

West Africa Seasonal Monitor

2021 Season



vam
food security analysis

World Food Programme, Regional Bureau Dakar

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Highlights

- At mid - May, seasonal rainfall remain located over southmost regions of west Africa and drier than average conditions dominate. Light to moderate rainfall was observed in most of the region while Sierra Leone, Liberia, Southern Guinea, South-eastern costal of Nigeria, Southern Cameroon and South – eastern CAR experienced the highest rainfall in the region. South- eastern and Central Nigeria, southern Liberia, Cote D’Ivoire, Ghana, Togo and Benin experienced very little rainfall and continue to experience abnormal dryness.
- The early season (mid- May) drier than average conditions still continue to dominate in west Africa region. Rainfall deficits was recorded in the Gulf Guinea (Cote d’Ivoire, Ghana, Togo and Benin). Most of Nigeria and Southern Sahel over Chad Sahelian Belt, Southern Niger, northern Burkina Faso, Western Mali, Western Guinea and South-eastern Senegal are also affected by drier than average conditions. Vegetation condition is being affected by this early season dryness leading lower-than-average vegetation cover across central Nigeria, parts of Benin, Togo, Ghana, Northern Cote d’Ivoire and Southern Burkina Faso.
- **According to short-term forecasts**, in the first dekad of June, rainfall improvement will likely be observed across the region with average to above average seasonal rainfall except Niger, Norther Mali, Central Burkina Faso, Sierra Leone and Burkina Faso which are likely to be below average. If the forecasts are verified, rainfall deficit alleviation and the onset of more favourable conditions for the early stages of the growing season will be observed in some areas while other areas may remain drier than average.
- **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

