

West Africa Seasonal Monitor

2020 Season



vam
food security analysis

World Food Programme, Regional Bureau Dakar

20-30 September 2020

Contents

1. Highlights.....	2
2. Latest Developments.....	3
3. Current Status.....	4
4. Seasonal Development.....	5
5. Focus areas	6
6. Seasonal Forecasts.....	7

Highlights

- Overall, late September (end of the rainy season in many areas across the Sahel), the rainy season across West Africa has been generally characterized by mostly adequate and well distributed rains, resulting widespread average to above average seasonal rainfall. These beneficial outcomes for the Sahel particularly were however countered by much drier than average conditions along the Gulf of Guinea coast ,from Liberia to southern Nigeria with Sierra Leone also affected. Over the next 3-5 days (2-6 October), moderate to heavy rainfall is expected in coastal countries (Guinea, Cote d'Ivoire and Ghana). This will potentially lead to flooding in low-lying areas and damages crop in some localized areas which are currently approaching their harvest time.
- A pattern of strongly above average vegetation emerged during September: this is particularly noticeable in the whole Sahel. It mostly results from increase and improvement in rainfall since late July, and wetter conditions in August and September. Agricultural areas benefitted from very good seasonal conditions. Good production prospects are certain this year in the region (in biomass and crops production). As result of good seasonal performance, water resources have been maintained at good level throughout the West African region. Overall they have reached their highest level.
- **According to PRESASS seasonal forecasts update in July, above average rainfall is expected** in Sahelian countries for the period July-August-September while rainfall amounts will be concentrated in the mid - season between mid-July and August. It emerges, the dry spells should be longer to normal over most Sudan-Sahelian belt in the second half of the season, including the heading, flowering and the crops ripening phases with high probabilities of late to normal end of season in agricultural areas of Sahelian countries except far northern Senegal, western Mali and the agricultural areas of Mauritania.
- However, **ECMWF** forecasts (for September–November 2020) indicate average to mostly near average condition in Sahel except Central Mali, Northern and SE Senegal, half western Mauritania and Burkina Faso. In the rest of the region, across the southern regions conditions will likely be below average to mostly near average except most of CAR, Southern Ghana and half northern Nigeria where **average condition rainfall is expected**. The two sets of forecasts are not currently consistent, with ECMWF being more pessimistic.

