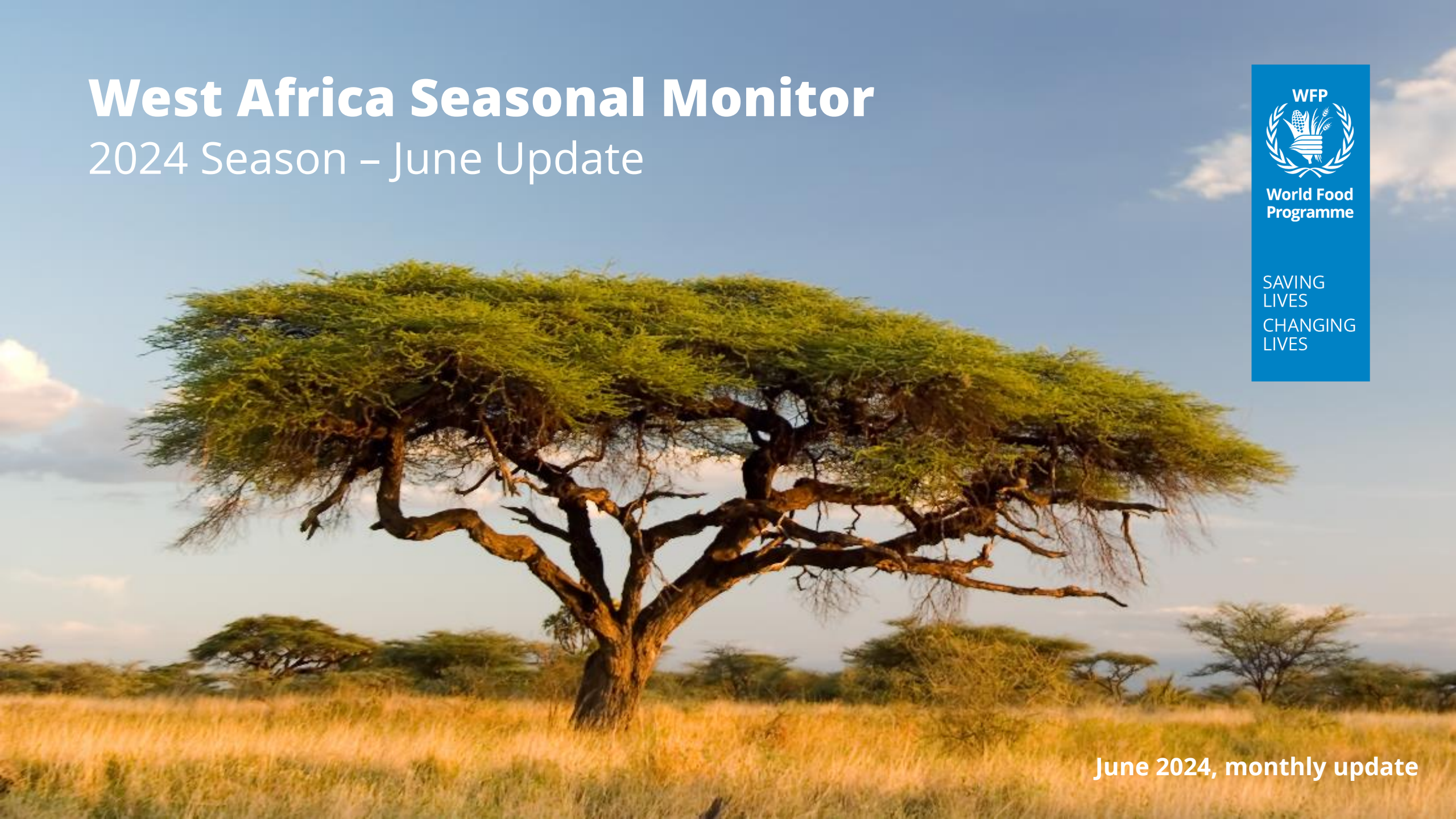
# West Africa Seasonal Monitor

## 2024 Season – June Update



World Food Programme

SAVING LIVES
CHANGING LIVES

**June 2024, monthly update**

# HIGHLIGHTS

- **By the end of June, the early stages of the rainfall season**, so far, in West Africa, **the 2024 rainy season** has been characterised by variable conditions. While deficits affected areas over western Sahel (Senegal, Gambia, southern Mauritania, western Mali), central western Niger, eastern Sahel (Southern &western Sahel Chad), as well as coastal countries (Guinea Bissau, western Guinea, Sierra Leone, south-eastern Liberia, central western Ghana, Cote d'Ivoire, northern Cameroon) and CAR, in the rest of the region, normal conditions prevailed with some pockets of above normal conditions (in central southern Niger, south-eastern Burkina Faso, south-western Mali, north-eastern Guinea and northern sahelian belt Chad).

- The rainfall deficits observed **at the beginning of the season**, have negatively impacted the **dynamics and growth of the vegetation**. This led to a tendency for delays in the start of the agricultural season across the region and below average vegetation cover. The vegetation deficits extended over a wide area in the Sahel from Senegal-western Mali across Burkina Faso and northern Nigeria to southern Chad. Water points across the Sahel are generally dry or near dry by end of June. Only over central southern Niger, northern Nigeria and central southeastern Burkina Faso conditions are favourable.

- As erratic rainfall at **the start of the season** could negatively impact agricultural (sowing) and livestock activities, the progression of the rains, and particularly their spatial and temporal distribution should be monitored closely. It should be noted that these deficits are having a negative impact on livestock activities particularly over the Sahel, as it will further prolong the **pastoral lean season** for many areas affected by biomass deficits in 2023.

- **The short-term forecasts** indicate that by mid-July (20 July 2024), seasonal rainfall improvement will likely be observed across West Africa Region, in particular over the Sahel with widespread wetter conditions. If the forecasts are verified, we might see an alleviation of the rainfall deficits in these regions and the onset of more favorable conditions for the early stages of the growing season. However, areas over southern and south-western Senegal, Gambia, eastern Guinea Bissau, as well as eastern Liberia, south-western cote d'ivoire, southern coastal and central western Ghana and southern Cameroon could remain drier than average.

- **According to the 2024 PRESASS seasonal forecast**, is expected above average to average seasonal rainfall from May to September 2024 across the region while below average conditions is expected over Sierra Leone, Liberia, far south-east of Nigeria and the coastal part of Cameroon. Seasonal rains onset will likely be average to early in the western and eastern Sahel and late to average in the Central Sahel. Cessation dates are expected to be late to average. Short dry spells are expected at the beginning of the season in the western Sahel and long towards the end of the season across the Sahelian region.