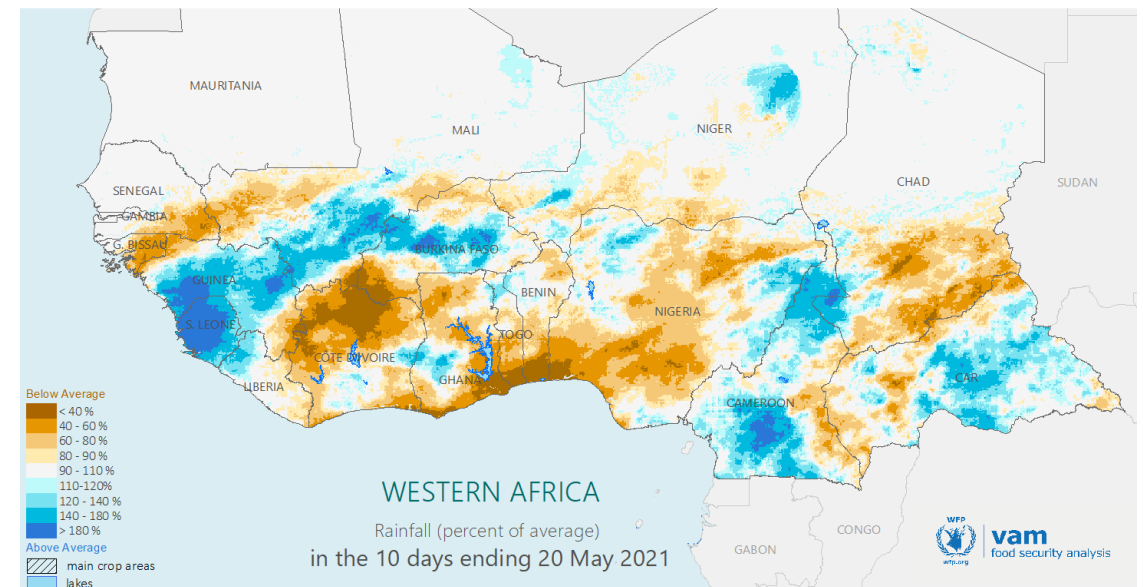
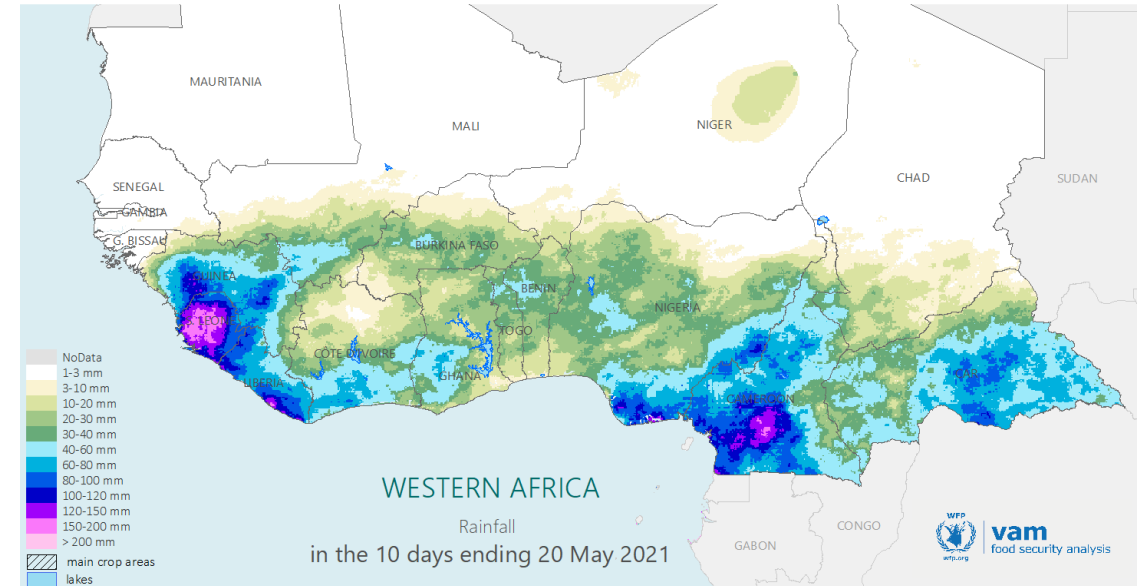
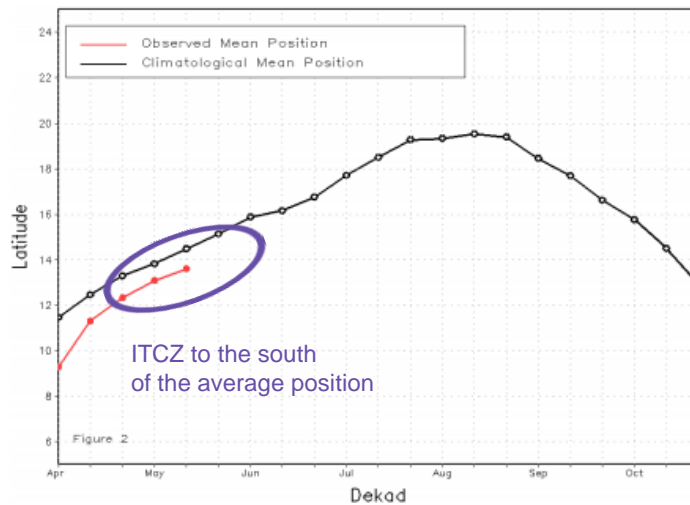
Latest Developments, May 10 - 20 2021

At this early stage of the season, seasonal rainfall remain located over southmost regions of west Africa and drier than average conditions dominate. Light to moderate rainfall was observed in Guinea, southern Mali, Cote d'Ivoire, Ghana, Burkina Faso, Togo, Benin, Nigeria, Northern Cameroun, eastern CAR and Southern Chad, while Sierra Leone, Liberia, Southern Guinea, South-eastern coastal of Nigeria, Southern Cameroon and South – eastern CAR experienced the highest rainfall in the region. South- eastern and Central Nigeria, southern Liberia, Cote D'Ivoire, Ghana, Togo and Benin experienced very little rainfall and continue to experience abnormal dryness.

The ITCZ advanced slightly to the north, while still remaining south of the long-term average over western regions. This below average position around the 13.6N, might have contributed to the below-average along the areas Gulf of Guinea. In contrast, in the eastern part of the region, its above average position at this time of the year could explain the persistent above - average rainfall in parts of CAR and southern Chad. However the ITCZ position is not yet favourable for the development of seasonal rains over the Sahel region.