West Africa: Rainfall Season 2020

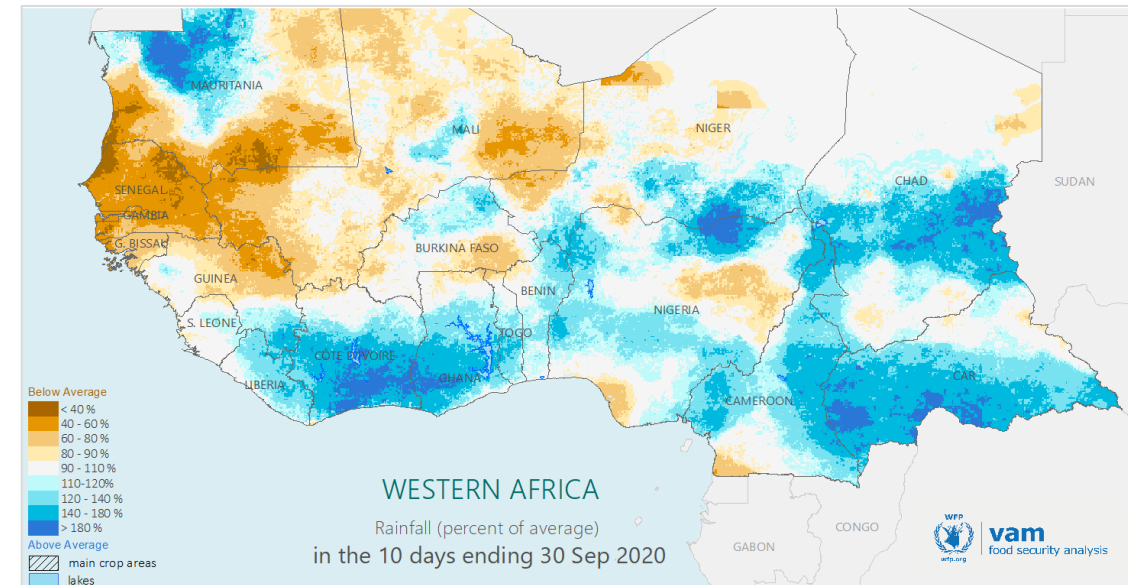
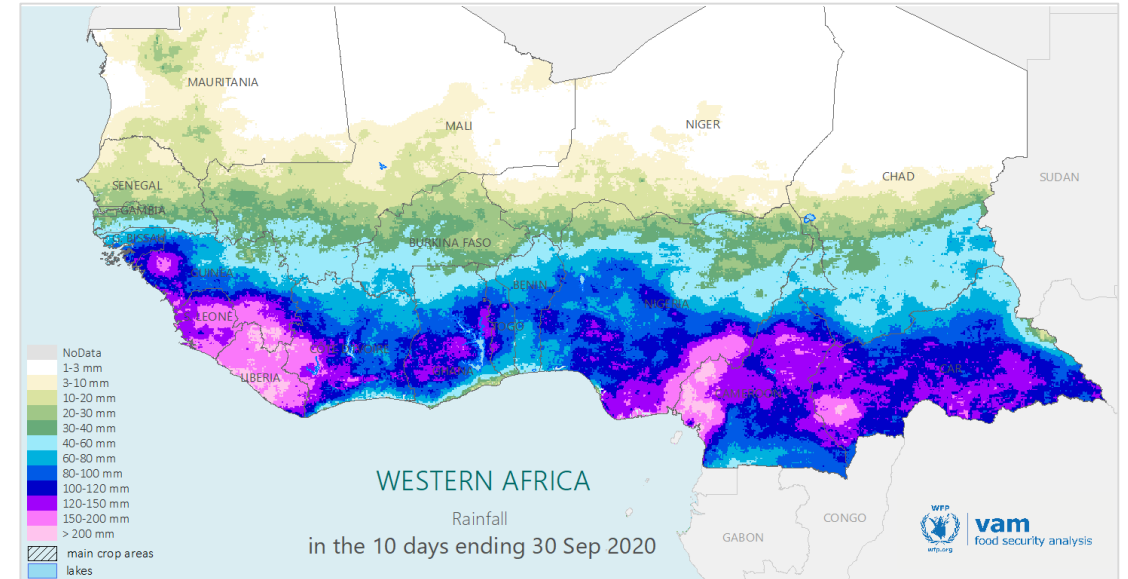
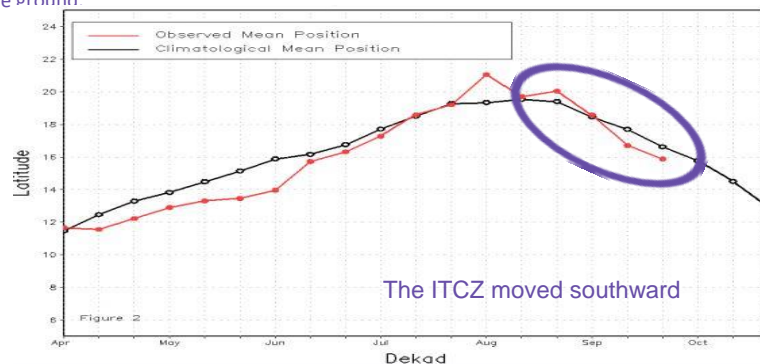
Latest Developments, September 20- 30 2020

Late September, seasonal rainfall continued over West Africa region but moved further southern areas. Gulf of Guinea received increased rainfall while many Sahelian countries continued to receive light to moderate rainfall. Over southern coastal areas, Liberia, Cote d'Ivoire, Ghana, Togo, Benin, and Nigeria recorded some more moderate to locally heavy rainfall as well as CAR, Cameroun and southern Chad. Heavy rainfall over the past several weeks has caused flooding across Burkina Faso, Ghana, and Nigeria.

In this last dekad of September, the Inter-Tropical Convergence Zone (ITCZ), continues his southward retreat, moving slightly southward compared to the previous Dekad. The western part has moved farther to the south compared to the mean climatological position which could explain the end of the rainy season over Mauritania and parts of northern Senegal. In contrast, the eastern part is along the climatological position which could explain the continuous seasonal rainfall over Central and southern Chad and part of Niger.

