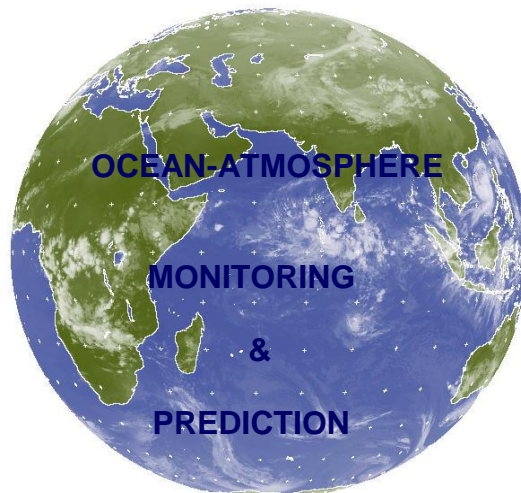


CLIMATE DIAGNOSTIC BULLETIN FOR AFRICA

NO. 8
AUGUST, 2022



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SUMMARY OF AUGUST 2022 AND OUTLOOK FOR SON 2022

The precipitation during August 2022, above-average to well above average was observed over Senegal, Guinea Bissau, Guinea, Liberia, western Côte d'Ivoire, Ghana, Niger, Cameroon, Gabon, Chad, Central African republic, Uganda, Rwanda, Burundi, most parts of Congo, South Sudan, Most parts of Ethiopia, western Kenya and northern Tanzania.

Below to well below-average precipitation was observed over south-east Mauritania, Mali, south of Nigeria and Madagascar. The rest of countinent shows ander normal condition.

The precipitation in the percent of average for June-July-August 2022 season was above to well above average over Senegal, Guinea Bissau, Guinea, western Côte d'Ivoire, Ghana, Niger, Cameroon, Gabon, Chad, Central African republic, southern parts of Uganda, Rwanda, Burundi, Congo, Most parts of Ethiopia and northern Tanzania.

Below to well below-average precipitation was observed over south-east Mauritania, Mali, south of Nigeria and Madagascar.

Positive temperature anomalies, greater than or equal to 1.5°C were observed during August 2022 over Morocco, western Algeria, eastern Libya, Egypt, East African Country, Mozambique, southern Namibia, south west of South Africa and Madagascar.

During the June-July-August 2022 season, positive temperature anomalies greater than or equal to 1.5°C were observed over Morocco, Mauritania, Algeria, Tunisia, Libya, Egypt, Mauritania, Senegal, Ethiopia, Somalia and South Africa.

Below average to normal to below rainfall is expected over southern Ethiopia, much of Somalia, Kenya and north-eastern Tanzania during the August to October 2022 season.

Normal to above average precipitation is very likely over south-western Mauritania, much of Senegal, Gambia, Guinea Bissau, north-western Guinea, southern Mali, Niger, must parts of Burkina Faso, northern Côte d'Ivoire, Ghana, Togo, Benin, Nigeria, central and southern parts of Chad, CAR, northern Cameroon, northern Congo, DRC and western South-Sudan during August to November 2022.

From August to October 2022 Above average precipitation is expected over south-eastern Sudan, northern Ethiopia, Eritrea, Djibouti, and eastern South-Sudan.

Above average Temperature is very likely over northern Morocco, Algeria and Egypt during July to October 2022. Over the northern Africa, Mauritania, Mali, Niger and Sudan near to above temperature is expected from August to November 2022

During August to November 2022, near to below average temperatures are very likely over South Africa, Lesotho and Eswatini. Morocco, much of Algeria, Tunisia, Libya, north Mauritania, northernmost of Mali, eastern Botswana, southern Zimbabwe and northern South Africa.

1. SYNOPTIC SITUATION FOR AUGUST 2022

This section shows the intensity of pressure centres, circulation and the associated anomalies at 850hPa, the wind direction and speed at the middle and higher levels, relative humidity at 850hPa and 700hPa, Sea Surface Temperature (SST) and El Nino/Southern Oscillation (ENSO).