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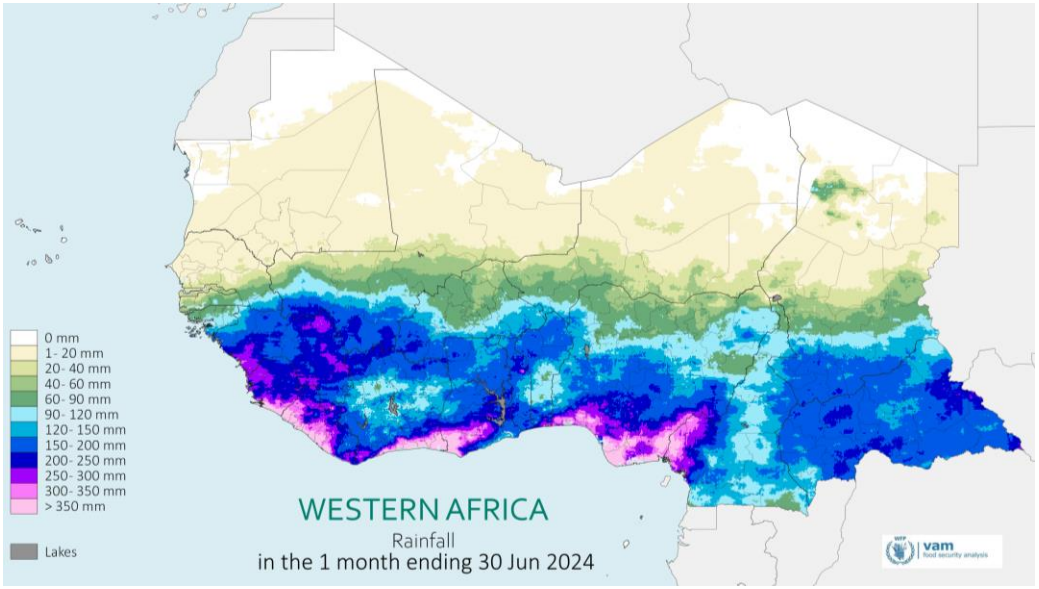
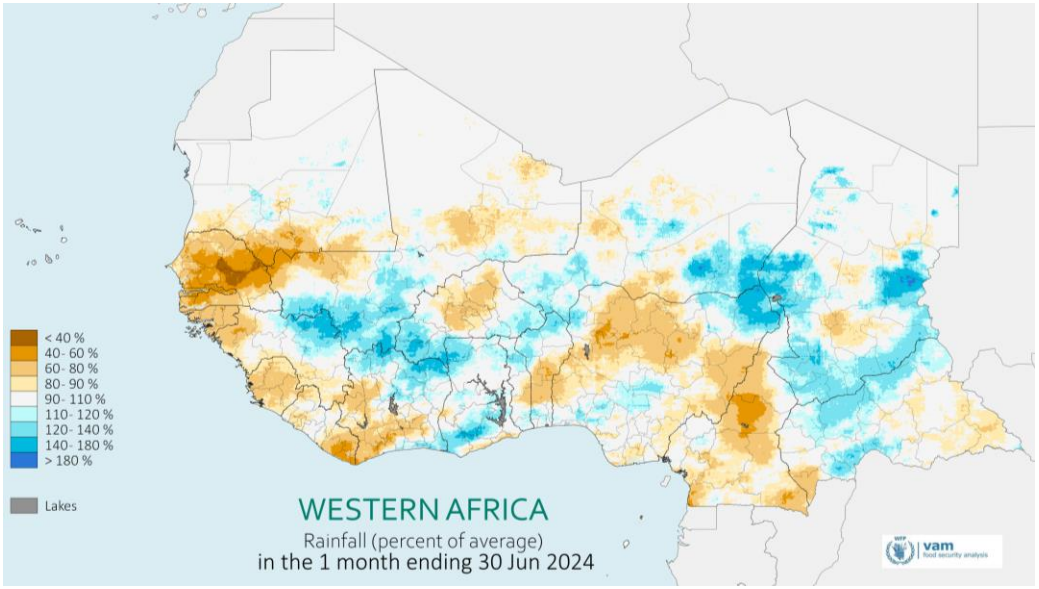
# LATEST DEVELOPMENTS : RAINFALL PATTERNS (1-30 JUNE 2024)




*The **map to the left** shows the **total rainfall received** over the last month (1-30 June 2024), based on CHIRPS satellite rainfall estimates. Areas highlighted in light green have received little rainfall, while areas in dark blue or pink have received moderate to intense rains.*




*The **map to the right** shows the **rainfall anomaly** over the last month (1-30 June 2024), expressed in percentage of the long-term average, based on CHIRPS satellite rainfall estimates. Areas in light to dark brown have received below average rains, while areas in dark blue have experienced above normal rainfall over the past month.*

**Cumulative rainfall:**

- Over the course of the last month (1-30 June 2024), the seasonal rains progressed from the southern parts of the region towards the north of the region.
- During this period, rainfall intensified in the region. Moderate rainfall (up to 90 mm) was received over the southern parts of the Sahel, with lighter rainfall further north.
- In coastal areas, heavier rainfall (over 150 mm) was recorded, particularly in coastal areas from Guinea through to Nigeria as well as CAR.
- Overall, in June 2024, the most important seasonal rainfall was recorded in the Mano River countries (Guinea, Sierra Leone, Liberia, southern Cote d'Ivoire), in the Gulf of Guinea (in Ghana, Togo, Benin, southern Nigeria) as well as in CAR. Lower seasonal rainfall amounts were recorded over Cameroon.

**Rainfall anomaly:**

- Compared with the long-term average, mixed conditions continued to characterize the West Africa region in June.
- The western Sahel (Senegal, Gambia, northwestern Mali), central Sahel (central Burkina Faso, half central belt Niger extended to northern Nigeria) as well as over coastal areas in eastern Nigeria extended to Cameroon, Guinea- Bissau, western Guinea, Sierra Leone, southern and central western Cote d'Ivoire, central Benin, experienced below normal rainfall during the month of June.
- On the other hand, southern and (western and eastern sahelian) Chad, northern and central western CAR, , as well as western Burkina Faso neighbouring central Mali, western Mali, received above normal rains in June
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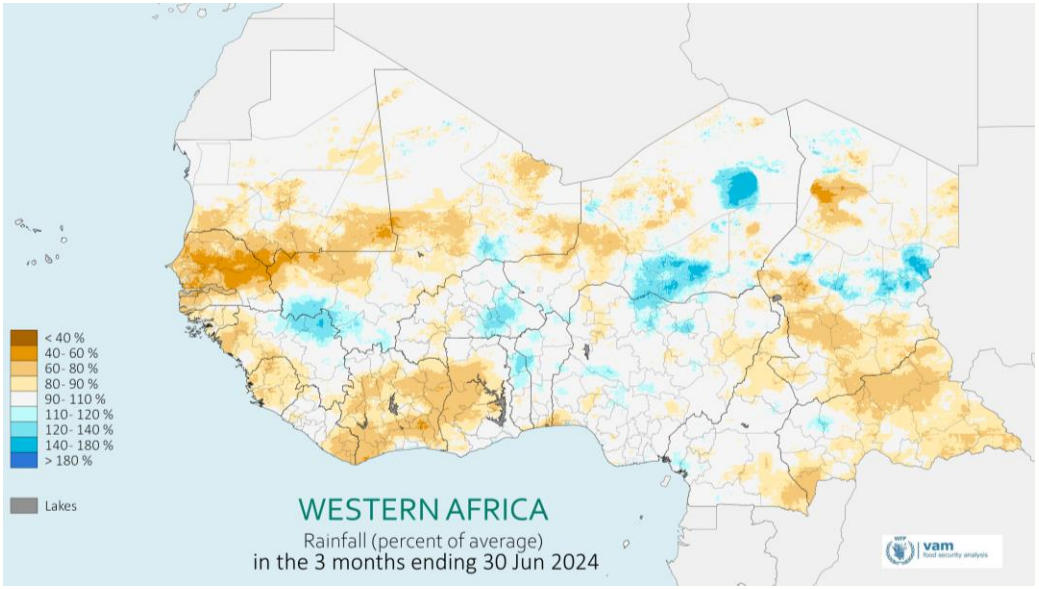
# THE SEASON OVERALL : APRIL – JUNE 2024




*The below **map** shows the **rainfall anomaly** over the last 3 months (April– June 2024), expressed in percentage of the long-term average, based on CHIRPS satellite rainfall estimates. Areas in light to dark brown have received below average rains, while areas in dark blue have experienced above normal rainfall over the past month.*

**Rainfall anomaly**:

- The early stages of the 2024 rainy season (April - June 2024) were characterised by mixed conditions.
- Areas over western Sahel (Senegal, Gambia, southern Mauritania, western Mali), western Niger, eastern Sahel (Southern & western Chad), as well as coastal countries (Guinea Bissau, western Guinea, Sierra Leone, south-eastern Liberia, central western Ghana, Cote d'Ivoire, northern Cameroon) and CAR, received below average seasonal rainfall.
- In the rest of the region, normal conditions prevailed with some pockets of above normal conditions (in central southern Niger, south-eastern Burkina Faso, south-western Mali, north-eastern Guinea and northern sahelian belt of Chad).