(* ITCZ: Inter-Tropical Convergence Zone. It's the border between dry areas and areas where the rainfall season is ongoing. It moves northwards as the monsoon advances, backtracking southwards as the monsoon wanes. Delays (advances) in this movement lead to drier (wetter) conditions on the ground.

Current ITCZ position (red)
and long term average
position (black)

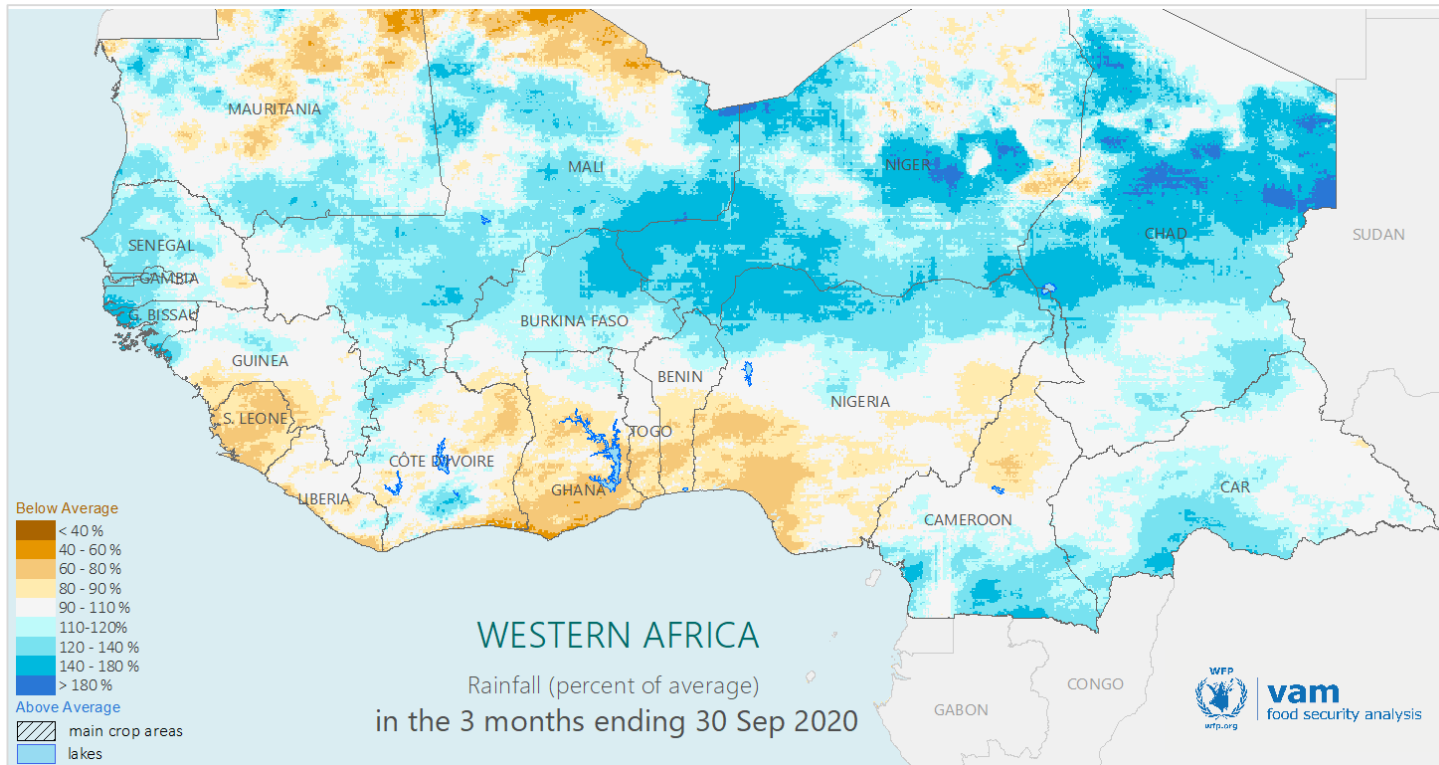


Rainfall amounts from 20 to 30 September 2020 (above).

Same as a proportion of the long term average (below). Blues for wetter than average, browns for drier than average.

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Current Status – end peak Season (late September)



Rainfall in the three months up to September 30 as a percent of the average. Blues for wetter than average conditions, browns for drier than average conditions.