1.1 Pressure Centres:

Figure 1 shows the locations and status of the surface pressure systems.

- **The Azores high:** The pressure systems at the Azores high recorded 1022hPa, weakened by 4 when compared to the previous month and intensifying by 2hPa than its climatology mean (1991-2020). The centre was located at 35°W, 33°N. It moved northern of its climatological position over the North Atlantic Ocean.
- **St. Helena High:** Observed a central value of 1023hPa, abating by 3hPa than its climatological mean (1991-2020). The centre was located at 34°S, 26°W, and it moved westward of its climatological position over South Atlantic Ocean.
- **Mascarene High:** The Mascarene high-pressure system observed a value of 1027hPa, abating by 2hPa when compared to the previous month and intensifying by 21hPa compared to its climatological mean (1991-2020). It moved eastward and was located at 73°E and 32°S.
- **Heat Low:** Twin heat-low located over Mali, eastern Niger and western Chad with 1008hPa respectively. The central values abating by 1hpa when compared to the previous month. The heat-lows were located at 4°W and 23°N and 15°E and 17°N respectively.

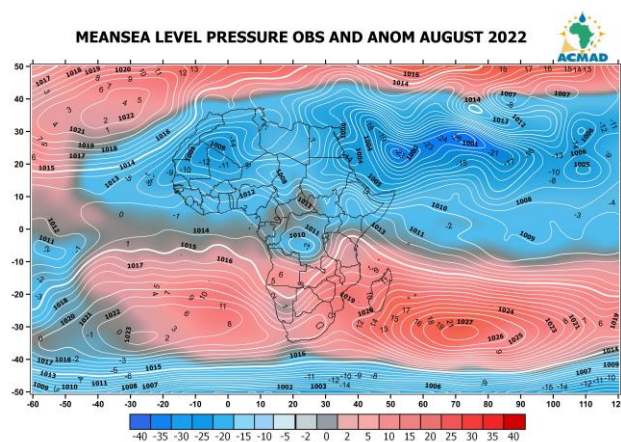


Figure 1. Observed Mean Sea Level Pressure (Contour) and anomaly (shaded) for August 2022 (Source: NOAA/NCEP)

1.2 Wind Anomalies (m/s) at 850hPa

Figure 2 shows wind anomalies at 850hPa. Light to moderate easterly winds was observed over Mali, Niger, Chad, Sudan, Uganda, DRC, Cameroon, Angola and Namibia.

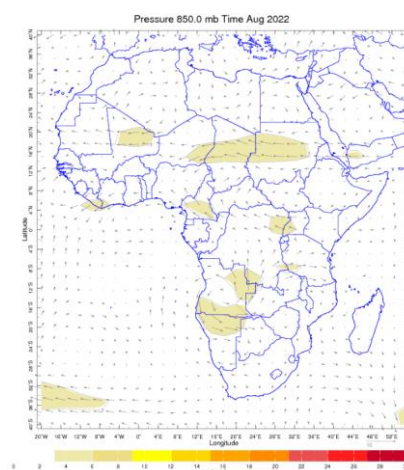


Figure 2a: Wind anomalies (m/s) at 850hPa for August 2022 (source: NOAA/NCEP)

1.2 Relative Humidity (RH) at 850hPa

In August 2022, high RH $\geq 60\%$ at 850hPa (fig.3) was observed over Western African Countries, Central Africa, Eastern Africa region and Madagascar. The rest of the continent observed RH values less than 60%.

Negative anomalies (1991-2020 mean) of relative humidity were observed over Morocco, northern Algeria, south tip of Congo, DRC, northern Tanzania, Burundi, Rwanda, Uganda and Angola. The rest of the continent observed positive anomalies of RH (above 1991-2020 mean) during August 2022.

