

West Africa Seasonal Monitor

2021 Season



vam
food security analysis

World Food Programme, Regional Bureau Dakar

May (Dekad 3), 2021

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Highlights

- Late May, Gulf of Guinea continued to experience little seasonal rainfall while in southern areas of the region over Sierra Leone, Liberia, South-eastern Guinea, Southern Cameroon and Western CAR, was received the highest rainfall in the region. The deficits were particularly noticeable in Gulf of Guinea, most of Nigeria, eastern Sahel, eastern CAR and the western areas of the region. Meanwhile, the rest of the region benefited from wetter conditions than the average and the increase in rainfall relieved some dryness.
- So far, in a one-month rainfall (for May 2021), most of West Africa continues to be characterized by drier than average conditions. The seasonal rainfall deficits extend across a wide region from eastern Liberia – Côte d'Ivoire across Gulf of Guinea countries, Nigeria, Southern Niger, and Southern Chad. This dryness also prevail over western areas of West Africa and in other pockets over eastern CAR. Vegetation condition is still affected by the early poor rainfall distribution leading lower-than-average conditions across a broad area from south-eastern Senegal – Northern Guinea across Northern Gulf of Guinea countries, southern Burkina Faso, Central Nigeria continuing into Central and far south-western Chad.
- According to short-term forecasts, in mid - June, rainfall improvement will likely be observed across the region. If the forecasts are verified, we might see rainfall improvement across western Sahel, in particular over Senegal, Mali and most of Burkina, as well as in Nigeria and across Gulf of Guinea countries seasonal rainfall deficits will be offset. However, in eastern Sahel condition will likely remain below average over Niger and Chad.
- **According to the PRESASS 2021 seasonal forecast, average to above average rainfall is expected over the Sahelian and Sudanian belt for June - August and July - September while below average cumulative rainfall for the entire season will likely be observed over coastal areas of Mauritania, Senegal, Gambia, Guinea Bissau, Guinea, northern Sierra Leone, eastern Liberia, Côte d'Ivoire, Ghana, Togo, Benin, Nigeria, and Cameroon. These conditions are associated with an early to normal onset of rains and long to medium dry spells over most of the Sahel.**