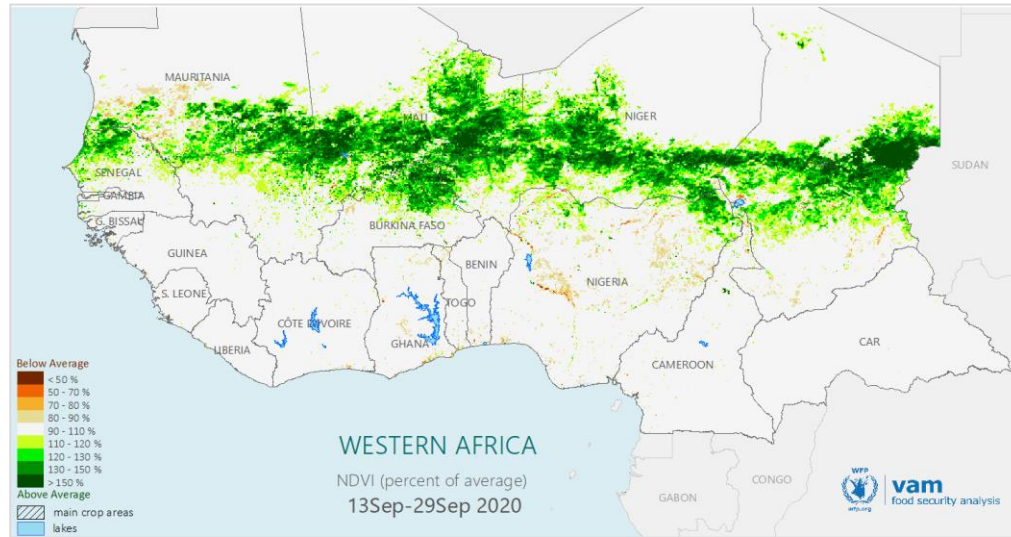
Overall, late September (end of the core months of the season announcing at the same time the end of the rainy season in many areas across the Sahel), the rainy season across West Africa has been generally characterized by mostly adequate and well distributed rains, resulting widespread average to above average seasonal rainfall.

Good seasonal performance characterize the region particularly the Sahel region except the Gulf of Guinea. Below-average rainfall since June has sustained dryness across this part of the region (over Southern Cote d'Ivoire, Ghana, Southern Togo and Benin and South-western Nigeria) and Central Cameroon. Despite the recent increase in rainfall, relief to moisture deficits is unlikely as the end of the rainy season nears. However deficits remain moderate. Elsewhere across Mano river region, over Sierra Leone and some pockets in Liberia remain below average condition.

Despite, the season length and the seasonal rainfall across the southern coastal areas in Mano rivers and Gulf Guinea, current deficits deserve to be closely monitored.

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Seasonal Development

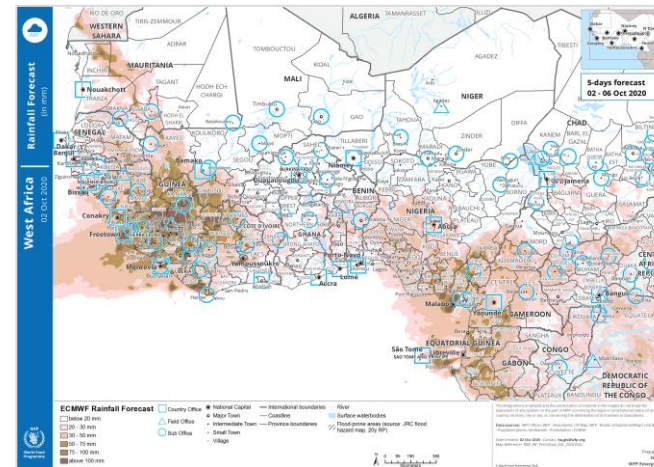


NDVI mid September - late September as a percent of average. Greens for above average, browns for below average

A pattern of strongly above average vegetation emerged during September: this is particularly noticeable in the whole Sahel across Senegal, Mauritania, Mali, Burkina Faso, Niger and Chad. This development is due to a better than average overall rainfall season. It mostly results from increase and improvement in rainfall since late July, and wetter conditions in August and September led to a continuous, vigorous response from grasslands resulting in significantly above average vegetation levels. Agricultural areas benefitted from very good seasonal conditions. Good production prospects are certain this year in the region (in biomass and crops production).