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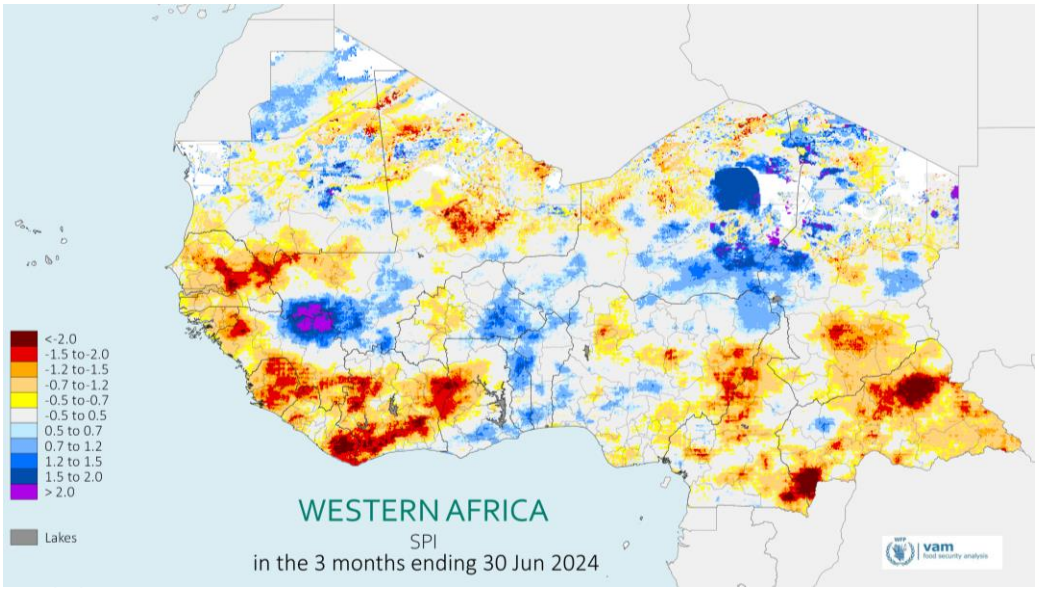
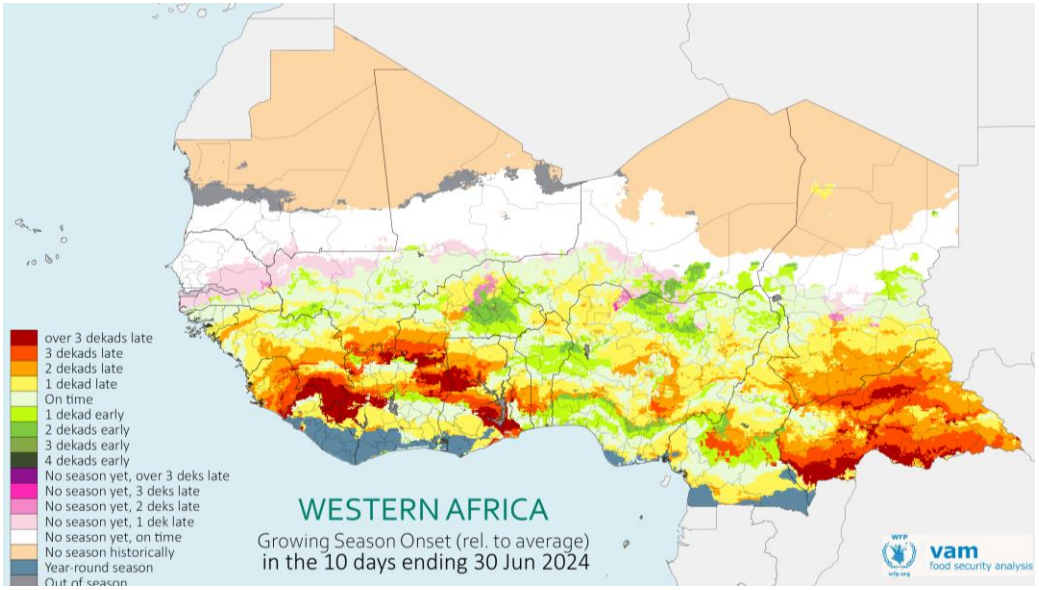
**Standard Precipitation Index (SPI):**

- The SPI reflects the similar patterns observed in the rainfall anomalies. The season so far in West Africa is characterised by mixed conditions.
- However, the more pronounced drought was located in eastern Senegal, eastern Gambia, north-western and south-eastern Guinea, Sierra Leone, western and eastern Liberia, western and southern Ghana, Cote d'Ivoire, as well as south-eastern Chad, northeastern CAR and areas neighbouring far central eastern Nigeria and central western Cameroon. For further information on the SPI, see this factsheet.



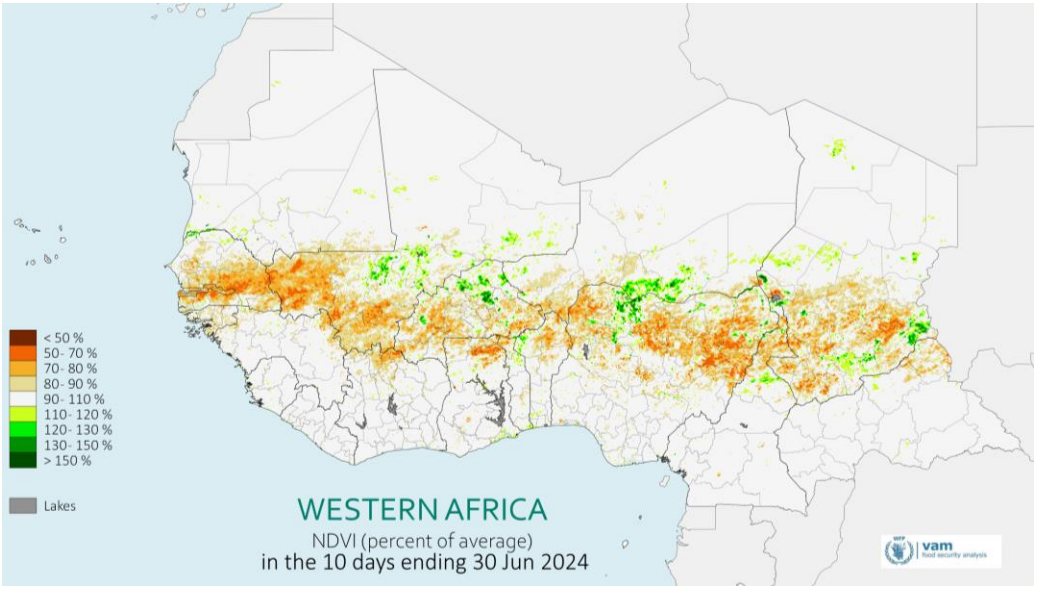

*The **map to the left** shows the **Standard Precipitation Index (SPI)** for the 3 months (April - June 2024), based on CHIRPS satellite rainfall estimates. This simultaneously shows the experience of wet conditions on one or more time scales, and dry conditions on other time scales. Blues - dark purple for wetter conditions , Yellow – Browns for drier conditions..*