West Africa: Rainfall Season 2021

Latest Developments, May 20 – 31, 2021

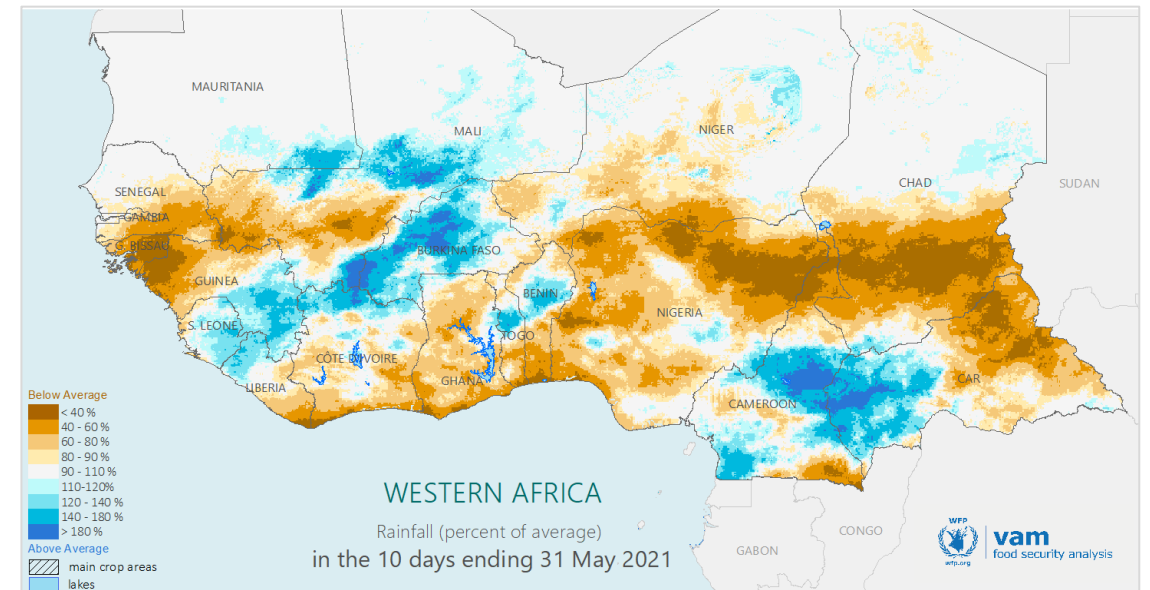
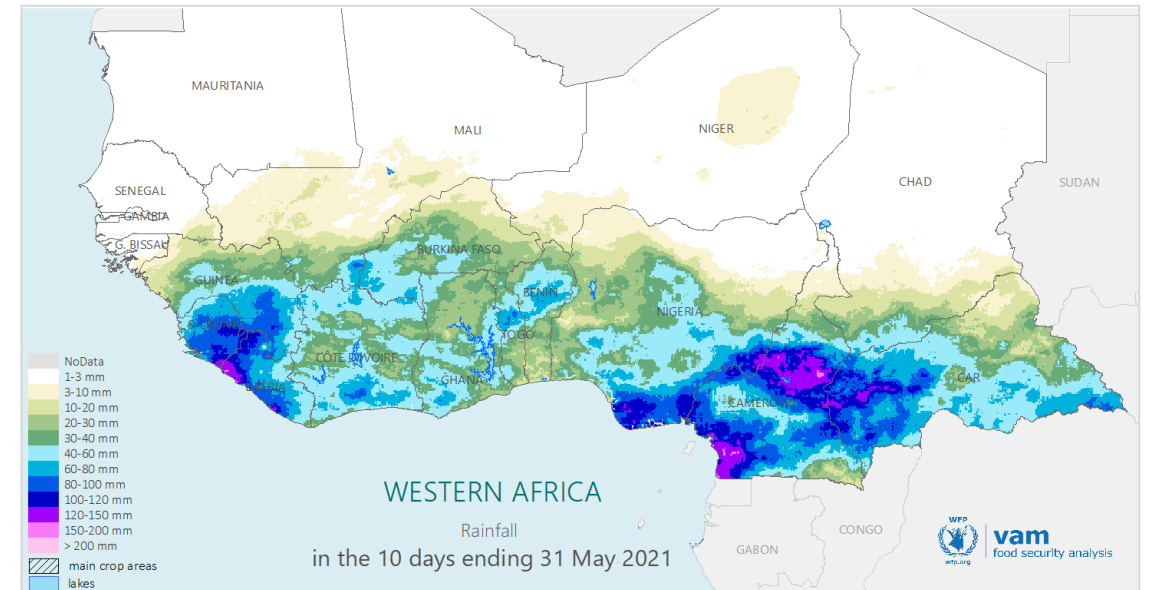
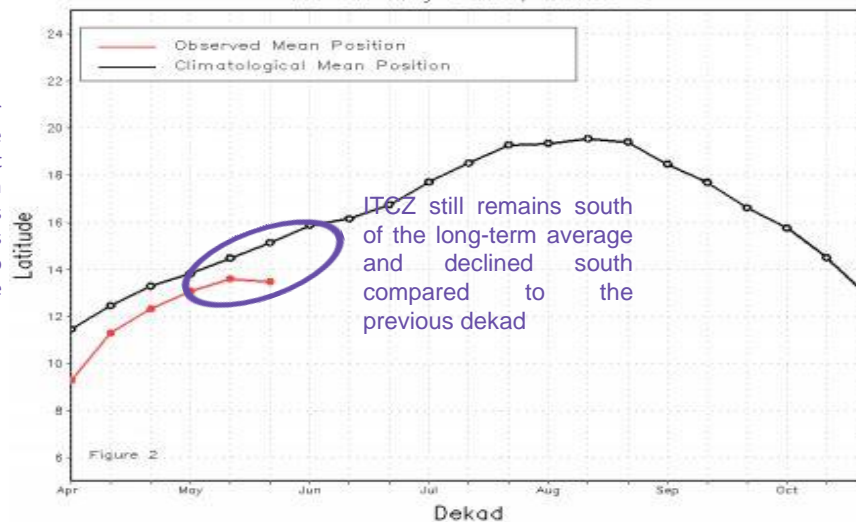
Late May, Gulf of Guinea continued to experience little seasonal rainfall while in southern areas of the region over Sierra Leone, Liberia, south-eastern Guinea, southern Cameroon and western CAR the highest rainfall in the region was received. Elsewhere light to moderate rains were recorded.

In this period rainfall deficits were particularly noticeable in Gulf of Guinea, most of Nigeria, the eastern Sahel, eastern CAR and the western parts of the region. Meanwhile, the rest of the region benefited from wetter than average conditions and the increase in rainfall relieved some dryness.