(* 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)

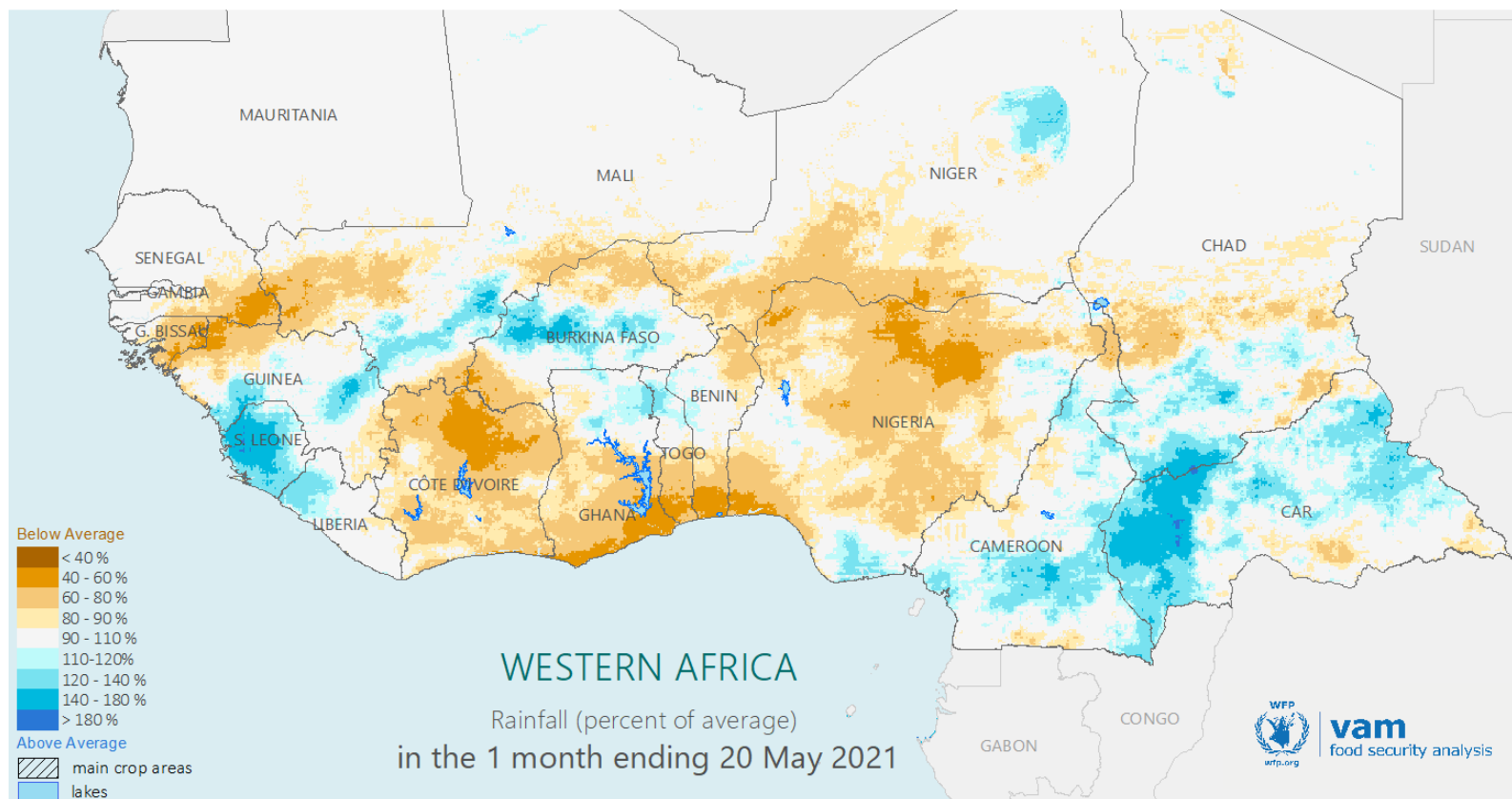


Rainfall amounts from 10 to 20 May 2021 (above).

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 – mid- May



Rainfall in the one month up to May 20 as a percent of the average. Blues for wetter than average conditions, browns for drier than average conditions.