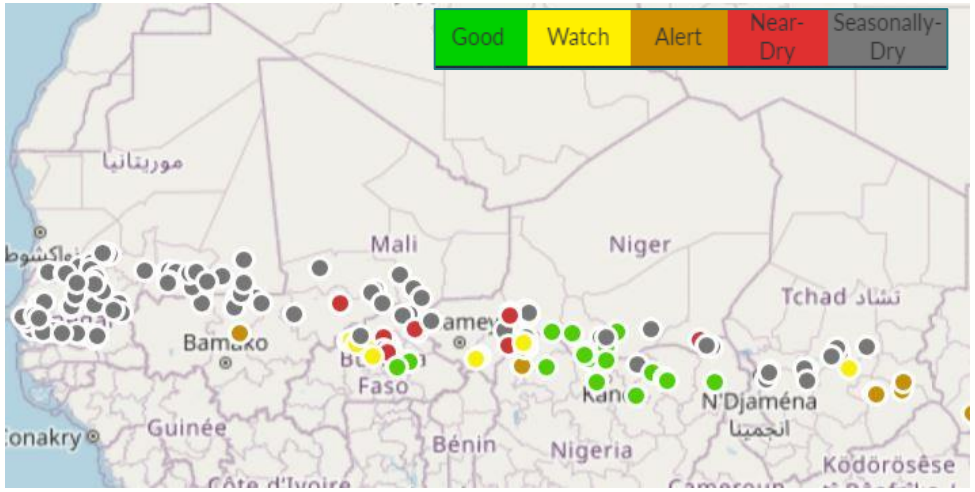
# GROWING SEASON CONDITION: ONSET, NDVI & WATER POINTS STATUS




*The **map on the left** shows the **start of the growing season anomaly** (as of 30 June 2024), using the vegetation phenological cycle to show the possible start of sowing activities. Areas with delays in the onset of growing season are highlighted in yellow and red, while areas where the season has started earlier than normal are presented in green.*

*The **map on the right** shows the vegetation anomaly as a percentage of the average (as of 30 june 2024), based on the MODIS NDVI. Green for above normal vegetation, yellows and browns for vegetation production deficit*




***Water point status (as of 12 July 2024):** Good: Higher than long term level (LTL), Watch: Between 50 to 100% of LTL, Alert: Between 3% and 50% of LTL, Near-Dry: Below 3% of LTL ( https://earlywarning.usgs.gov/fews/waterpoint/index.php)*

**Start of season:**

- The growing season onset map suggests that the 2024 season is characterized by mixed conditions mostly dominated by a late start of the season.
- In areas affected by a late start of the season (mapped in yellow to red above), over southern and northern Cameroon, most of CAR, southern Chad, central and southern Nigeria, northern and south-western Burkina Faso, Ghana, Cote d'Ivoire, Sierra Leone, southern Togo and Benin, most of Guinea, Southern Guinea Bissau, southern Mali, the delayed start of the season can be attributed to erratic and poor rains in the early stages of the season than usual season onset over more than 3 dekads.
- Areas mapped in purple over southern Senegal, most of The Gambia, western Mali, pockets in central Niger and central Chad, monsoon conditions were not favorable for the start of the agricultural season.

  Over the Nigeria, southern Cameroon, central Burkina Faso, northern Benin, pockets in southern Mali, an earlier than usual season onset of 1 to 3 dekads can be observed.

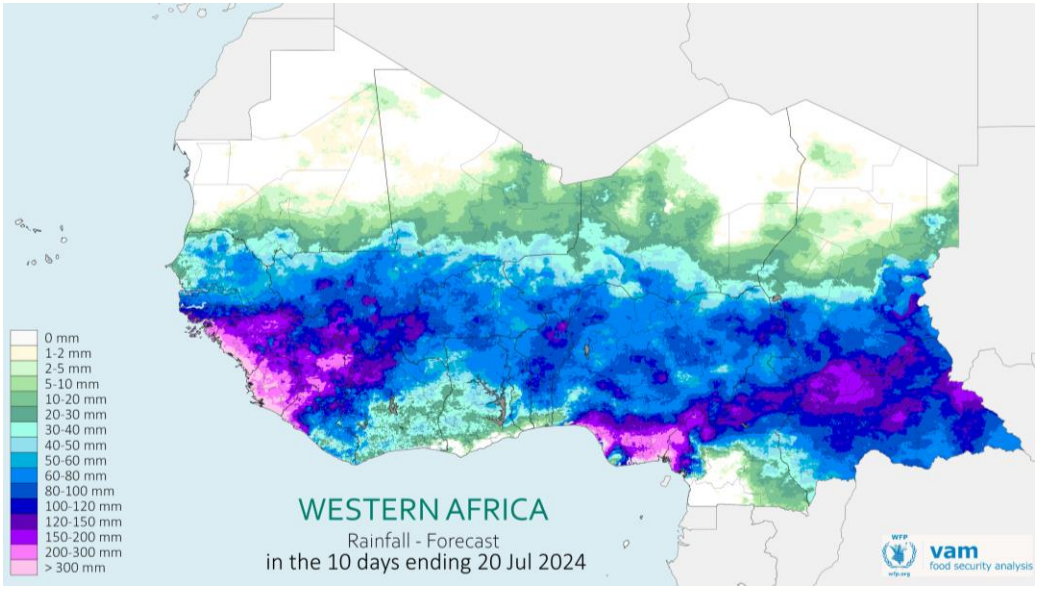
**Vegetation :**

- As a result of the mixed start of the rainy season characterized by erratic rainfall distribution, vegetation conditions are below average in most areas. The vegetation deficits are particularly pronounced over a wide area in the Sahel from Senegal across Burkina Faso and northern Nigeria to southern Chad in June.
- On the other hand, better than normal vegetation conditions can be observed in parts of central Mali, northern Burkina Faso, central Niger as well as northern Nigeria and south-eastern Chad.

**Water resources:**

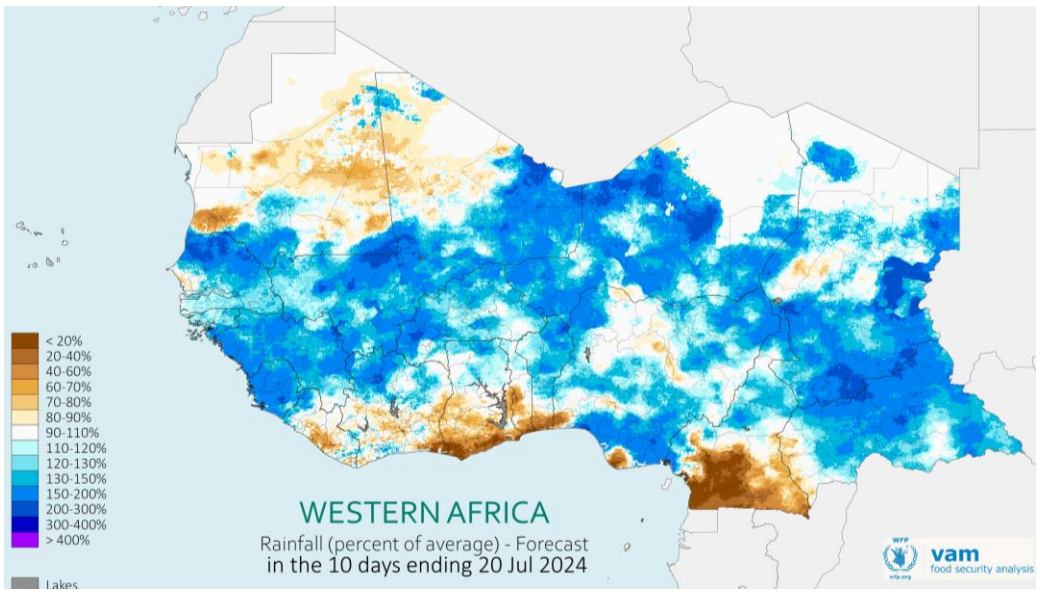
- Over most of the Sahel water points are generally dry or near dry at the end of June. Only over central Niger, northern Nigeria and southeastern Burkina Faso conditions are favourable.