The ITCZ remains south of the long-term average (see Figure 2 below), and has not progressed northwards over the last dekad. An anomalous position south of the long-term average is usually associated with drier than normal conditions across West Africa. This might explain the below average rainfall prevailing across the Gulf of Guinea and over the western parts of the region. In the eastern parts of the region, its shift has also led to below average seasonal rainfall across Nigeria, eastern CAR and southern Chad.

(*) ITCZ: the Inter-Tropical Convergence Zone is 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)

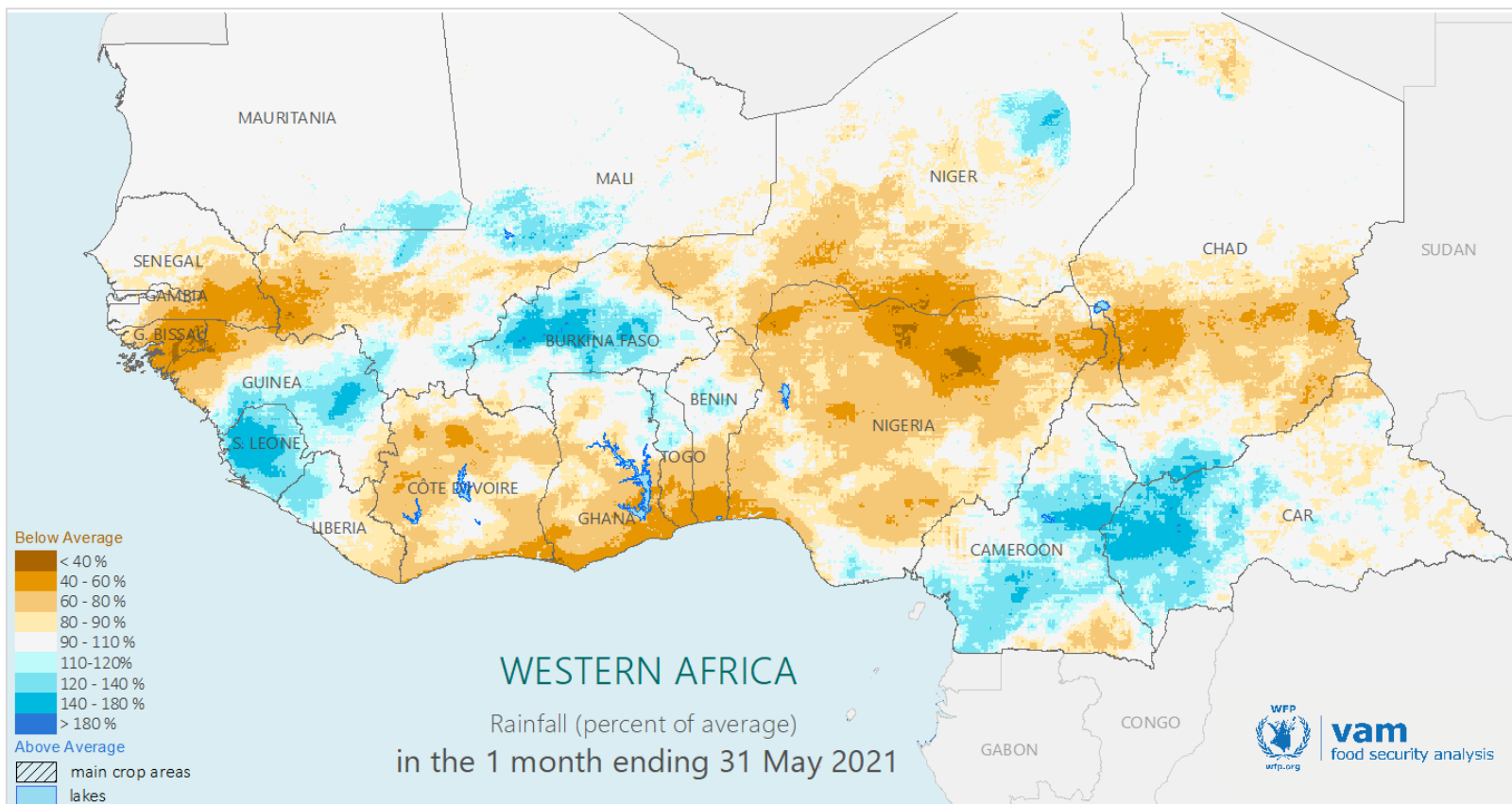


Rainfall amounts from 20 to 31 May 2021 (above).

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 at early stage of the season – late May



Rainfall in the one month up to May 31 as a percent of the average. Blues for wetter than average conditions, browns for drier than average conditions.