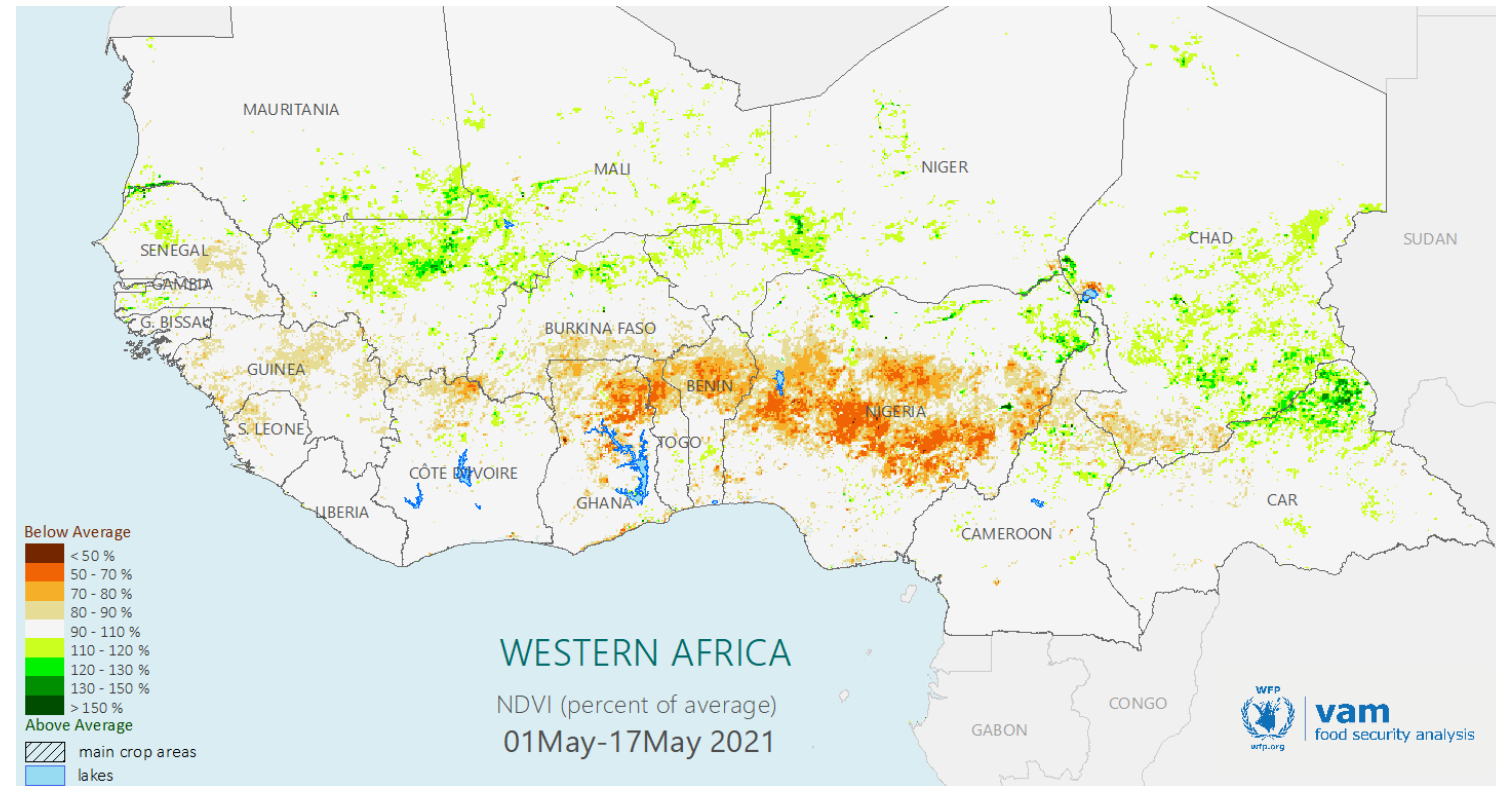
In mid-May at early stage of the season, drier than average conditions still continue to dominate in west Africa region. Rainfall deficits was recorded in the Gulf Guinea (Cote d'Ivoire, Ghana, Togo and Benin). Most of Nigeria and Southern Sahel over Chad Sahelian Belt, Southern Niger, northern Burkina Faso, Western Mali, Western Guinea and South-eastern Senegal are also affected by drier than average conditions.

In contrast, only CAR, Cameroon, Sierra Leone and Liberia have so far enjoyed average to above-average rainfall and other some pockets in central Burkina Faso, southern Mali and Eastern Guinea.

