



**Ten Days Climate Diagnostics Bulletin**

**N°23**

**Dekad 2, 11<sup>st</sup>–20<sup>th</sup> August 2022**

**HIGHLIGHTS**

- ✓ *During the first dekad of August 2022, rainfall activities were observed over most of Subtropical and tropical band of the Continent, with above-average to well above-average rainfall conditions observed over some westernmost of Western Africa, most of the northern part of Central Africa and northern parts of the Eastern Africa regions. Below-average to well below-average rainfall was recorded over western and central parts of Western Africa and southern side of the Central Africa..*
- ✓ *The dekad was characterized by neutral to cold SSTs conditions in the eastern parts of the Atlantic Ocean closer to the western coastline of the Continent. In addition, in the equatorial pacific region, La Nina conditions have persisted during most of the four last weeks. Over the Indian Ocean, the SSTs were mostly dominated by neutral to cold conditions led to reduced rainfall over the most the eastern side of East African countries. These conditions of the above average precipitation were led by easterly wave in some parts of the Equatorial and Subtropical band over the Continent.*
- ✓ *The outlook for 14 to 22 August 2022, depict a general tendency of below to normal precipitation over southern part of Mali, south western parts of Burkina Faso and northern parts of central Africa. But during the first to second week above average precipitations are expected to be observe from Senegal, Guinea, eastern Burkina Faso, Niger, Nigeria, Chad, Cameroon, CAR, Congo, DRC, South-Sudan, Sudan and Ethiopia.*

## 1.0 GENERAL CLIMATOLOGICAL SITUATION

Subsection 1.1 provides the strength of the surface pressure systems, ITD, CAB and ITCZ displacements, while subsection 1.2 is discussing the state of the troposphere and gives a summary of monsoon and relative humidity thresholds.

### 1.1 SURFACE

#### Pressure Systems

- **The Azores High** observed a central value of 1023 hPa, a 2hPa weakened from the previous dekad and strengthened by 2hPa compared to the climatological mean (1991-2020). The Azores high moved to the west to climatology over the North Atlantic Ocean and was located at 45°W and 38°N.
- **St. Helena High** observed a central pressure value of 1026hPa, a 5hPa strengthened from the previous dekad and the climatological mean (1991-2020). It was located at 26°W and 36°S. It was moved to west of its climatological position over the South Atlantic Ocean.
- **Mascarene High:** The central value for Mascarene High was 1027hPa. It was strengthened by 2hPa from the previous dekad and the climatological mean (1991-2020). Positioned at 68°E and 30°S, it moved to the south over the south Indian Ocean.
- **Heat Low:** Thermal low was observed with the value of 1008hPa over the southern parts of north part of Mali and west of Niger, located at 5°W/23°N and 15°E/17°N stable to previous dekad and its climatological mean.

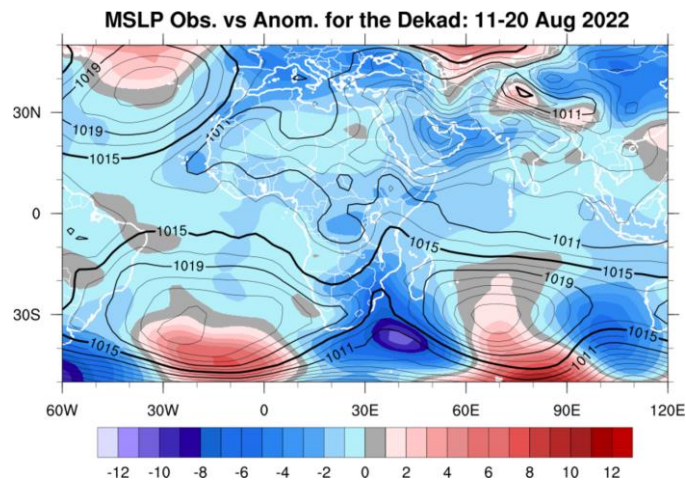


Figure 1. Observed Mean Sea Level Pressure (Contour) and anomaly (shaded) from 11<sup>th</sup> to 20<sup>th</sup> August 2022

## 1.2 TROPOSPHERE

### 1.2.1 African Monsoon

Figure 2a: This figure shows the dekad average wind at 850hPa. Negative wind from north to south easterly and southerly anomalies observed over Cameron, CAR, DRC and Angola. Positive wind anomaly observed over Chad, Nigeria, Niger and Chad.