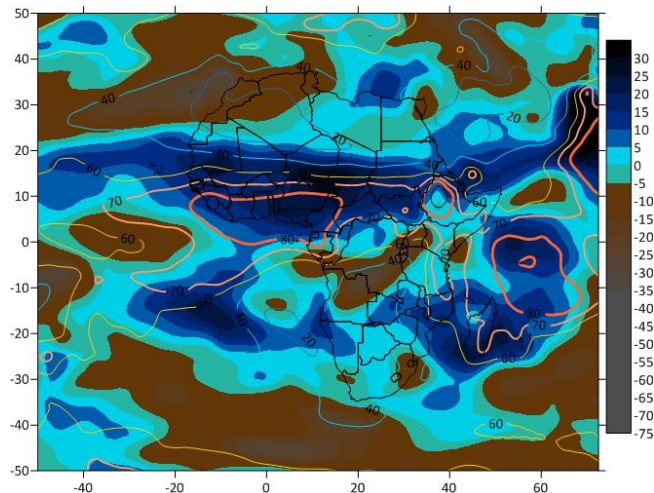


Figure 3. Relative humidity (%) at 850hPa (contour) and anomaly (shaded) for August 2022 (SOURCE: NOAA/NCEP)

1.4 Relative Humidity at 700 hPa

High RH $\geq 60\%$ at 700hPa (fig.4) was observed during August 2022 over Western Africa, Central Africa, Eastern Africa region and north part of SADC. The rest of the continent observed RH values were less than 60%.

Negative anomalies (1991-2020 mean) of RH were observed over north of Morocco, north west of Algeria, Mali, Somalia, Rwanda, Burundi, and most parts of SADC region. The rest of the continent observed positive anomalies (greater than the 1991-2020 mean) of RH during the month under review.

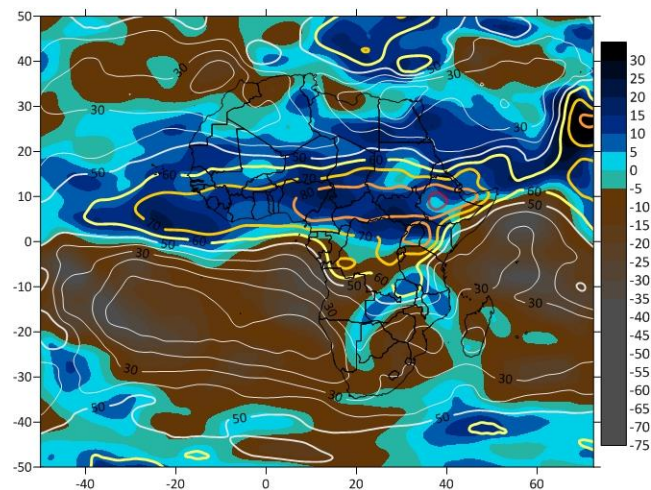


Figure 4. Relative humidity (%) at 700hPa (contour) and anomaly (shaded) for August 2022 (SOURCE: NOAA/NCEP)

1.5 Sea Surface Temperature (SST) and El Nino/Southern Oscillation (ENSO)

Over eastern to central parts of the Equatorial Pacific, near to below-average SSTs were observed during August 2022. Neutral to warm SST were noted over Tropical North Atlantic (TNA) area. In the Gulf of Guinea, neutral conditions prevailed during August 2022 with some positive conditions further south. Over the Indian Ocean, neutral to cold SSTs conditions were

recorded over the south-western Indian Ocean and neutral to warm SSTs were observed over the north to the south-eastern Indian Ocean.