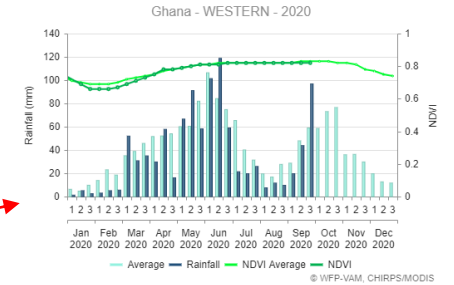
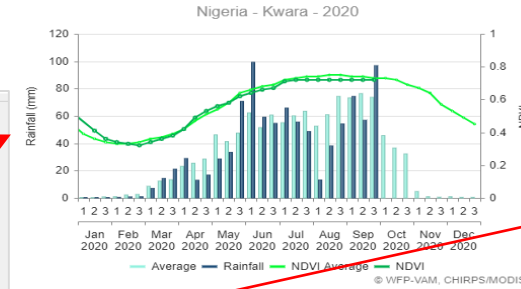
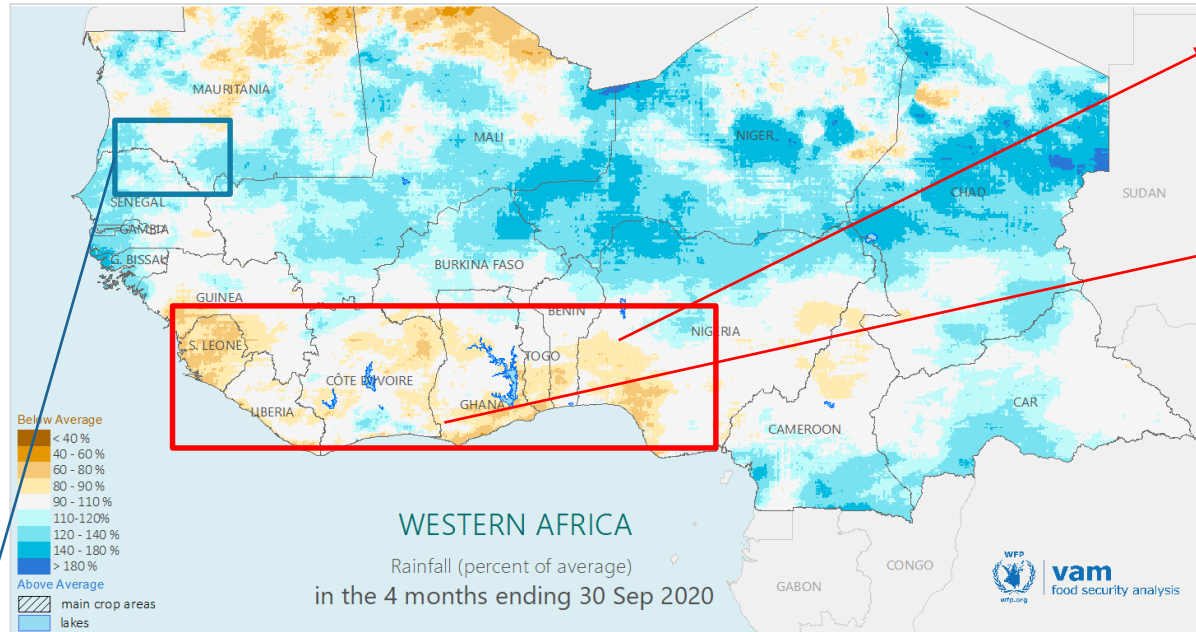
Water point status across the Sahel. Good: Higher than long term level (LTL), Watch: Between 50 to 100% of LTL, Alert: Between 3% and 50% of LTL, Near-Dry: Below 3% of LTL