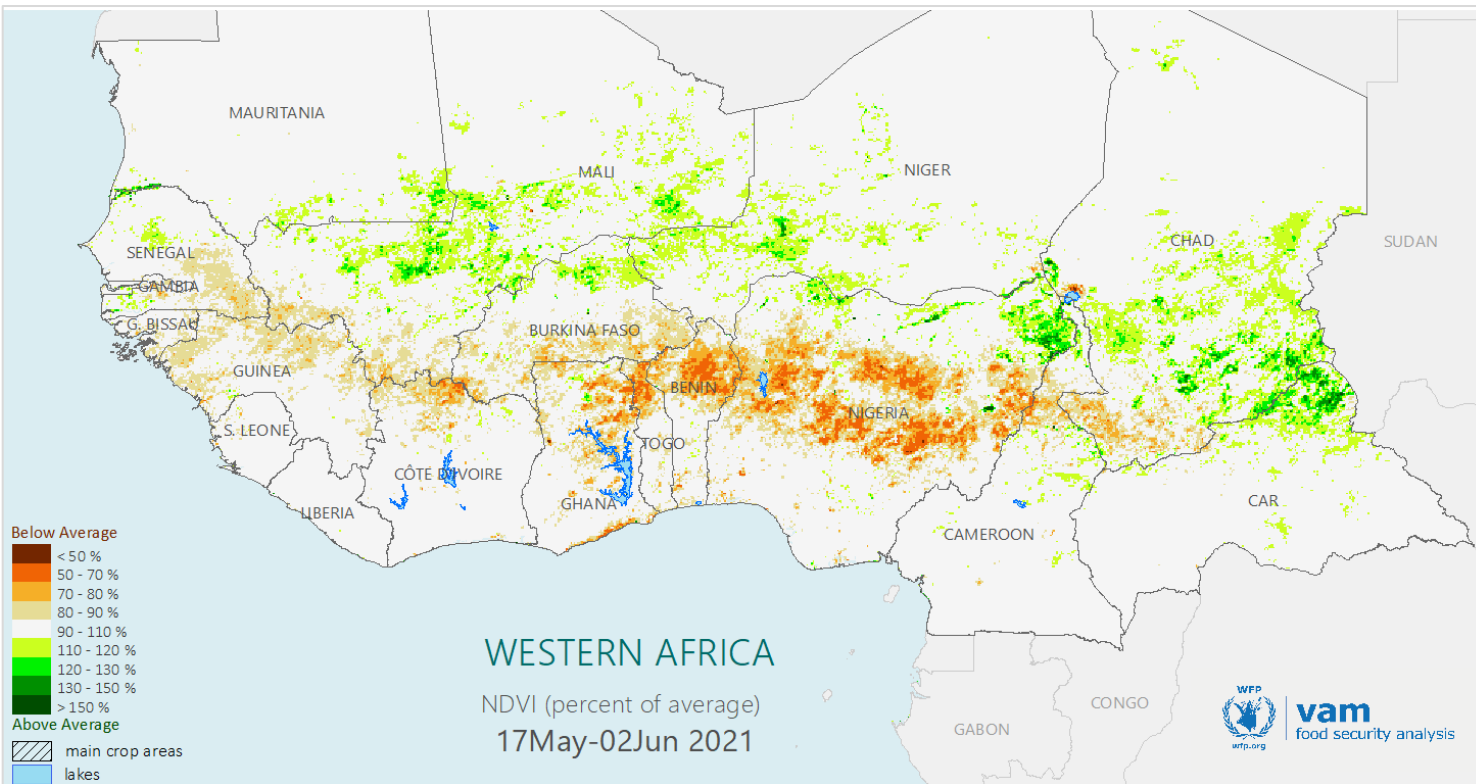
In May, most of West Africa was characterized by drier than average conditions. Over the course of the month (May 2021), rainfall deficits extended across a wide area from eastern Liberia and Côte d'Ivoire across the countries of the Gulf of Guinea, Nigeria, southern Niger, and southern Chad. Drier than average conditions also prevailed over the western parts of the region, particularly in western Mali, south-eastern Senegal, Guinea-Bissau and western Guinea and in pockets of eastern CAR.

In contrast, average to above average conditions were recorded in Sierra Leone, western Liberia, most of Burkina Faso, eastern Guinea, southern Cameroun and eastern CAR. These areas have so far enjoyed favourable conditions in the region.