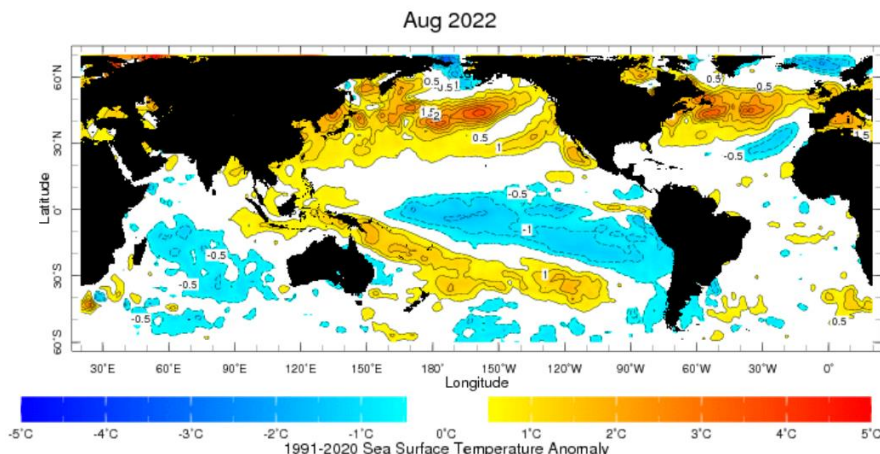


Figure 5: Sea surface temperature anomalies for August 2022 (source: IRI)

2. CLIMATOLOGICAL SITUATION AND IMPACTS DURING AUGUST 2022

This section provides the general climatological situation and its impacts, covering two major parameters; temperature and precipitation.

2.1 Precipitation

2.1.1 Monthly Precipitation

The precipitation during August 2022, above-average to well above average was observed over Senegal, Guinea Bissau, Guinea, Liberia, western Côte d’Ivoire, Ghana, Niger, Cameroon, Gabon, Chad, Central African republic, Uganda, Rwanda, Burundi, most parts of Congo, South Sudan, Most parts of Ethiopia, western Kenya and northern Tanzania.

Below to well below-average precipitation was observed over south-east Mauritania, Mali, south of Nigeria and Madagascar. The rest of continent shows under normal condition.

2.1.2 Seasonal Precipitation

The precipitation in the percent of average for June-July-August 2022 season was above to well above average over Senegal, Guinea Bissau, Guinea, western Côte d’Ivoire, Ghana, Niger, Cameroon, Gabon, Chad, Central African republic, southern parts of Uganda, Rwanda, Burundi, Congo, Most parts of Ethiopia and northern Tanzania.

Below to well below-average precipitation was observed over south-east Mauritania, Mali, south of Nigeria and Madagascar.

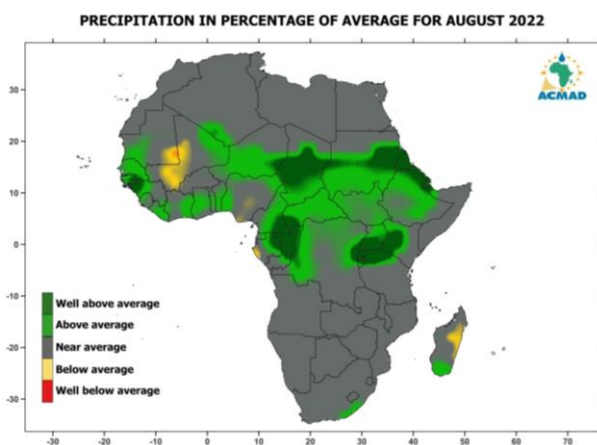


Figure 6a: Monthly precipitation in the percentage of the average for August 2022 (Source: NOAA/NCEP)

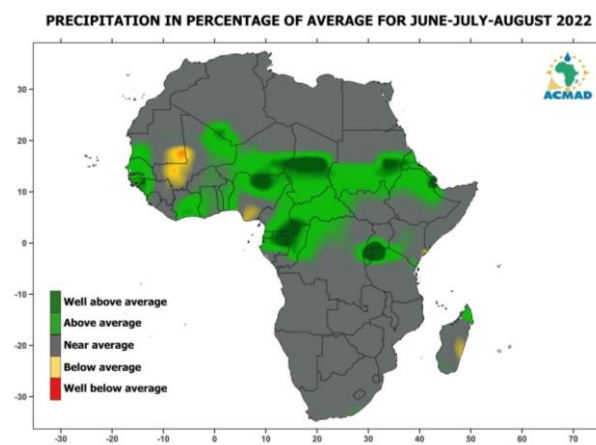


Figure 6b: Precipitation in the percentage of the average for June-July-August 2022 (Source: NOAA/NCEP)