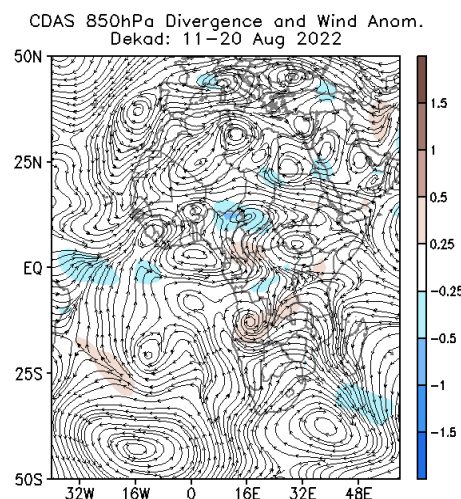


Figure 2a: Mean wind (m/s) at 850hPa from 11<sup>st</sup> to 20<sup>th</sup> August 2022, Source: NOAA/NCEP

Figure 2b: At the 700hpa level, the vortex wind anomaly was observed over northern parts the North Africa and Sahel region, in the central parts of the Continent the neutral wind from west to north-western have been observed.

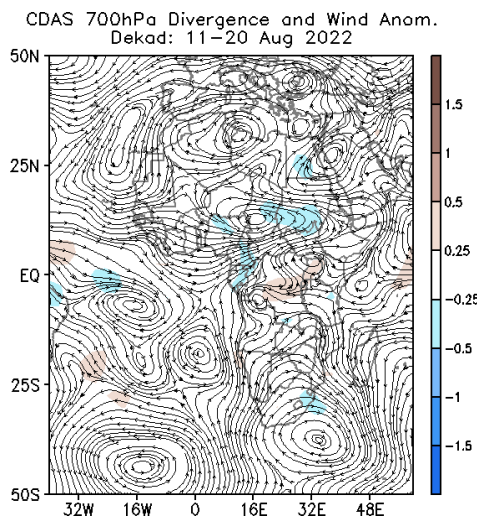


Figure 2b: Mean wind (m/s) at 700hPa from 1st to 10th August 2022, Source: NOAA/NCEP

Figure 2c: At the 200hpa level, the vortex wind anomaly was observed over northern parts the North Africa. Very strong south westerly wind vector anomalies at 200hPa observed mainly over the continent West Africa region.

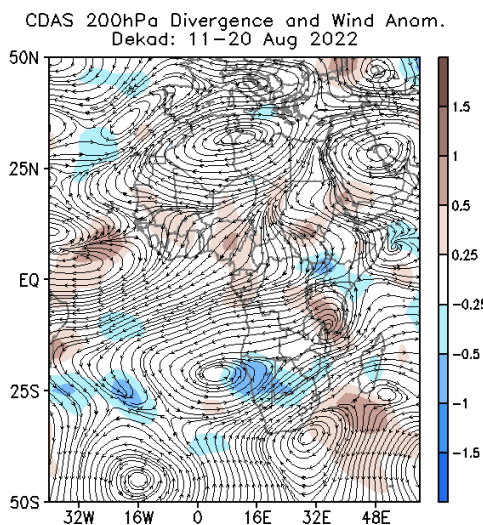


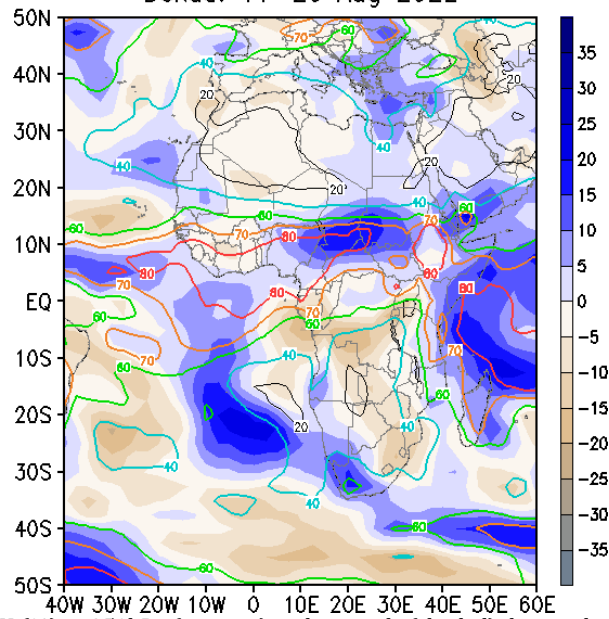
Figure 2c: Mean wind at 200 hPa (m/s) during the period 1st to 10th August 2022 (Source: NOAA/NCEP)

### 1.3. Relative Humidity (RH) at 850hPa

Figure 4 shows the dekadal observed relative humidity and anomalies at 850hPa for the second dekad of August 2022 for the reference period 1991-2020. Wet atmospheric conditions (relative humidity  $\geq 60\%$ ) were observed over Western Africa countries, the most of Central Africa and East African region. The rest of the continent observed RH values  $\leq 60\%$ .