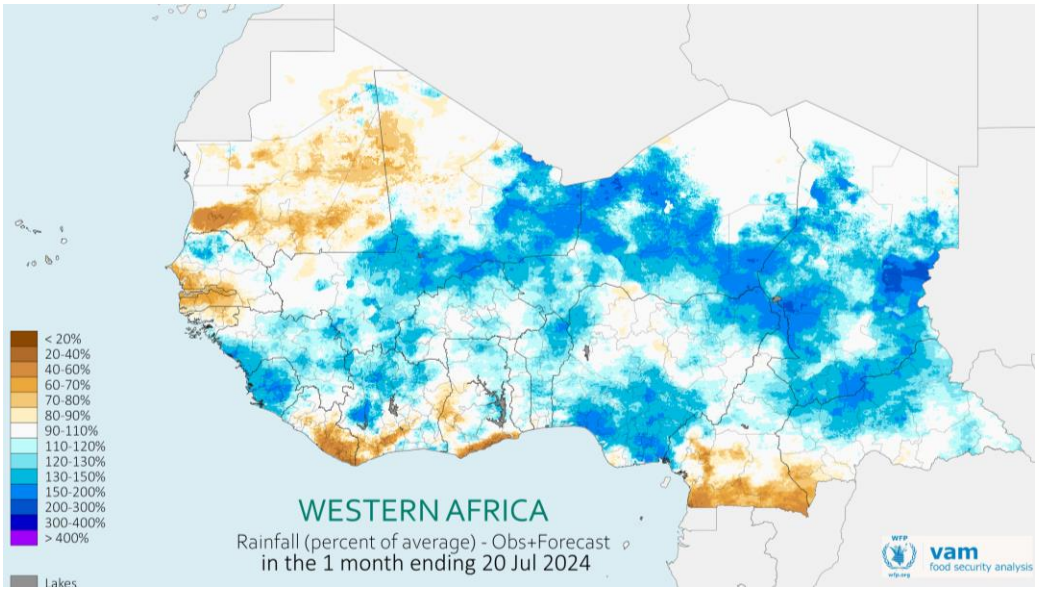
# THE SHORT-TERM OUTLOOK




*The **map on the left** shows the **short-range CHIRPS-GEFS forecasts** of the total rainfall expected for the upcoming dekad,. Blues for wetter than average conditions, browns for drier than average conditions.*

*The **map on the right** shows the **short-range CHIRPS-GEFS forecasts** for the upcoming dekad, expressed in percentage of the long-term average. Blues for wetter than average conditions, browns for drier than average conditions.*

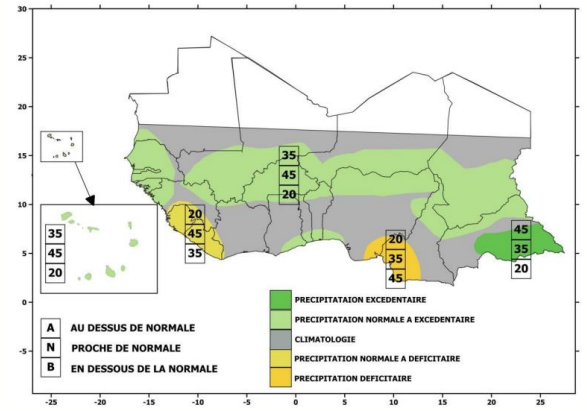


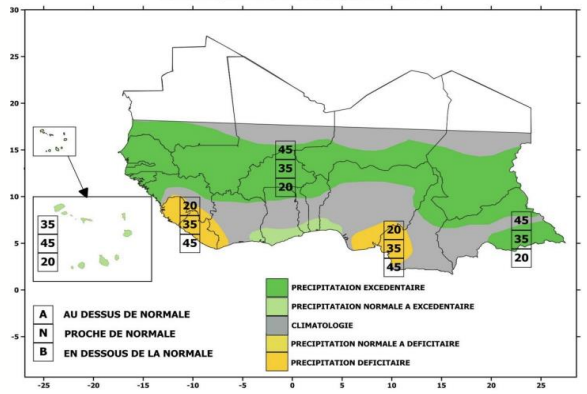

*The map to the below (left) shows the **short-range CHIRPS-GEFS forecasts in one-month** for the upcoming month, expressed in percentage of the long-term average. Blues for wetter than average conditions, browns for drier than average conditions.*

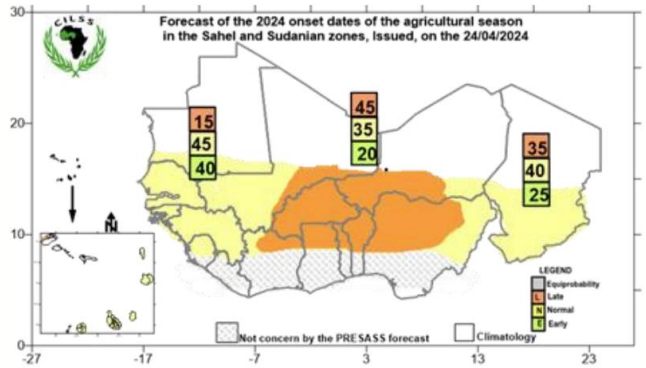
- Short range forecasts provide estimates of rainfall up to July 20, 2024. In mid-July, rainfall improvement will likely be observed across West Africa Region, in particular over the Sahel with widespread wetter conditions.
- If the forecasts are verified, we might see an alleviation of the rainfall deficits in these regions and the onset of more favorable conditions for the early stages of the growing season. However, areas over southern and south-western Senegal, Gambia, eastern Guinea Bissau, as well as eastern Liberia, south-western cote d'ivoire, southern coastal and central western Ghana and southern Cameroon could remain drier than average.

# SEASONAL FORECASTS: PRESASS, APRIL 2024



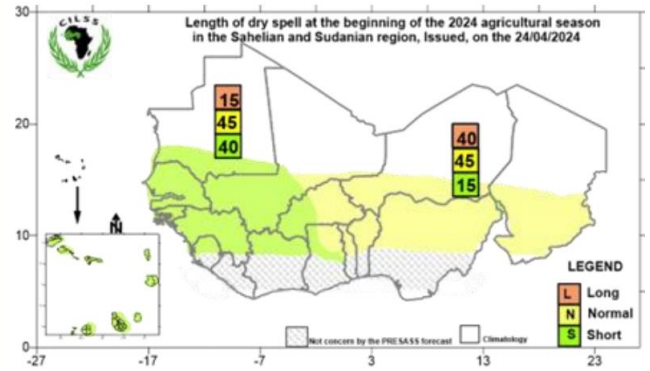

**According to the April 2024 PRESASS seasonal forecasts**, above average to average seasonal rainfall (in May-July 2024, map above) is expected in most of the Sahel belt (from Cabo Verde to Chad, coastal parts of Ghana, Togo, Benin and Southwestern Nigeria) while below average conditions is expected over Sierra Leone, Liberia, far south-east of Nigeria and the coastal part of Cameroon. Elsewhere conditions will likely be generally average. During June-July-August 2024 and July-August-September 2024 (Map below) average to above average seasonal rainfall is expected in the agricultural belts of Chad, Niger, Mali, Mauritania, Senegal, Gambia, Burkina Faso, Guinea Bissau and the northern parts of Guinea, Côte d'Ivoire, Ghana, Togo, Benin, Nigeria and Cameroon. Elsewhere, seasonal rainfall is expected to be average.

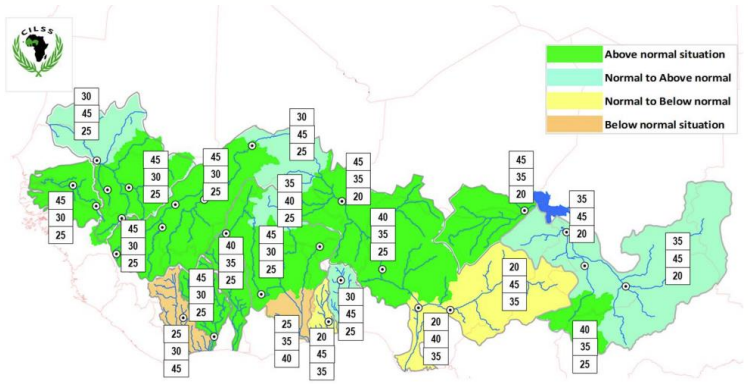



**Normal to early onset** of seasonal rains is expected (map above) over the western costal parts including Senegal, Gambia, Guinea Bissau, Guinea, northern Sierra Leone and southern parts of Mauritania and Mali while **a late to normal onset** of seasonal rains is expected in the central Sahel (southeastern Mali, Burkina Faso, the western half of the agricultural and pastoral strips of Niger), northeastern Côte d'Ivoire, northern parts of Ghana, Togo and Benin and northwestern Nigeria.