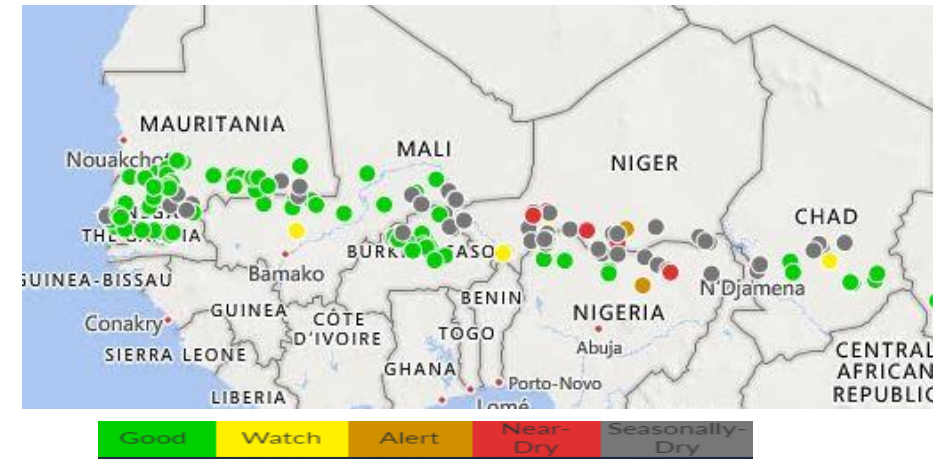
It is important to note that these are early days in the seasonal development, so these conditions are not of particular significance, particularly over the Sahelian belt, but will continue to be closely monitored.

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Seasonal Development



NDVI in early May (01 – 17 May 2021) as a percent of average. Greens for above average, browns for below average



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>

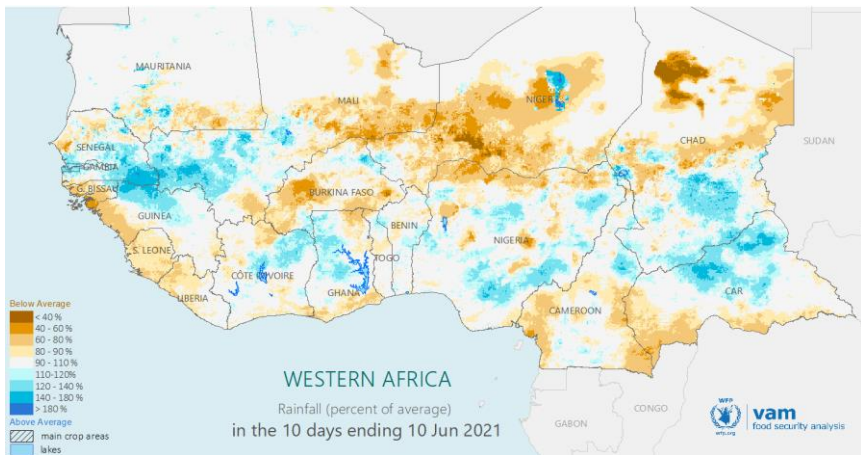
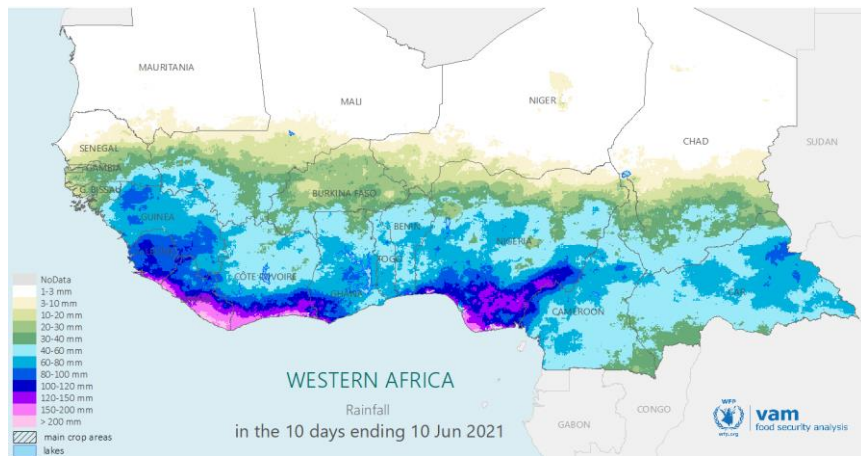
The early season dryness affected vegetation conditions (map upper left). This leads to lower-than-average vegetation cover in some places across central Nigeria, parts of Benin, Togo, Ghana, Northern Cote d'Ivoire and Southern Burkina Faso.