Negative anomalies were observed during the second dekad of August 2022 over most of DRC, north and eastern parts of Angola, southern Zambia, Gabon, Uganda, south of Congo, northern parts of Mali, Mozambique, western parts of Botswana, eastern parts of South Africa and Eswatini, the positive anomalies were recorded over the rest of the continent

CDAS 850hPa Rel. Hum. and Anom.  
Dekad: 11–20 Aug 2022



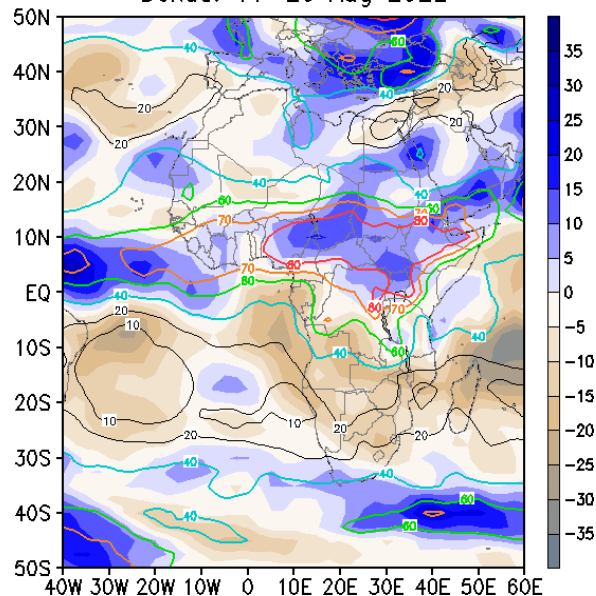
**Figure 4.** RH (%) at 850hPa (contour) and anomaly (shaded) during the period 11<sup>th</sup> to 20<sup>th</sup> August 2022  
(SOURCE/. NOAA/. NCEP-CAR/. CDAS1)

### 1.2.4 Relative Humidity at 700hPa

Figure 5 presents the dekad observed relative humidity at 700hPa. The figure shows that high relative humidity values  $\geq 60\%$  at 700hPa were observed over Western Africa countries, the most of Central Africa and East African region. The rest of the continent observed RH values  $\leq 60\%$ .

The relative humidity anomalies for the second dekad of August 2022 were negative over Egypt, Mali, northern parts of Algeria, southern parts of DRC, Angola, most parts of Zambia, Gabon, western parts of Congo, Mozambique, Botswana, Namibia, northern parts of South Africa and Eswatini Rwanda, Burundi, most parts of Tanzania, Somalia, and Madagascar. The rest of the continent observed positive anomalies.

CDAS 700hPa Rel. Hum. and Anom.  
Dekad: 11–20 Aug 2022



**Figure 5.** RH (%) at 700hPa (contour) and anomaly (shaded) during the period 11<sup>th</sup> to 20<sup>th</sup> August 2022  
(SOURCE/. NOAA/. NCEP-CAR/. CDAS1)

## 2.0 PRECIPITATION

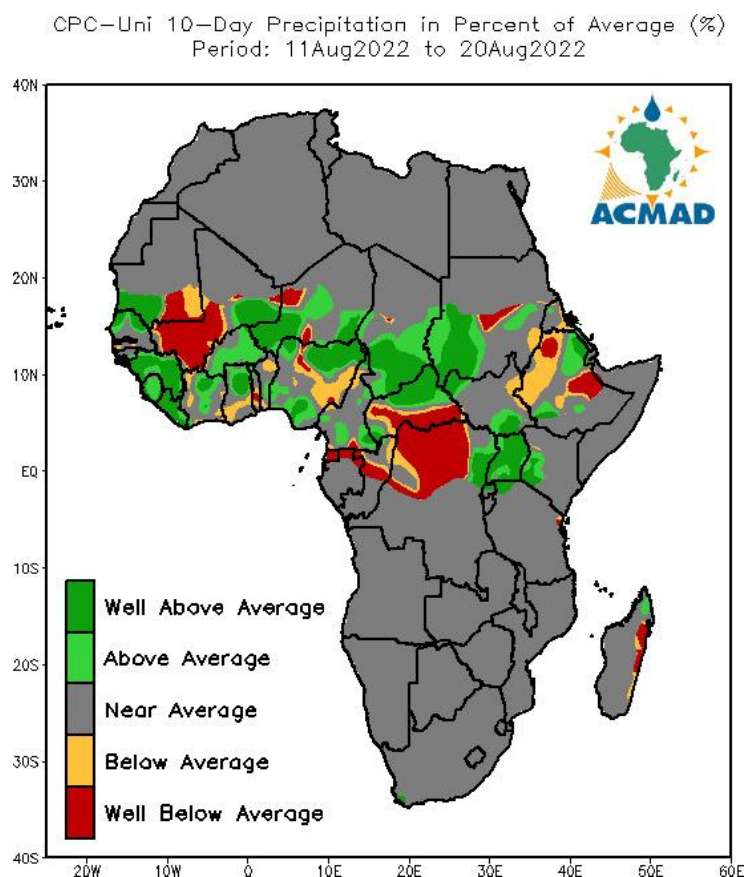
Figure 8 shows the observed precipitation as a percentage of average for the second dekad of August 2022.

