



HIGHLIGHTS

- ✓ *During the second dekad of July 2022, rainfall activities were observed over most of the central parts of the Continent, with above-average to well above-average rainfall conditions observed over some western parts of Western Africa, most part of Central Africa and Eastern Africa regions. Below-average to well below-average rainfall was recorded over western and southern Western 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 for the past four 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 was led by easterly wave in some parts of the Equatorial and Subtropical band over the Continent.*
- ✓ *The outlook for 25 to 31 July 2022, depict a general tendency of below to normal precipitation over south-eastern and south-west of Western Africa, western Cameroon, much of Guinea Equatorial. During the same week above to well above average rainfall is expected over Senegal, Guinea, Mali, Burkina Faso, Niger, Nigeria, Chad, Cameroon, CAR, Congo, DRC, South Sudan, Sudan Ethiopia, Djibouti and Somalia. During the following week the rainfall is expected to be observing below normal over Sierra Leone, Liberia, Nigeria and Cameroon, and above average precipitation over Burkina Faso, Niger, Nigeria, Chad, Sudan South-Sudan, 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 1026 hPa, it was stable when compared to the previous dekad and weakened by 1hPa compared to the climatological mean (1991-2020). The Azores high moved to the west to the climatology over the North Atlantic Ocean and was located at 40°W and 33°N.
- **St. Helena High** observed a central pressure value of 1027hPa, a 2hPa strengthened from the previous dekad and the climatological mean (1991-2020). It was located at 8°w/28°S. It was moved to western of its climatological position over the South Atlantic Ocean.
- **Mascarene High:** The central value for Mascarene High was 1031hPa. It was strengthened by 6hPa from the previous dekad and 5 hPa to the climatological mean (1991-2020). Positioned at 59°E and 31°S, it moved to the west over the south Indian Ocean.
- **Heat Low:** Thermal low was observed with the value of 1007hPa over the western parts of Chad, located at 15°E and 16°N stable to previous dekad and its climatological mean..

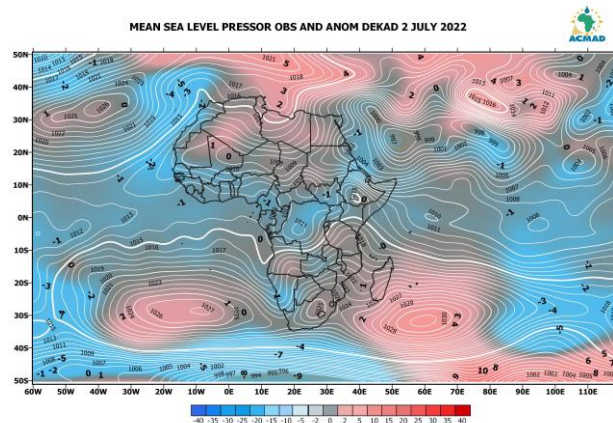


Figure 1. Observed Mean Sea Level Pressure (Contour) and anomaly (shaded) from 11th to 20th July 2022

1.2 TROPOSPHERE

1.2.1 African Monsoon

Figure 2a: This figure shows the dekad average wind at 850hPa. negative wind from north to north-easterly and east anomalies of about 6m/s - 8m/s average wind speeds were observed over parts of southern Morocco, Algeria, Libya, Niger, Sudan, Ethiopia, Chad, DRC and Uganda. The positive anomaly from north, south-eastern and eastern was observed over south Ethiopia, Somalia, Kenya, Tanzania, Zambia, Malawi, Mozambique, Zimbabwe, South Africa, Botswana and Angola.