West Africa: Rainfall Season 2020

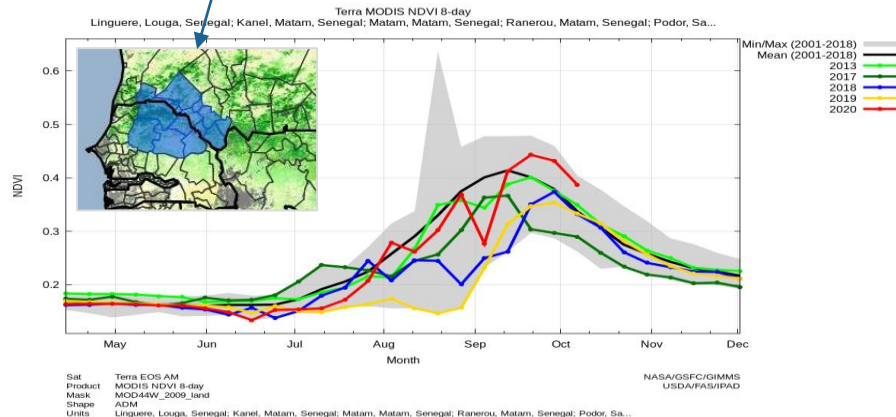
Focus Areas

Rainfall in the four months up to September 30 as a percent of the average. Blues for wetter than average conditions, browns for drier than average conditions.



Since June, Mano river countries extended to Gulf of Guinea affected by poor rainfall time distribution, leading abnormally dryness.

During this period below-average seasonal rainfall remain ; this has sustained dryness across Southern Guinea, Sierra Leone, Liberia, Cote d'Ivoire, Ghana, Southern Togo and Benin and South-western Nigeria) and Central Cameroon. Relief to moisture deficits is unlikely as the end of the rainy season nears.



In far western areas (over Northern Senegal and southern Mauritania) persisted seasonal rainfall deficits during these past consecutive years (2019, 2018, 2017...) In 2020 conditions are more favorable compared to 2019, 2018, 2017, 2013. In Western Mauritania where failure occurred in mid- August, deficits have been largely relieved.

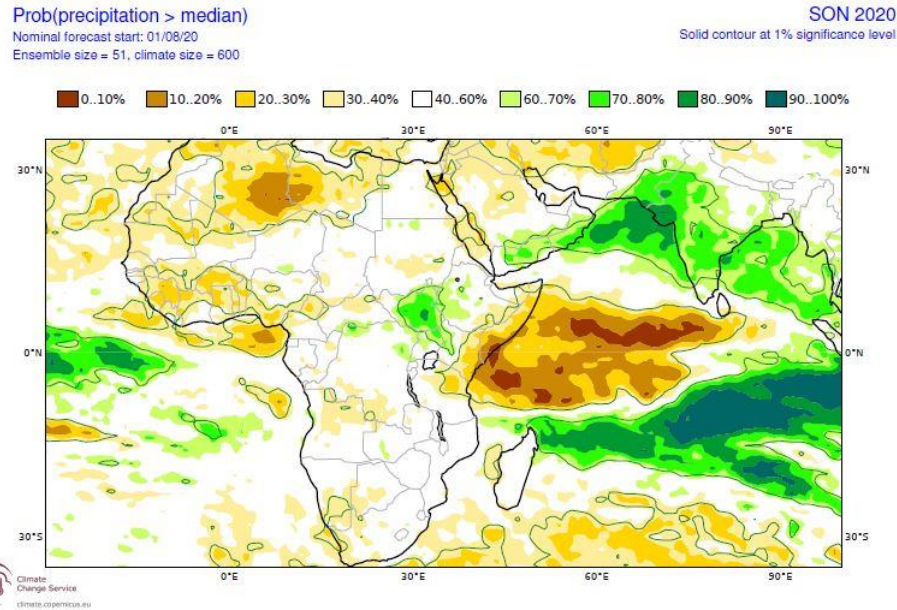
<https://glam1.gsfc.nasa.gov/>

https://dataviz.vam.wfp.org/seasonal_explorer/rainfall_vegetation/visualizations

West Africa: Rainfall Season 2020

Seasonal Forecasts (2020, PRESASS, ECMWF)

C3S: ECMWF contribution
Prob(precipitation > median)
Nominal forecast start: 01/08/20
Ensemble size = 51, climate size = 600



Latest seasonal forecasts from ECMWF indicate average to mostly near average condition in Sahel except Central Mali, Northern and SE Senegal, half western Mauritania and Burkina Faso from September to November 2020 .