### 2.1 Precipitation

During the second dekad of August 2022, rainfall activities were observed over most of Subtropical and tropical band of the Continent, with above-average to well above-average rainfall conditions observed over most of Western Africa, most of the northern part of Central Africa and some western parts of Eastern Africa regions. Below-average to well below-average rainfall was recorded over eastern and central parts of Western Africa and central parts of Central Africa and northern side of East Africa.

#### Details:

- **North Africa:** This region experienced mostly near average rainfall conditions.
- **Sahel:** Below to well below average rainfall conditions were experienced over south-eastern Mauritania, most of Mali. During the same dekad above to well above average precipitation over some parts of Senegal, Gambia, Guinea, Burkina Faso, central of Niger and Chad
- **Gulf of Guinea countries:** Most parts the region received above to well above-average precipitation over Ivory Coast, Ghana, Benin, Nigeria, Togo and Benin.
- **Central Africa countries:** experience below to well below normal precipitation was observed over south of CAR, Equatorial Guinea, northern Gabon, northern Congo and DRC.
- **East African countries:** most of eastern parts observed above to well above average rainfall conditions over south-western parts of Sudan, south pocket area of South-Sudan, Uganda, western Kenya and north-eastern Ethiopia, below to well below average were observed north-western and eastern parts of Ethiopia.
- **Southern Africa countries:** most parts of the SADC region are off-season.



*Figure 6: Precipitation in the percentage of the average for the second dekad 1st to 10th August 2022. The reference period used is 1991-2020. Source: NOAA/ NCEP/ CPC/ UNIFIED/ Africa/ DAILY/*

### 3.0 OUTLOOK RAINFALL VALID FOR 08 TO 21 AUGUST 2022

#### 3.1 PRECIPITATION

The outlook for 22 to 29 August 2022, depict a general tendency of below to normal precipitation over southern part of Mali, south western parts of Mauritania and some western parts of Burkina Faso. But during the first to second week above average precipitations are expected to be observing from Senegal, Guinea-Bissau, Guinea, Sierra Leone, Chad, Cameroon, CAR, Congo, Uganda, South-Sudan, Sudan and Ethiopia.

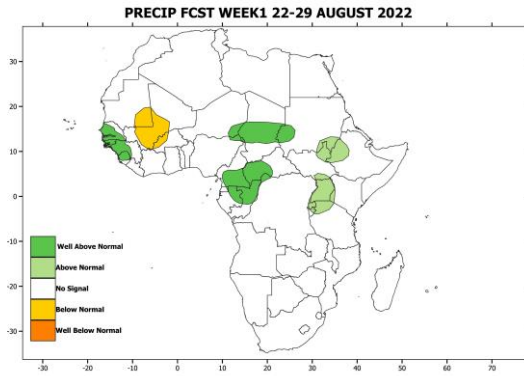


Figure 9a: Precipitation forecast for 22-29 August 2022

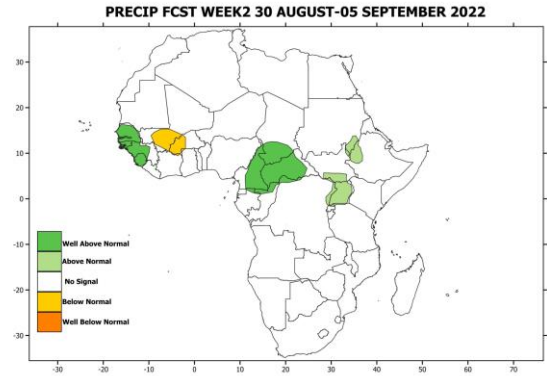


Figure 9b: Precipitation forecast for 30 August - 05 September 2022