At **the beginning** of the season **short to average dry spells** are expected over southern Mauritania, half southern Mali, Senegal, Gambia, Guinea Bissau, Guinea, northern Sierra Leone and Côte d'Ivoire, northwestern Ghana and western Burkina Faso (map below). **Towards the end of the season**, **short to average** dry spells are expected over southern Mauritania, Senegal, Gambia, Guinea Bissau, Guinea, northern Sierra Leone, central Nigeria and northern parts of Benin and Togo.




*The **map above** shows the **river basin levels** expected in 2024. Green indicates above normal river levels, blue normal to above normal levels, yellow normal levels and orange below normal river levels compared to the long-term average.*

In terms of the **hydrological situation**, globally equivalent to above the average river levels are expected in all river basins of West Africa, except the Lower Niger, the Lower Volta, the Sassandra and the Mono. Specifically, are expected:

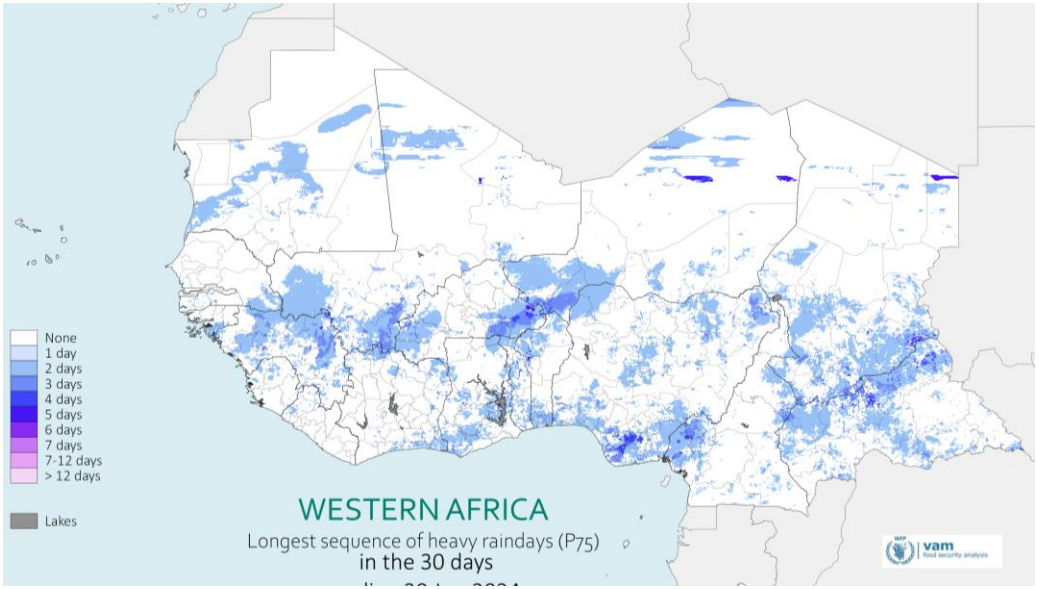
**Above-average** in the Gambia Basin, the Upper Senegal Basin (in Mali, Senegal and Guinea), the Upper Niger River Basin (in Guinea, Côte d'Ivoire and Mali), the Niger Inner Delta (in Mali), the Nigerien and Nigerian portions of the Middle Niger River Basin, the Komadougou Yobé, the Logone Basin, the Upper Volta Basin (in Côte d'Ivoire, Ghana, Togo and Burkina Faso), the Comoé (in Côte d'Ivoire and Burkina Faso) and the Bandama (in Côte d'Ivoire).

**Average to above average** in the lower Senegal River basin (in Senegal and Mauritania), the Malian and Burkinabe portions of the middle Niger River basin, the Chari basin and the Ouémé basin (Benin).

**Average to below average** in the lower Niger River basin, including the Benue River (in Nigeria) and the Mono basin (Togo and Benin), are expected to experience.

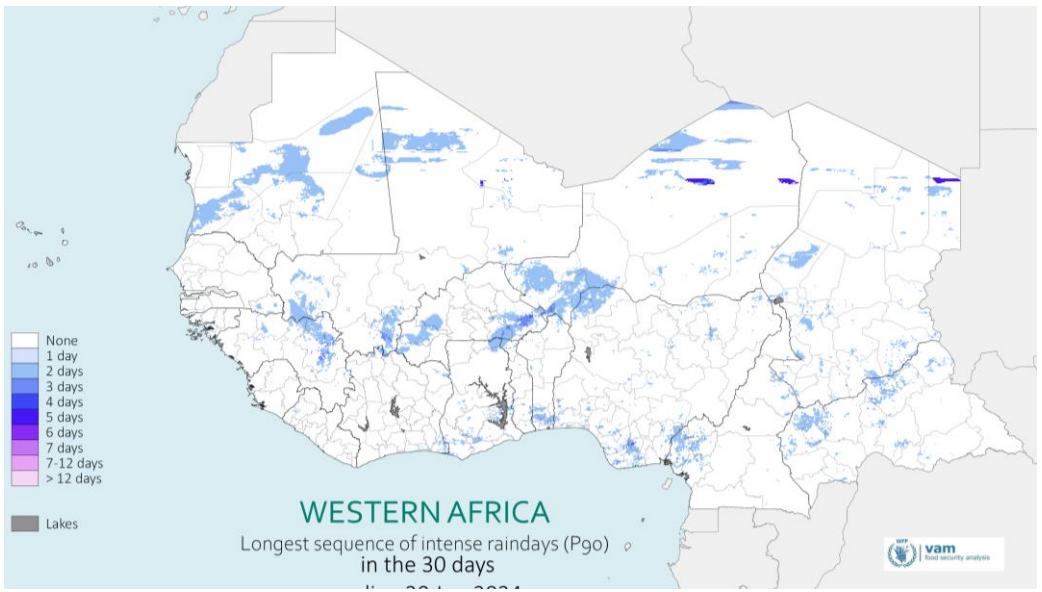
**Below average** in the Sassandra Basin (in Côte d'Ivoire) and the Lower Volta (in Ghana).

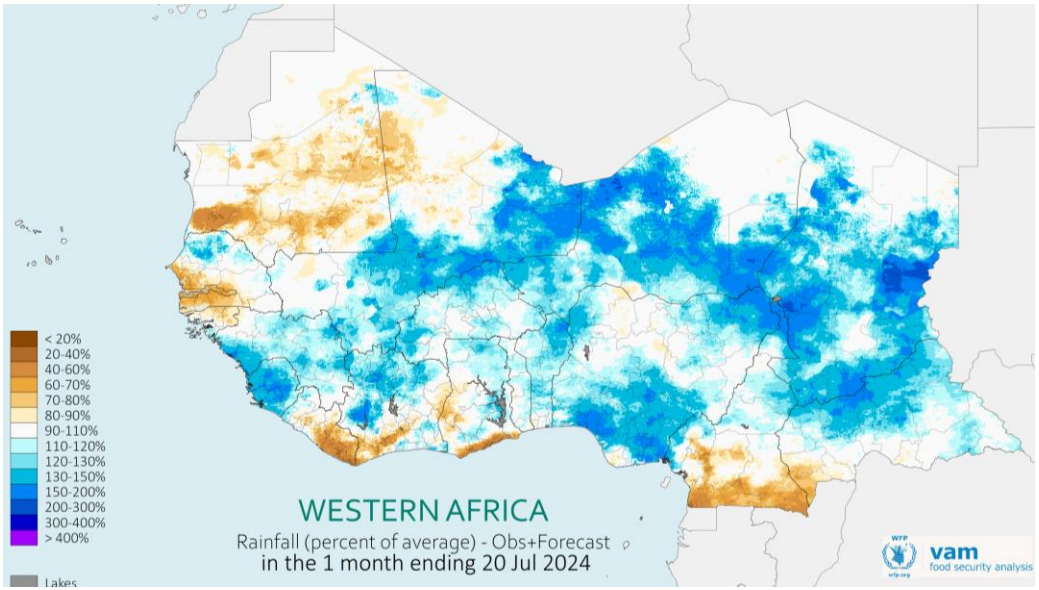
# AREAS OF CONCERN (FLOOD RISK): HEAVY & EXTREME RAINFALL, JUNE 2024




*The **map to the left** shows the **longest sequence of heavy raindays** over the past month (1-30 June 2024), based on CHIRPS satellite rainfall estimates. Areas highlighted in dark blue and purple have experienced longer sequences of intense raindays (defined as days with a 75th percentile of rain received) over the last 30 days.*