2.2 Surface Temperature

2.2.1 Monthly Temperature Anomalies

Positive temperature anomalies, greater than or equal to 1.5°C were observed during August 2022 over Morocco, western Algeria, eastern Libya, Egypt, East African Country, Mozambique, southern Namibia, south west of South Africa and Madagascar.

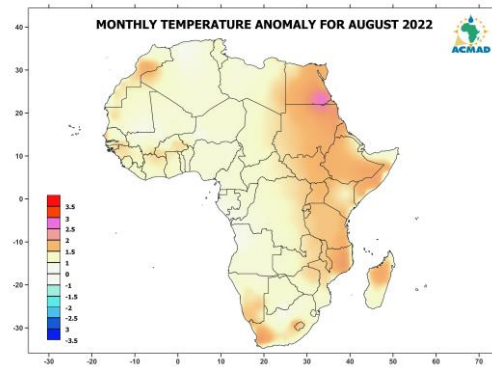


Figure 7: Temperature anomaly for August 2022 (Source: NOAA/NCEP)

2.2.2 Seasonal Temperature Anomalies

During the June-July-August 2022 season, positive temperature anomalies greater than or equal to 1.5°C were observed over Morocco, Mauritania, Algeria, Tunisia, Libya, Egypt, Mauritania, Senegal, Ethiopia, Somalia and South Africa.

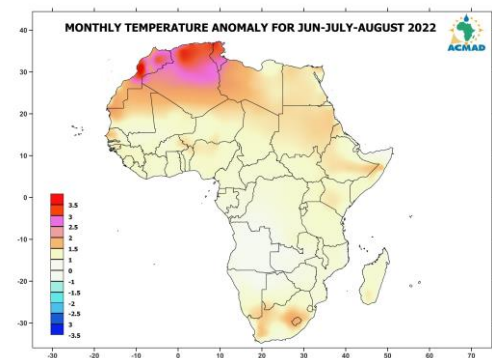


Figure 8: Seasonal temperature anomaly Jun-July-August 2022 (Source: NOAA/NCEP)

3. OUTLOOK

3.1 El Niño/La Niña

This section provides the predicted Sea Surface Temperature (SST) anomalies, exhibiting the future characteristics of ENSO and the precipitation outlook for the coming months.

Figure 12 shows the forecasts by dynamic and statistical models over Niño3.4 (5°N–5°S, 120°W–170°W).

In mid-August, sea surface temperatures in the central-eastern equatorial Pacific remain below-average. Key oceanic and atmospheric variables have remained consistent with La Niña conditions, although weakened. A La Niña Advisory still remains in place for August 2022. A large majority of the models in the plume predict SSTs to remain below-normal at the level of a weak La Niña until at least Sep–Nov 2022. Similar to the most-recent official CPC/IRI ENSO Outlook issued on August 14, 2022, the objective model-based ENSO outlook forecasts a continuation of the La Niña event with moderate probability (68% chance) during Aug–Oct 2022.

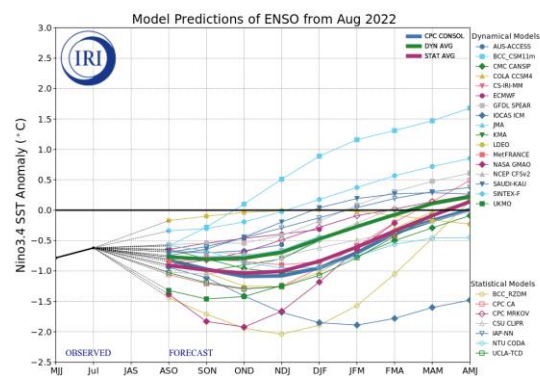


Figure 12: Ensemble multi-model forecast from August 2022 (Source: IRI)

3.2. Seasonal Precipitation Forecast for September-October-November 2022

The precipitation forecast for September-October-November 2022 season (fig.13), issued on August 31, 2022, reveals that:

Below average to normal to below rainfall is expected over southern Ethiopia, much of Somalia, Kenya and north-eastern Tanzania during the August to October 2022 season.