It is important to note that in May we are in the early days of the rainy season, so these conditions are not of particular significance. However the coming weeks will be particularly interesting for the seasonal onset conditions, thus will be closely monitored.

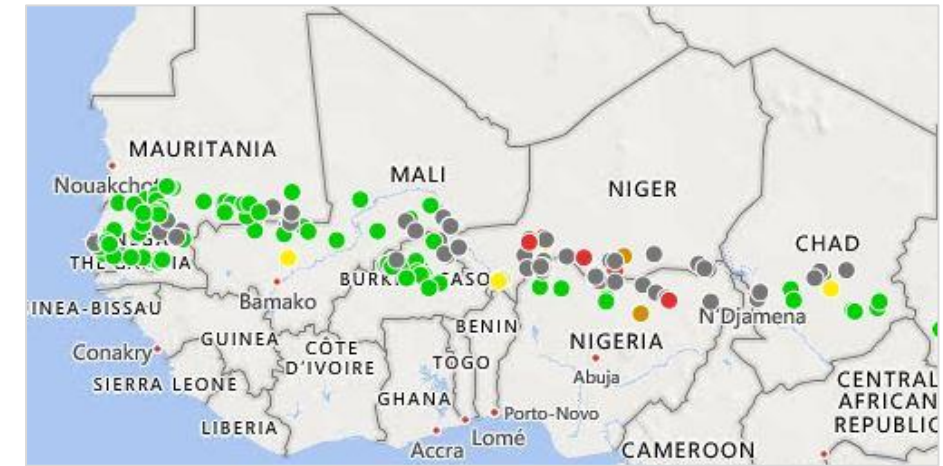
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Seasonal Development



NDVI in early May (17 May – 02 June 2021) as a percent of average. Greens for above average, browns for below average

In West Africa, vegetation conditions are still affected by the early poor rainfall distribution leading to below average conditions. Below average vegetation can be seen across a broad area from south-eastern Senegal and northern Guinea across northern Côte d'Ivoire, Ghana, Togo, Benin, southern Burkina Faso, central Nigeria continuing into central Cameroon (neighboring areas of Far North and North regions) and far south-western Chad (in Tandjile, Mandoul, Logone Oriental and Logone Oriental regions). This below average vegetation cover is most pronounced over the Central Belt of Nigeria, northern Benin, Togo and north-eastern Ghana.



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

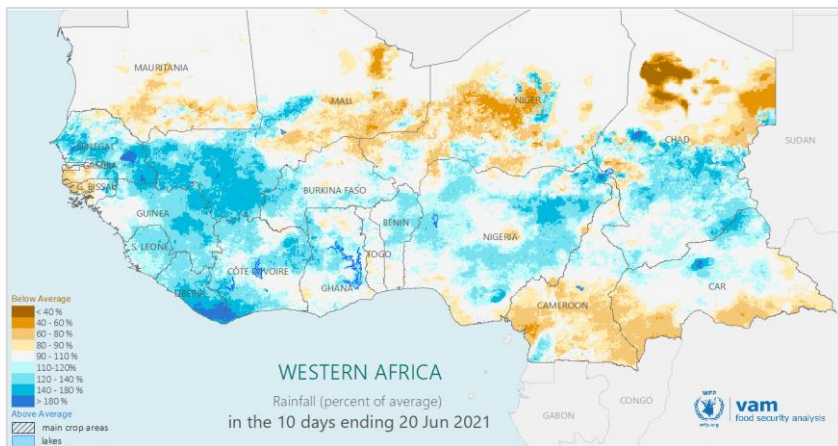
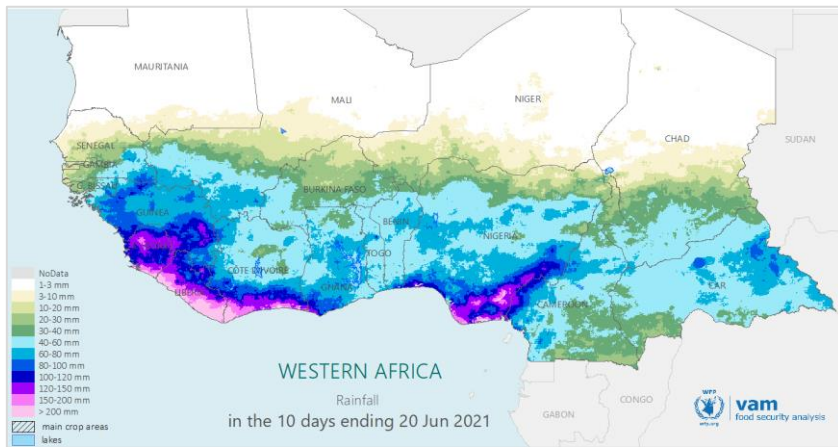
<https://earlywarning.usgs.gov/fews/waterpoint/index.php>

Despite below average start of the rainy season, favourable vegetation conditions prevail over most of the Sahelian belt, from central Mali to southern Chad.