*The **map to the right** shows the **longest sequence of extreme raindays** over the past month (1-30 June 2024), based on CHIRPS satellite rainfall estimates. Areas highlighted in dark blue and purple have experienced longer sequences of intense raindays (defined as days with a 95th percentile of rain received) over the last 30 days.*




*The map to the right shows the **short-range CHIRPS-GEFS forecasts in one-month** for the upcoming month, expressed in percentage of the long-term average. Blues for wetter than average conditions, browns for drier than average conditions.*

**Heavy raindays:**

- Overall, the region experienced short to moderate sequences of heavy raindays (defined as days with a 75th percentile of rain received) during the month of June.
- In most other parts of the region, the sequences of heavy raindays remained relatively short (0-3 consecutive days). It is important to note that over the northern parts of the region, the rainy season has not yet started.

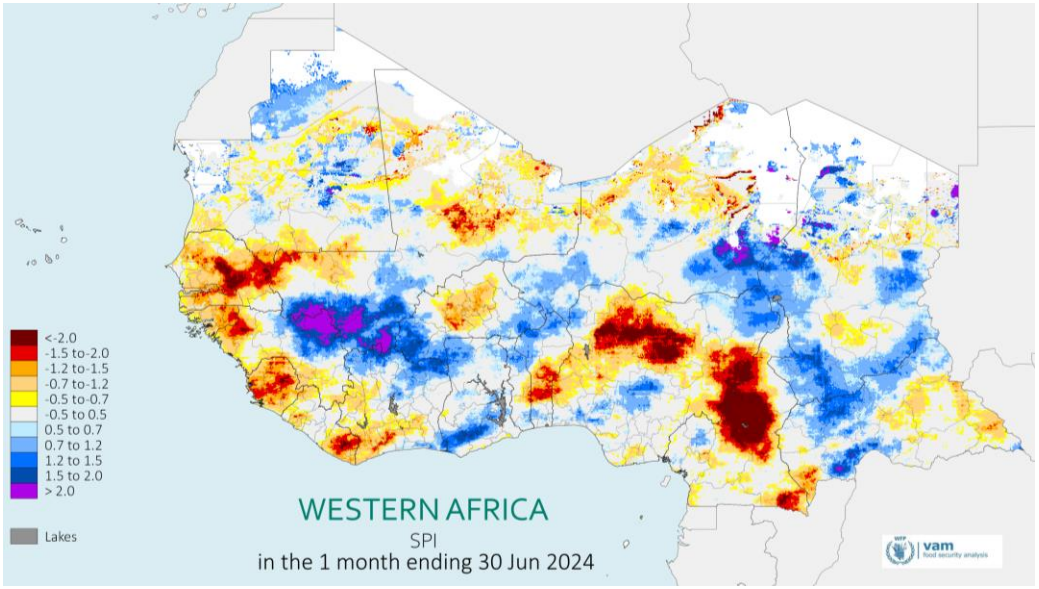
**Extreme raindays:**

- The occurrence of extreme raindays (defined as days with a 95th percentile of rain received) was relatively limited in June 2024.
- It is expected that the likelihood of extreme rainfall events, which can potentially lead to river floods and flash floods, increases as the rainy season progresses in the region.

**One month Forecast:**

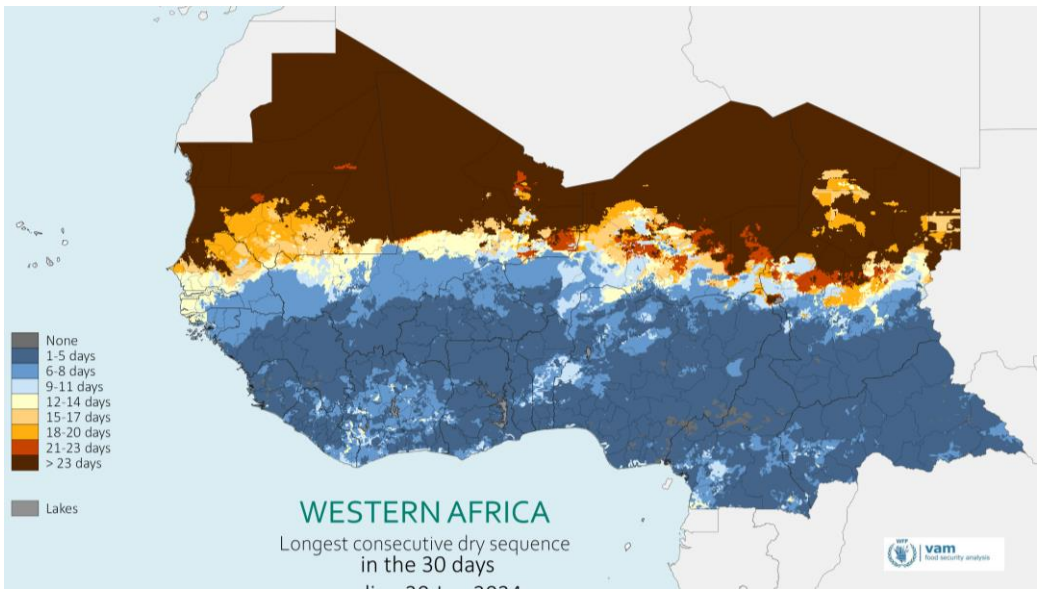
- In the month ending 20 July, forecasts suggest more favorable conditions over the region. Only areas over southern and south-western Senegal, Gambia, eastern Guinea Bissau, as well as eastern Liberia, south-western cote d'ivoire, southern coastal and central western Ghana and southern Cameroon could remain drier than average.
- This early-season situation in no way predicts the likelihood of flooding until mid- July.

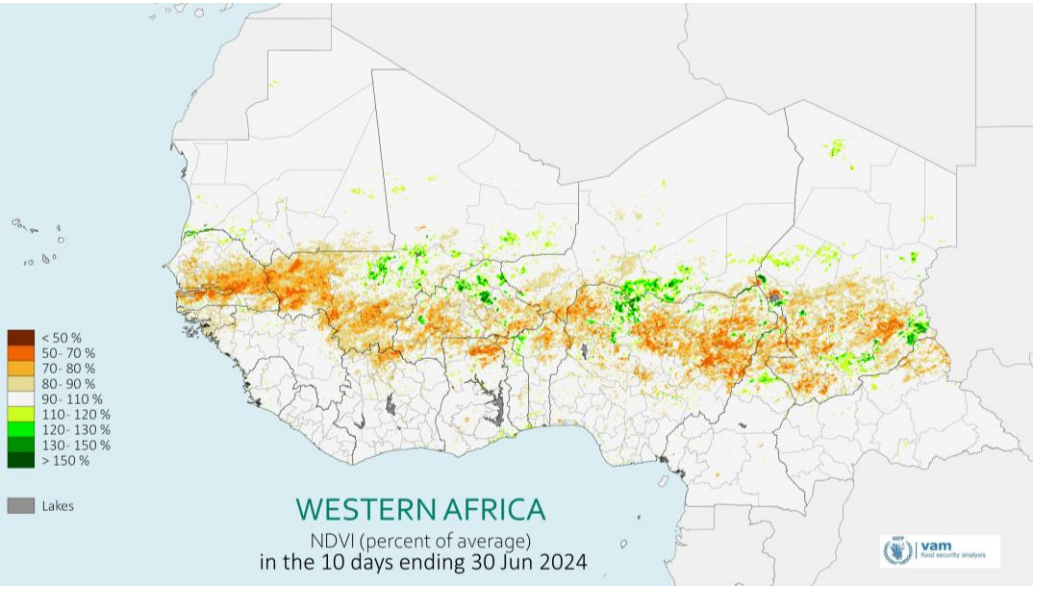
# AREAS OF CONCERN (DROUGHT RISK): SPI, DRY SPELLS & NDVI, JUNE 2024




*The **map to the left** shows the **Standard Precipitation Index (SPI)** for the last month (1-30 June 2024), based on CHIRPS satellite rainfall estimates. This simultaneously shows the experience of wet conditions on one or more time scales, and dry conditions on other time scales. Blues - dark purple for wetter conditions , Yellow – Browns for drier conditions.*