Normal to above average precipitation is very likely over south-western Mauritania, much of Senegal, Gambia, Guinea Bissau, north-western Guinea, southern Mali, Niger, must parts of Burkina Faso, northern Côte d'Ivoire, Ghana, Togo, Benin, Nigeria, central and southern parts of Chad, CAR, northern Cameroon, northern Congo, DRC and western South-Sudan during August to November 2022.

From August to October 2022 Above average precipitation is expected over south-eastern Sudan, northern Ethiopia, Eritrea, Djibouti, and eastern South-Sudan.

SEASONAL PRECIPITATION FORECAST
FOR SEPTEMBER-OCTOBER-NOVEMBER 2022
ISSUED ON AUGUST 25, 2022

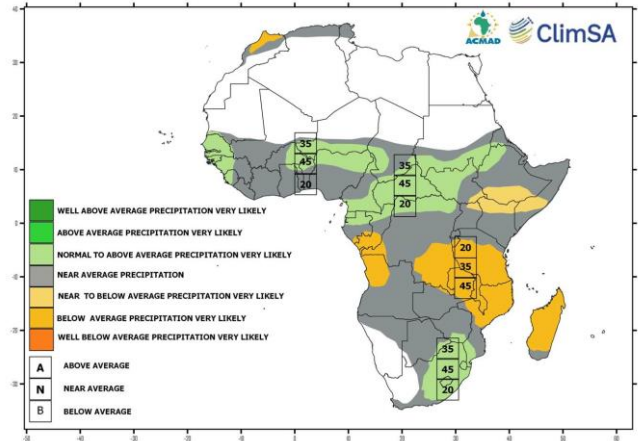


Figure 13: Seasonal precipitation forecast for September-October-November, 2022

3.3. Seasonal Temperature Forecast for September-October-November 2022

The temperature forecast for September-October-November 2022 season (fig.14), issued on August 31, 2022, shows that:

Above average Temperature is very likely over northern Morocco, Algeria and Egypt during July to October 2022. Over the northern Africa, Mauritania, Mali, Niger and Sudan near to above temperature is expected from August to November 2022

During August to November 2022, near to below average temperatures are very likely over South Africa, Lesotho and Eswatini. Morocco, much of Algeria, Tunisia, Libya, north Mauritania, northernmost of Mali, eastern Botswana, southern Zimbabwe and northern South Africa.

SEASONAL TEMPERATURE FORECAST
FOR SEPTEMBER-OCTOBER-NOVEMBER 2022
ISSUED ON AUGUST 25, 2022

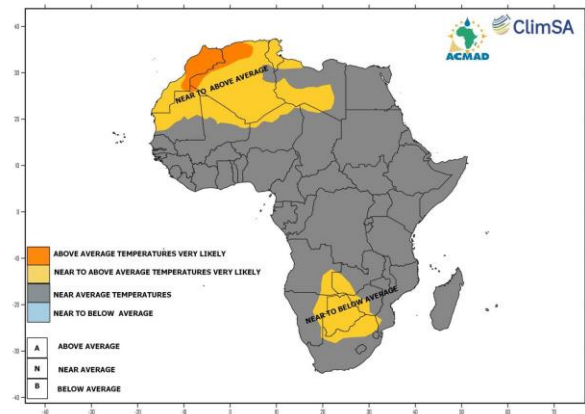


Figure 14: Temperature forecast for September-October-November, 2022