Over Chad favourable vegetation conditions are observed, and above average vegetation conditions can also be observed in northern Nigeria and Cameroun. Over the Sahel region, at this stage of the season, favourable vegetation conditions than usual can be seen.

The availability of water resources in the region is exceptionally favourable at this time of the year in the half Western part of the region from Burkina Faso across Mali, Southern Mauritania and Senegal.. However, in eastern areas over Niger, Southern Nigeria, pockets in Chad the season has not yet started. Over Niger, has been seen some pockets of nearest dry conditions.

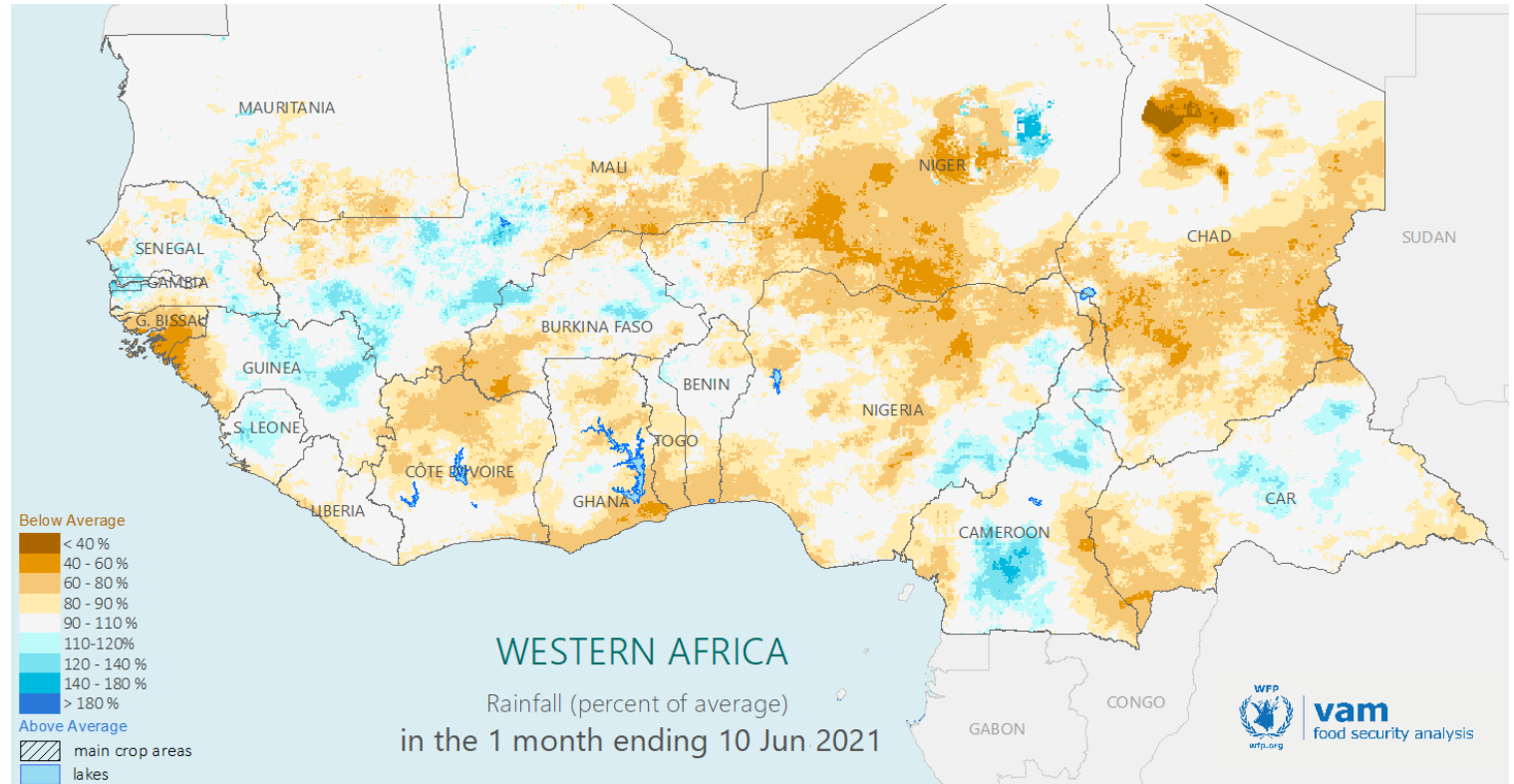
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Short-term Forecasts



Short range CHIRPS-GEFS forecasts for 01-10 June 2020

Above: forecast rainfall amounts and Below: Corresponding anomaly



Rainfall for the month ending June 10 (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.