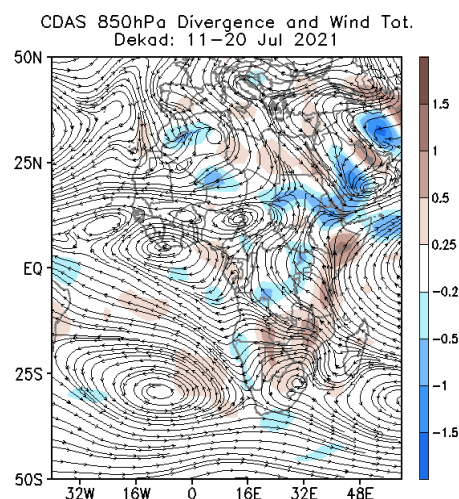


Figure 2a: Mean wind (m/s) at 850hPa from 11th to 20th July 2022, Source: NOAA/NCEP

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

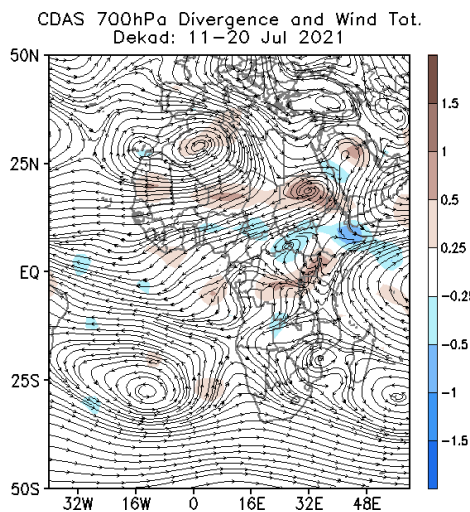


Figure 2b: Mean wind (m/s) at 700hPa from 11th to 20th July 2022, Source: NOAA/NCEP

Figure 2c: shows very strong westerly wind vector anomalies $\geq 14\text{m/s}$ at 200hPa observed mainly over the continent except for much of the Gulf of Guinea and parts of central, east and southern Africa that observed moderate wind speeds of about 6m/s-8m/s

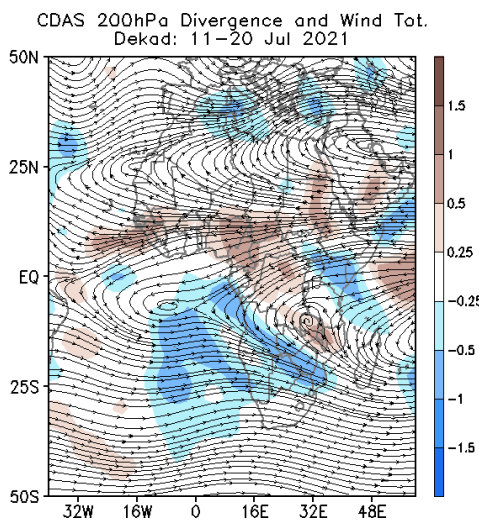


Figure 2c: Mean wind at 200 hPa (m/s) during the period 11th to 20th July 2022 (Source: NOAA/NCEP)

1.3. Relative Humidity (RH) at 850hPa

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

Negative anomalies were observed during the first dekad of July 2022 over DRC, Uganda, southern Congo, north of Angola, South-Africa, Eswatini, and Lesotho. Positive anomalies were recorded over the rest of the continent

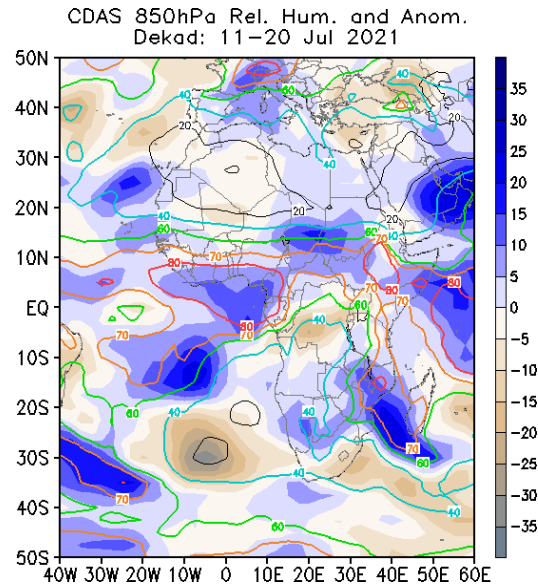


Figure 4. RH (%) at 850hPa (contour) and anomaly (shaded) during the period 11th to 20th July 2022
 (SOURCE/. NOAA/. NCEP-CAR/. CDAS1)

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 most of Guinea Gulf and southern parts the Sahel Countries, northern and central parts of Central Africa region and Eastern Africa. The rest of the continent observed RH values $\leq 60\%$.