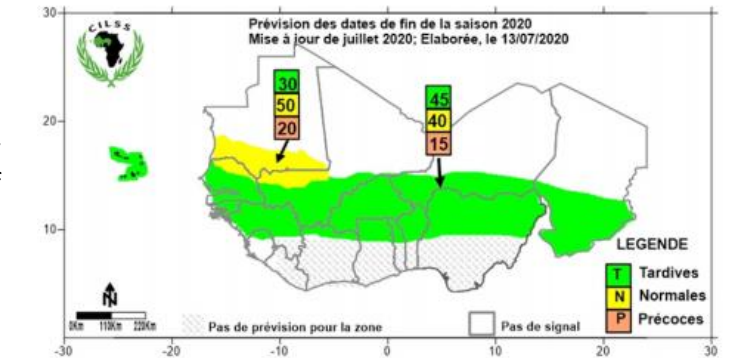
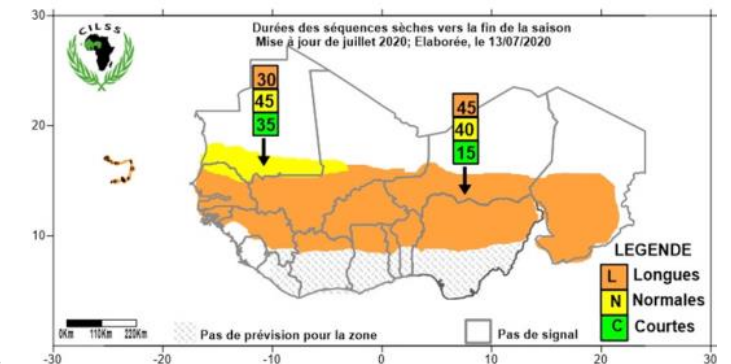
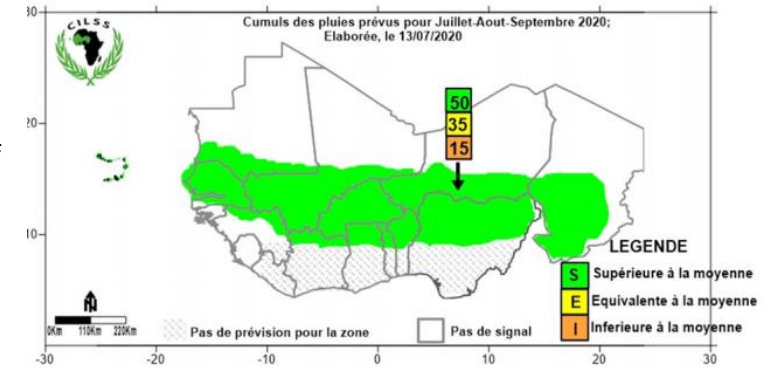
In the rest of the region, across the southern regions conditions will likely be below average to mostly near average except most of CAR, Southern Ghana and half northern Nigeria where **average condition rainfall is expected**

ECMWF forecasts are more pessimistic than those of PRESASS so the two sets of forecasts are not particularly consistent at the moment.

According to PRESASS seasonal forecast, the update of the forecasts in July confirms those issued in April 2020, with high probability of above average rainfall for the period July-August-September in Sahelian countries. It is very likely that the expected rainfall amounts will be concentrated in the mid - season between mid-July and August.

Overall, the forecast for **the date of the end of the season** remains the same as those issued in April 2020 for the Sudanese and Sahelian areas. Indeed, the July update reveals strong probabilities of late to normal end of season over all agricultural areas of Sahelian countries ((Senegal, Mali, Burkina Faso, Niger, Chad, Gambia, Guinea Bissau, Guinea and Cabo Verde) and in the northern parts of Côte d'Ivoire, Ghana, Togo, Benin and Nigeria). However, is expected in far northern Senegal, western Mali and the agricultural areas of Mauritania, a normal to late end-of-season.

