FAMINE EARLY WARNING SYSTEMS NETWORK

Democratic Republic of Congo

Monthly Climate and Weather

20 February 2025

Highlights

- La Niña conditions continued during January 2025 as indicated by below-average sea-surface-temperatures (SSTs) across the central and east-central equatorial Pacific Ocean. La Niña is expected to persist in the near-term, with a transition to El Niño Southern Oscillation (ENSO)-neutral conditions during March – May 2025 with a 66% chance, according to the latest ENSO outlook.

- In January 2025, northern and central provinces of the Democratic Republic of Congo (DRC) saw above-average **rainfall** (10-100 mm), with Equateur province exceeding 100 mm. In contrast, southern provinces experienced below-average rainfall (10-100 mm), with Kwango, Haut-Lomami, and Haut-Katanga facing deficits of 100 mm. In March, certain areas in the western and central regions, including Haut-Uele, Ituri, Nord-Kivu, Sankuru, Lualaba, and Haut-Katanga, are expected to have below-average rainfall.

- Much of the country experienced above-average **maximum temperatures**. Northern and southern regions saw increases of 2°C to 3°C, and the highest anomaly was 4°C in Bas-Uele province. Most areas reported normal **minimum temperatures**; however, the northeastern, central, and southern regions recorded increases of 1°C, with Bas-Uele, Haut-Uele, and Tshopo provinces seeing 2°C rises. Meanwhile, southern Haut-Katanga provinces had below-average temperatures of 2°C. In March 2025, DRC is expected to have above-average temperatures. Pocket areas in Tshopo province are favored to have a greater than 70% probability of above-average mean temperatures.

- The **Standardized Precipitation Index (**SPI) analysis for January 2025 shows that the DRC saw predominantly drier conditions, while some northern, eastern, and southern areas experienced near-normal to wetter conditions. Drier conditions are anticipated in west-central and eastern DRC. Near-normal conditions are expected over the western and central regions. Eastern pockets may see SPI > 2.0 standard deviations above the mean.

The FEWS NET Monthly Climate and Weather information bulletin is based on current weather and climate information and monthly and seasonal outlooks from the NOAA CPC. Information on crops, soil moisture, flooding, and evapotranspiration data were produced by FEWS NET, USGS, NASA and USDA. Various sources were used to assess impacts of extreme conditions. Questions or comments about this product may be directed to Dr. Wassila Thiaw, Head, International Desks/NOAA, wassila.thiaw@noaa.gov. Questions about the USAID FEWS NET activity may be directed to Dr. James Verdin, Program Manager, FEWS NET/USAID, jverdin@usaid.gov.