However, the availability of water resources in the region is mixed. In the western parts of the region (Senegal, Mauritania, Mali and Burkina Faso), a good availability is observed. However, in the eastern part of the Sahel (Niger, northern Nigeria and Chad), the status of water points is below the long-term level.

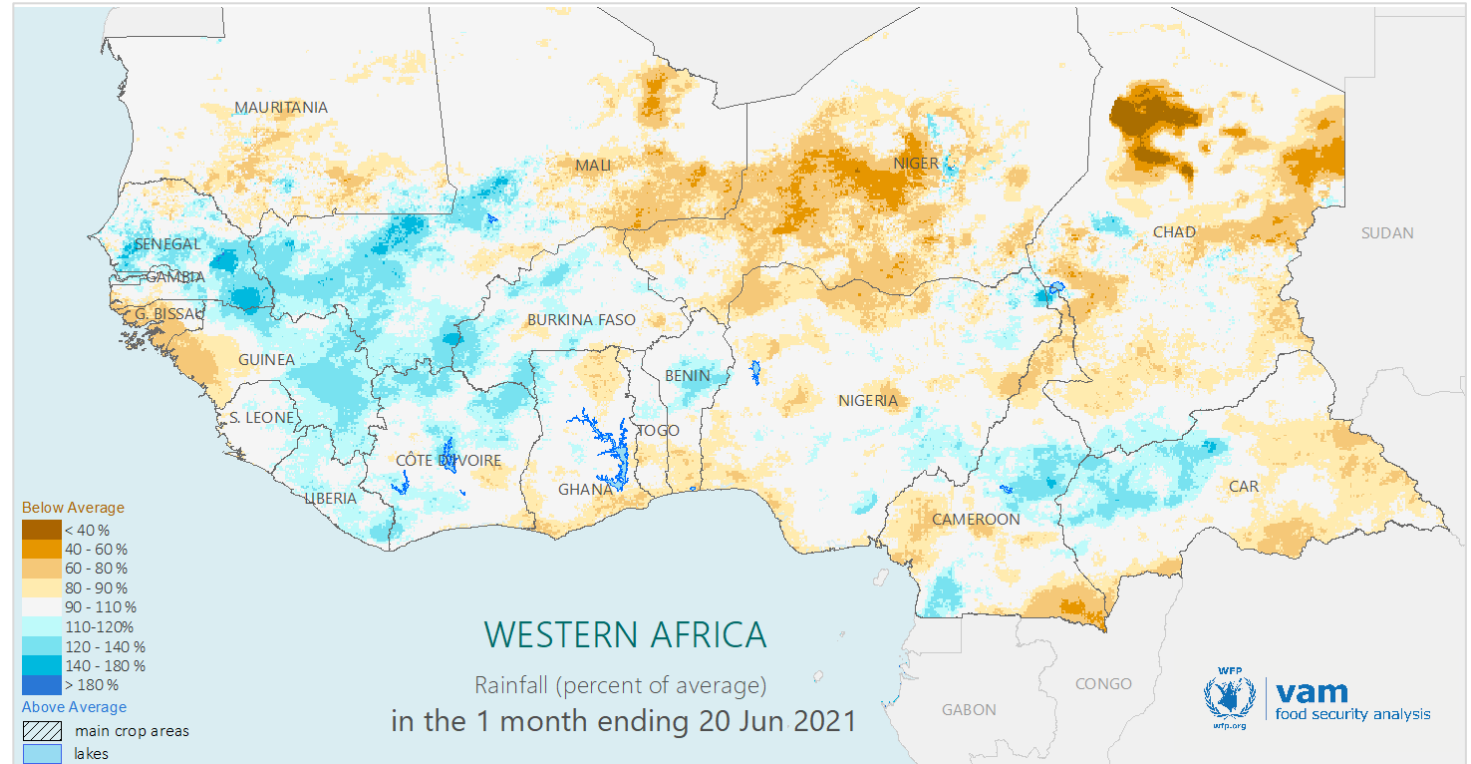
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Short-term Forecasts



Short range CHIRPS-GEFS forecasts for 10-20 June 2020

Above: forecast rainfall amounts and Below: Corresponding anomaly



Rainfall for the month ending June 20 (composed of actual and forecast rainfall) as a percent of the long term average. Blues for wetter than average conditions, browns for drier than average conditions.