The relative humidity anomalies for the second dekad of July 2022 were negative over Algeria, Libya, Mali, Burkina Faso, Ghana, Togo, Benin, Niger, Nigeria, Congo, DRC, Angola, Zambia, Namibia, Botswana, South Africa, Zimbabwe, Mozambique, South Africa, and Madagascar. The rest of the continent observed positive anomalies.

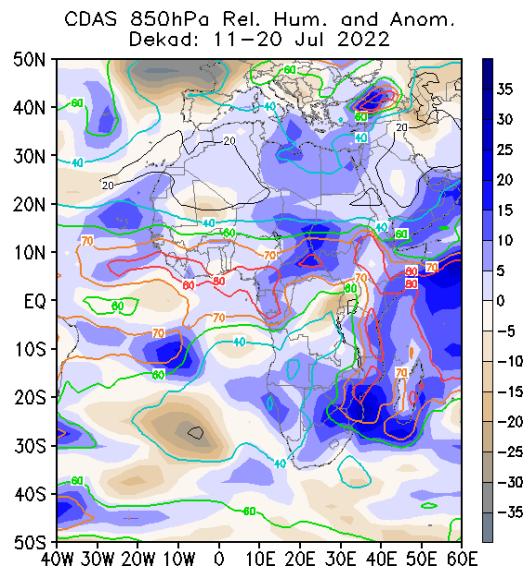


Figure 5. RH (%) at 700hPa (contour) and anomaly (shaded) during the period 11th to 20th July 2022
 (SOURCE/. NOAA/. NCEP-CAR/. CDAS1)

2.0 PRECIPITATION

Figure 6 shows the observed precipitation as a percentage of average for the second dekad of July 2022.

2.1 Precipitation

During the second dekad of July 2022, rainfall activities were observed over most of the central parts of the Continent, with above-average to well above-average rainfall conditions observed over some western parts of Western Africa, most part of Central Africa and Eastern Africa regions. Below-average to well below-average rainfall was recorded over western and southern Western Africa.

Details:

- **North Africa:** This region experienced mostly near average rainfall conditions..
- **Sahel:** Below to well below average rainfall conditions were experienced over southern Mauritania, western Mali, central of Niger. During the dekad above to well above average precipitation over southern Senegal, Guinea Bissau, much of Burkina Faso, southern Niger, central and southern Chad.
- **Gulf of Guinea countries:** some parts the region received below to well below-average precipitation over Sierra Leone, northern and central of Côte d'Ivoire, much of Ghana, Togo, Benin and most of the southern part of Nigeria, the region was experience above to well above average rainfall over Guinea, Liberia, southern Cote d'Ivoire, northern Togo, Benin and of Nigeria.
- **Central Africa countries:** experience above to well above normal precipitation was observed over much CAR, Cameroon, northern Congo and DRC.
- **East African countries:** most of eastern parts observed above to well above average rainfall conditions over most of the southern parts of Sudan, much of South-Sudan, north and west of Ethiopia, and much of Djibouti and Eritrea.
- **Southern Africa countries:** most parts of the SADC region are off-season.