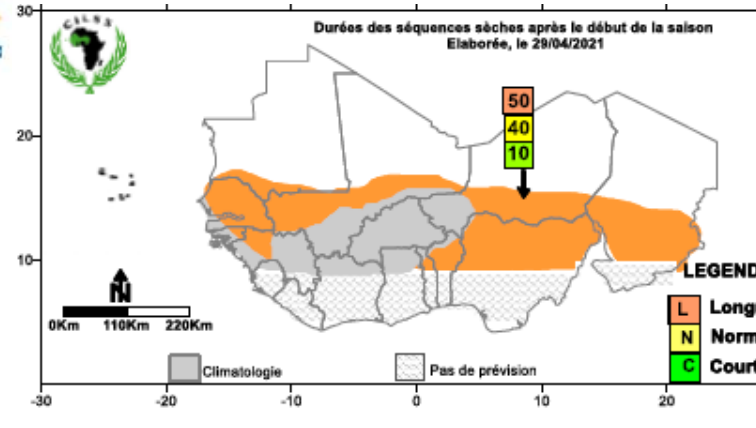
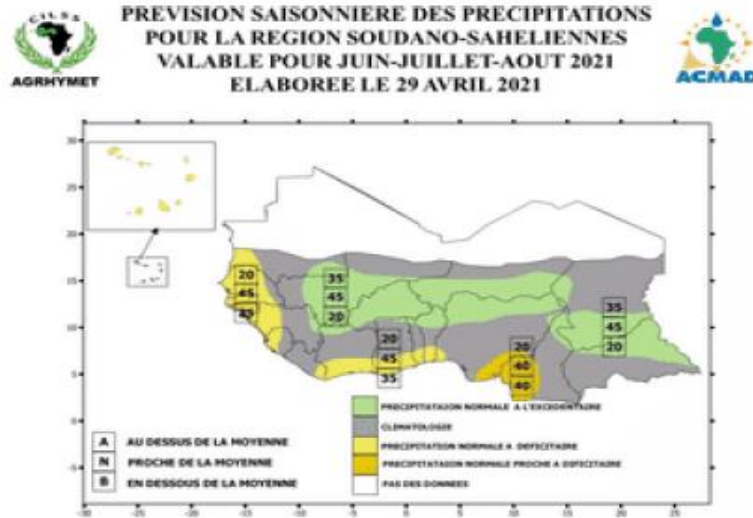
Short range forecasts provide estimates of rainfall up to June 10. In first dekad of June rainfall improvement will likely be observed across the region with average to above average seasonal rainfall except Niger, Northern Mali, Central Burkina Faso, Sierra Leone and Burkina Faso which are likely to be below average.

If the forecasts are verified, we might see an alleviation of the rainfall deficits in some areas and the onset of more favourable conditions for the early stages of the growing season. Other areas may remain drier than 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)