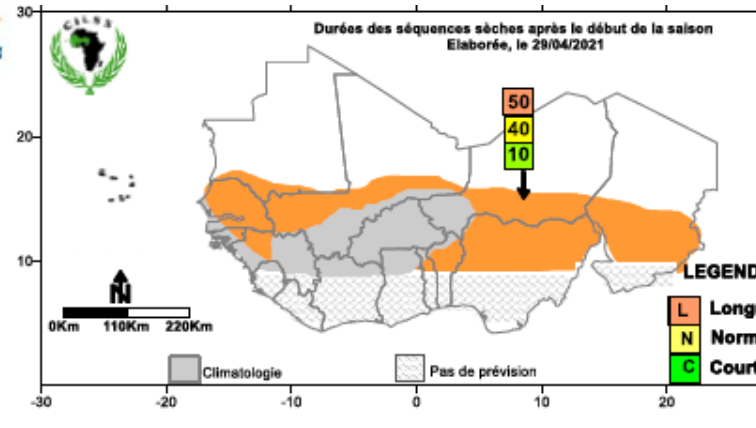
Short range forecasts provide estimates of rainfall up to 20 June 2021. Until mid-June, the West Africa region will likely be dominated by wetter than average conditions.

If the forecasts are verified, we might see rainfall improvement across the western Sahel, in particular over Senegal, Mali and most of Burkina, as well as in Nigeria and across the countries of the Gulf of Guinea, where the current seasonal rainfall deficits might be offset. However, in the eastern Sahel (Niger and Chad), rainfall conditions will likely remain below average.

NOTE: This is the short range CHIRPS-GEFS forecast product, a bias-corrected and downscaled version of the NCEP Global Ensemble Forecast System precipitation forecasts from the Climate Hazards Centre (CHC/UCSB). They are consistent with the CHIRPS rainfall estimate used in this Bulletin and provide a short range outlook on rainfall. Forecast information should be considered carefully since these products always have a margin of error

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Seasonal Forecasts (PRESASS, 2021)