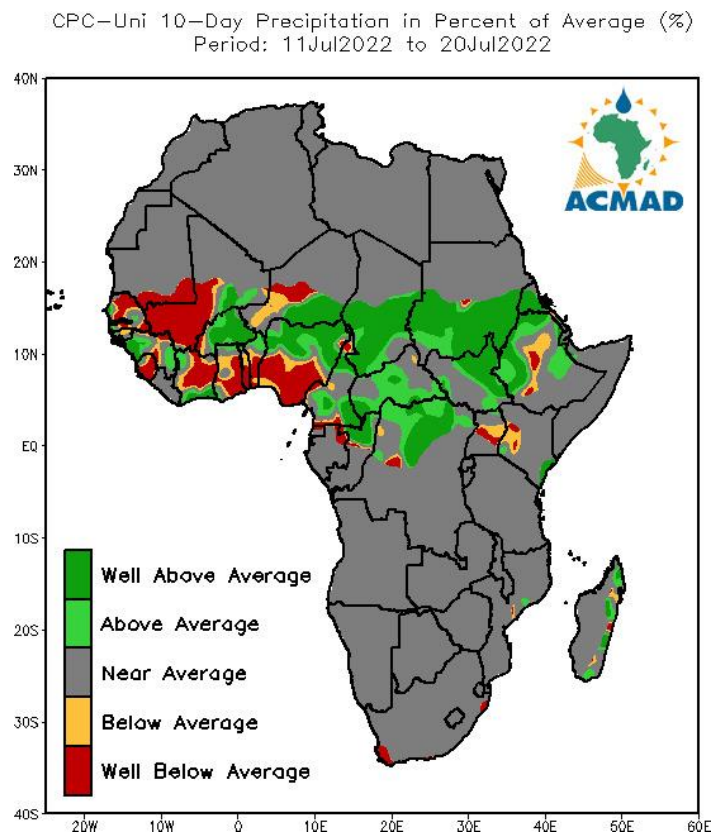


Figure 6: Precipitation in the percentage of the average for the first dekad 11th to 20th July 2022. The reference period used is 1991-2020. Source: NOAA/ NCEP/ CPC/ UNIFIED/ Africa/ DAILY/

3.0 OUTLOOK RAINFALL VALID FOR 26 JULY TO AUGUST 2022

3.1 PRECIPITATION

The outlook for 25 to 31 July 2022, depict a general tendency of below to normal precipitation over south-eastern and south-west of Western Africa, western Cameroon, much of Guinea Equatorial. During the same week above to well above average rainfall is expected over Senegal, Guinea, Mali, Burkina Faso, Niger, Nigeria, Chad, Cameroon, CAR, Congo, DRC, South Sudan, Sudan Ethiopia, Djibouti and Somalia. During the following week the rainfall is expected to be observing below normal over Sierra Leone, Liberia, Nigeria and Cameroon and above average precipitation over Burkina Faso, Niger, Nigeria, Chad, Sudan South-Sudan, and Ethiopia.

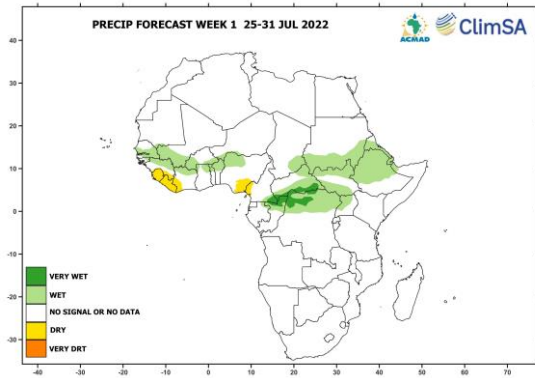


Figure 7a: Precipitation forecast for 25-31 July 2022

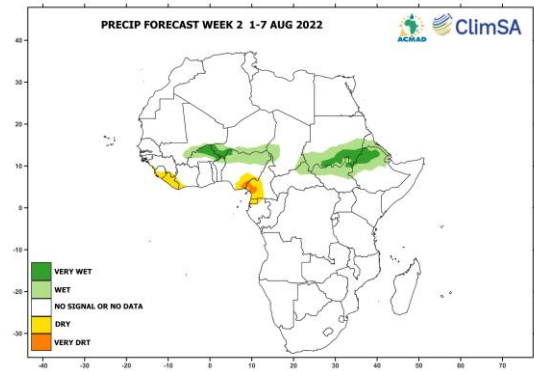


Figure 7b: Precipitation forecast for 1-7 August 2022