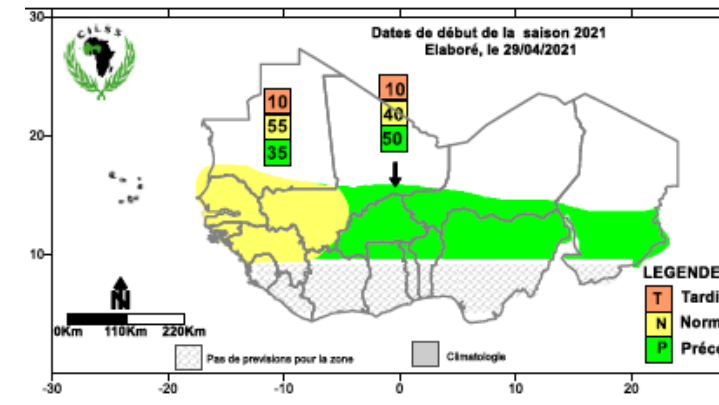


*PRESASS seasonal forecast, issued in April:
Dry spell duration tendency*

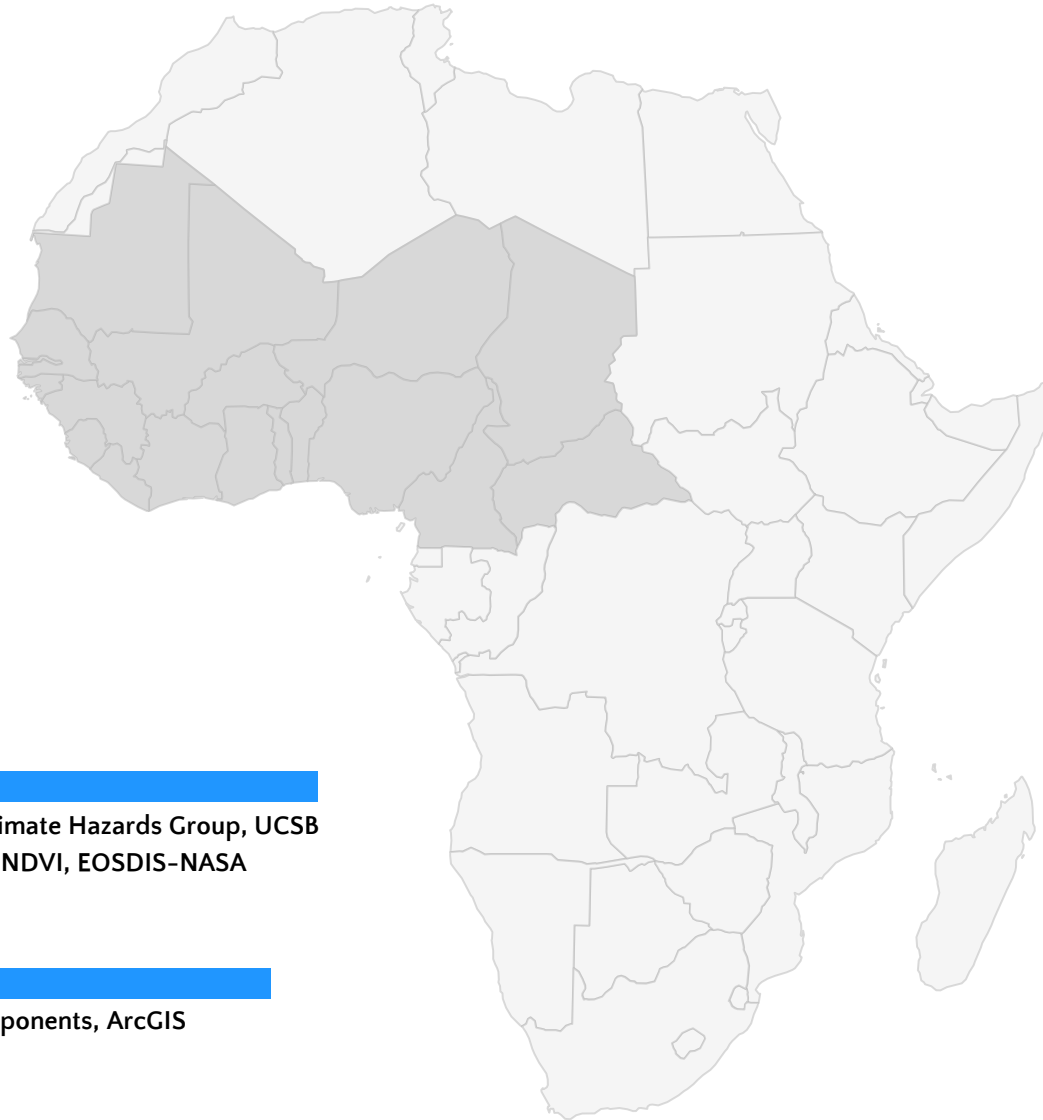
An early to normal onset of seasonal rains is likely expected over most of the Sahelian belt extended to northern parts of the Gulf of Guinea countries. However, in the area covering southern Senegal, Guinea Bissau, and Western Guinea, there are equal chances of having early, normal, or late onset dates.

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.

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.



*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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