*The **map to the right** shows the **longest consecutive dry sequence** over the past month (1-30 June 2024), based on CHIRPS satellite rainfall estimates. Araes in blue have experienced shorter dry sequences, while areas in brown have experienced longer ones. Note that in some areas, this is linked to the fact that the season has not started yet.*




*The **map on the right** shows the vegetation anomaly as a percentage of the average (as of 30 June 2024), based on the MODIS NDVI. Green for above normal vegetation, yellows and browns for vegetation production deficit.*

**Standard Precipitation Index (SPI):**

- The monthly SPI for June 2024 suggests mixed conditions mostly dominated across the region.
- Dryer conditions can be observed over western parts of the region (Senegal, Gambia, southern Mauritania, Guinea Bissau, north-western Guinea), in central Sahel (northern Mali, central Burkina Faso), in coastal countries (Sierra Leone, Liberia, southern and western Cote d'Ivoire, central Benin, central western Nigeria, central Cameroon) as well as south-eastern CAR)

**Dry Sequences:**

- Over the southern parts of the region, dry spells were generally short (1-5 days).
- However, the southernmost areas of the Sahel as well as most of Cote d'Ivoire, central Benin, northern Nigeria experienced slightly longer dry sequences of up to 8 days.

**Vegetation :**

- vegetation conditions are below average. The deficits are particularly pronounced over a wide area in the Sahel from Senegal-western Mali across Burkina Faso and northern Nigeria to southern Chad

- While it is unlikely that these moderate dry spells had any significant impact on agricultural activities at this early stage of the season in the region, the progression of the rains, and particularly their spatial and temporal distribution should be monitored closely, as erratic rainfall at the start of the season could negatively impact sowing activities.
- However, it should be noted that these deficits might have a negative impact on livestock activities.

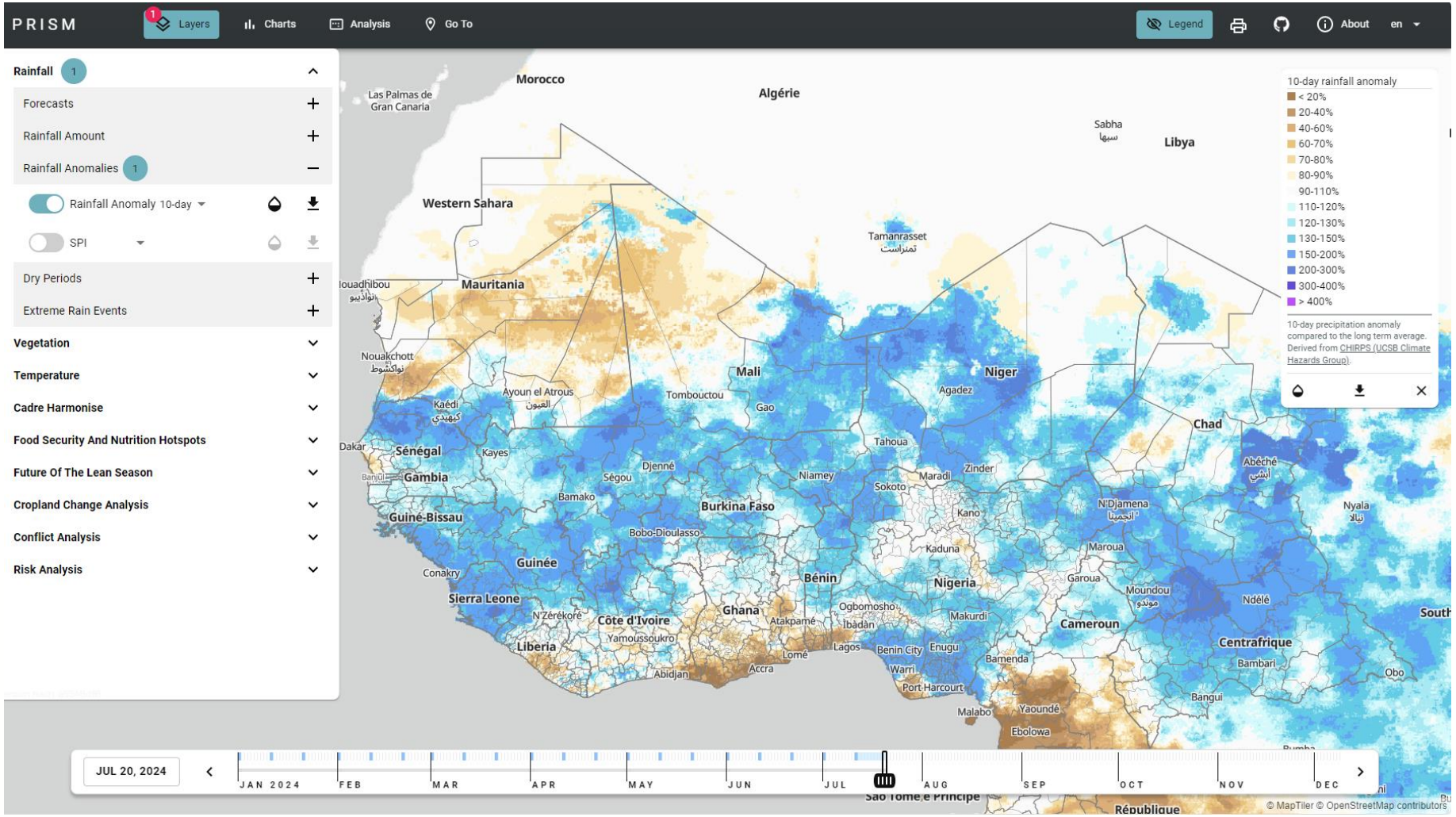
# THE PLATFORM FOR REAL-TIME IMPACT AND SITUATION MONITORING (PRISM)

RBD RAM is pleased to announce the launch of the **PRISM platform for West Africa**. PRISM allows users to **follow climate and hazard indicators in near-real time** and to conduct **analyses that combine hazard data with risk layers** – for instance, you can use the analysis feature to identify acutely food insecure areas that are experiencing drought conditions.

PRISM currently includes a series of **hazard layers** including data on rainfall amounts and anomalies, dry periods and extreme rain events, vegetation and land surface temperatures. In addition, the platform includes historical Ca**dre Harmonisé (CH) results from 2018** onwards, as well as other **risk analyses** such as WFP's Integrated Context Analysis (ICA) and the Multi-Dimensional Risk Analysis. WFP is working with regional and national partners to expand the datasets included in PRISM.

*You can **access the RBD PRISM Platfom** (internally and externally) by clicking on the following link:*

***https://prism.dakar.wfp.org/***.




WFP World Food Programme

**Data sources:**
Rainfall: CHIRPS, Climate Hazards Group, UCSB
Vegetation: MODIS NDVI, ESODIS-NASA

**Data Processing:**
RAM software components, ArcGIS, QGIS

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