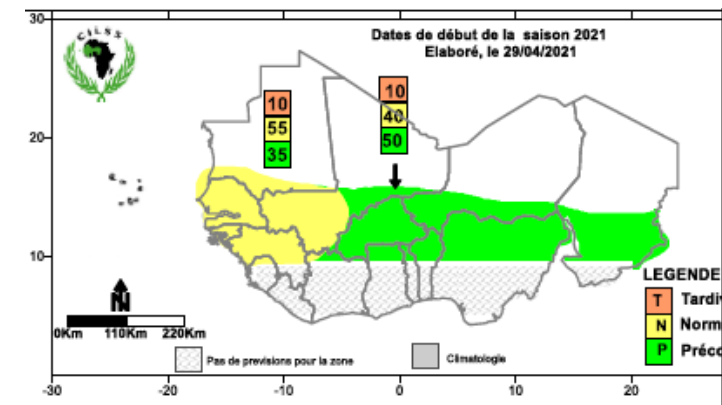


*PRESASS seasonal forecast, issued in April:
Dry spell duration tendency*

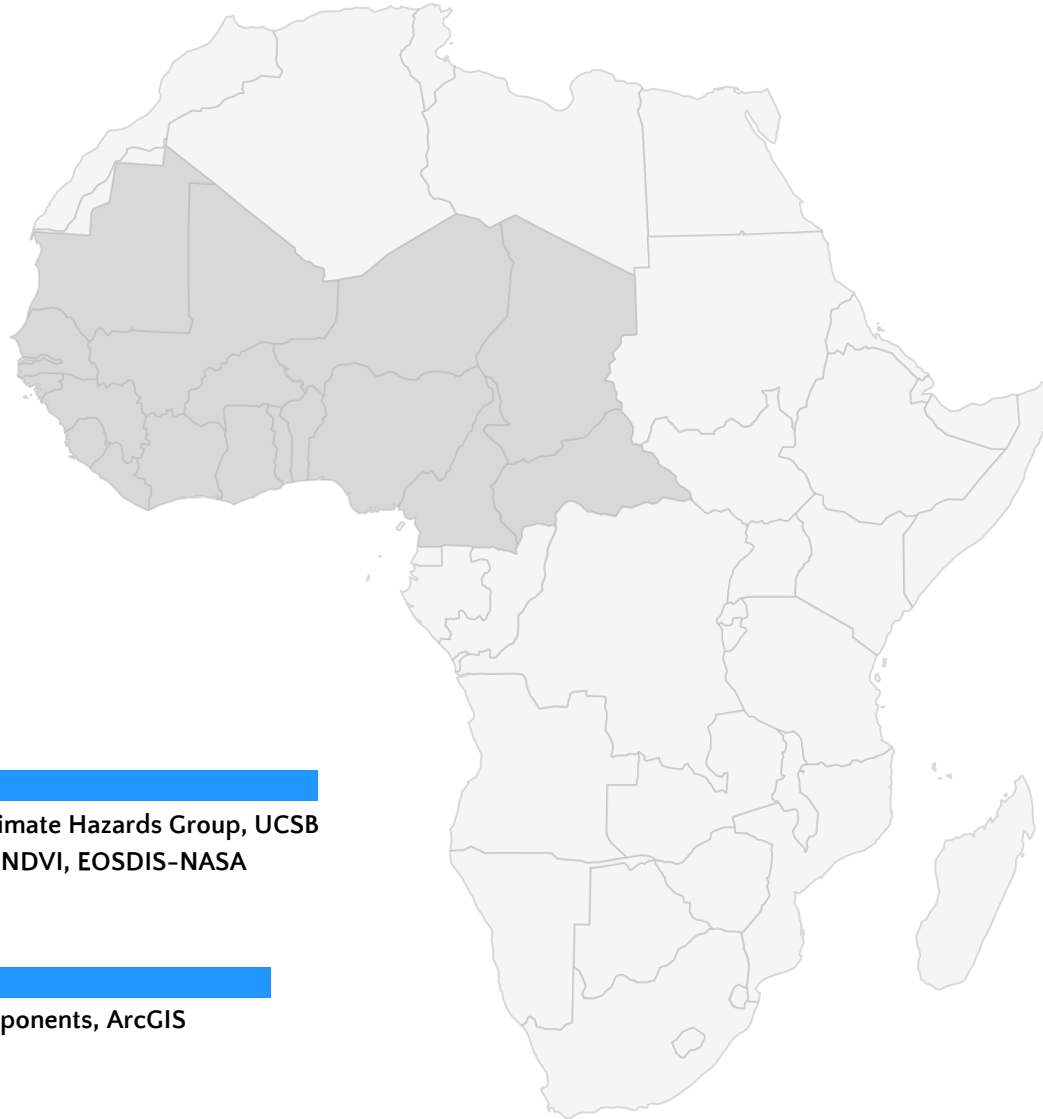
According to PRESASS 2021 seasonal forecast, seasonal rainfall amounts are expected to be average to above average for June - August and July - September over the Sahelian and Sudanian belt covering the southern and western parts of Chad, the agricultural strip of Niger, Burkina Faso, southern and central Mali, the northern parts of Nigeria, Benin, Togo, Côte d'Ivoire, and the far northeast of Guinea. However, coastal areas of Mauritania, Senegal, Gambia, Guinea Bissau, Guinea, Northern Sierra Leone, Eastern Liberia, Côte d'Ivoire, Ghana, Togo, Benin, Nigeria, and Cameroon could experience average to below average cumulative rainfall for the entire season.

An early to normal onset of seasonal rains is likely expected over most of the Sahelian belt extended to northern parts of the Gulf of Guinea countries. However, in the area covering southern Senegal, Guinea Bissau, and Western Guinea, there are equal chances of having early, normal, or late onset dates.

Long to medium dry spells are expected after the onset of the season over the eastern Sahel (eastern Niger and southern Chad extended to northern parts of Nigeria, Benin and Togo) and over the northern part of the central and western Sahel (central Mali, southern Mauritania, Senegal and north-eastern Guinea). On the other hand, over Burkina Faso, the western part of Niger, southern Mali, the northern parts of Benin, Togo, Ghana, Côte d'Ivoire and Guinea, and the coastal areas from northern Sierra Leone to the Senegal loop, the chances of observing longer, equivalent or shorter than average dry spells are the same. Coupled with the expected above average rains, this could mean that the region might be affected by more irregular and extreme rainfall during the 2021 season.



*PRESASS seasonal forecast, issued in April:
Top: June-August 2021 rainfall, Bottom : Date of onset of rainfall,*



DATA SOURCES:

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

PROCESSING:

VAM software components, ArcGIS

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