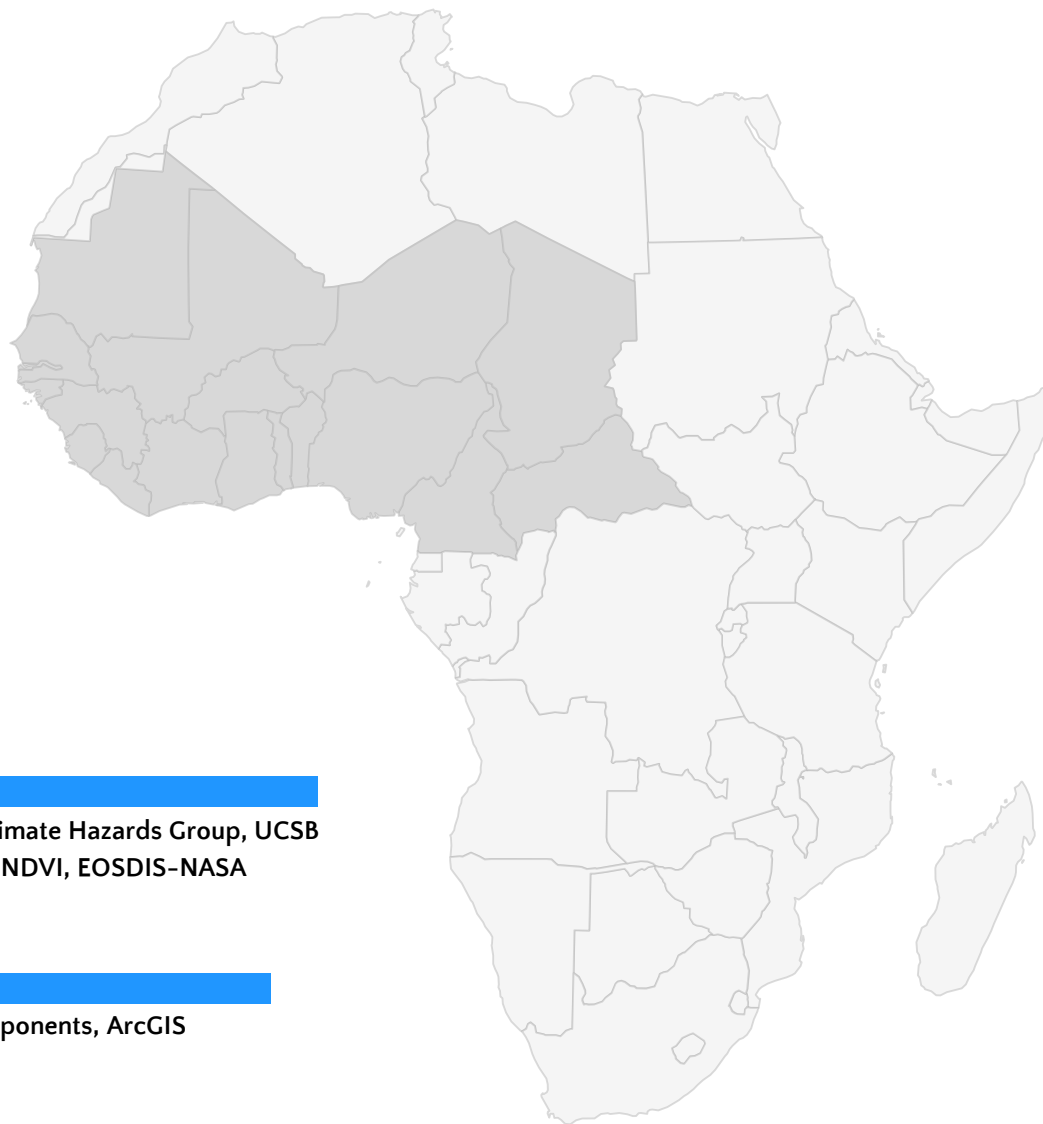
It **emerges from the July 2020 update that**, in the second half of the season, including the heading, flowering and the crops ripening phases, the dry spells should be longer to normal over most Sudan-Sahelian belt covering most of Senegal, Burkina Faso, the southern parts of Mali and Niger, southwestern Chad, the Gambia, Guinea, Guinea Bissau, the northern Cote d'Ivoire, Ghana, Togo, Benin, Nigeria and most of the Cabo Verde islands.



PRESASS seasonal forecast, issued in July:

Top: July-September 2020 rainfall, Middle: Date of end of seasonal rainfall in Sahel and Sudanese areas

Bottom: Longest dry spell durations during the second half of the rainy season



DATA SOURCES:

Rainfall: CHIRPS, Climate Hazards Group, UCSB
Vegetation: MODIS NDVI, EOSDIS-NASA

PROCESSING:

VAM software components, ArcGIS

FOR FURTHER INFORMATION:

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