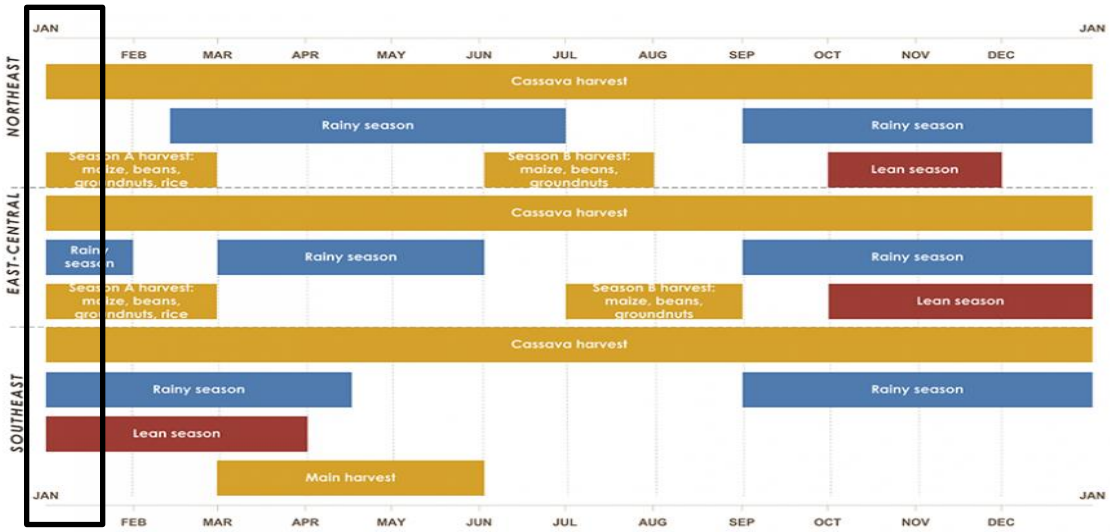


Figure 1: Seasonal calendar for DR Congo. **Source: FEWS NET**

Current Climate Modes and Teleconnections

- La Niña conditions continued during January 2025. Below-average SSTs persisted across the central and east-central equatorial Pacific Ocean. Subsurface temperatures were below-average across the central and eastern equatorial Pacific Ocean. Low-level wind anomalies remained easterly over the western and central Pacific, while upper-level wind anomalies were westerly over the central Pacific.

- The latest ENSO outlook anticipates La Niña conditions to persist in the near-term, with a transition to ENSO-neutral conditions during March – May 2025 with a 66% chance (**Fig. 2**). The latest update of the NOAA Climate Prediction Center's ENSO diagnostic discussion can be found here.

- Based on historical records, La Niña conditions are associated with near-normal rainfall and above-average mean temperatures in DRC. The La Niña-precipitation teleconnection pattern can be found here, and the pattern for temperature can be found here.

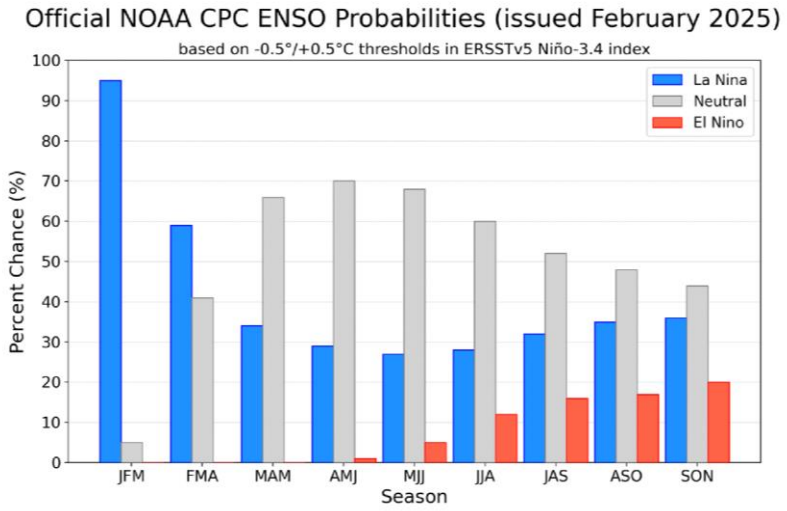


Figure 2: Official CPC ENSO probabilities outlook. **Source: NOAA/NCEP**

Extreme Events

- In the Democratic Republic of the Congo, 5,505 high-confidence fire alerts have been reported by VIIRS so far in 2025. In the last 4 weeks, the region with the most significant number of fire alerts was Kasai-Central, with 34 fire alerts. This represents 1.3% of all alerts detected in the Democratic Republic of the Congo.

Rainfall/Precipitation

Past 3 months (November 2024 to January 2025):

- **Total:** The DRC has recorded extremely heavy precipitation (300-750 mm) over much of the country for the past three months. Parts of the northern provinces, including Sud-Ubangi, Nord-Ubangi, Mongala, Bas-Uele, and Haut-Uele, received rainfall between 75-300 mm. The heaviest rainfall, greater than 750 mm, occurred in the western and northern Equateur, western Nord-Kivu, and the northern parts of Maniema provinces (**Fig. 3a)**.

- **Anomalies:** Rainfall was above-average by 25-200 mm in parts of the east, west, and central regions of the DRC. Large rainfall surpluses reaching 500 mm were observed in Equateur province. In contrast, part of the north, central, and southern regions experienced below-average rainfall (25-200 mm). High rainfall deficits were noted in the southern region, with provinces like Kwilu, Kasai, Kasai-Central, Lualaba, Haut-Lomami, and Haut-Katanga recording 100-200 mm of rainfall below the average (**Fig. 3b)**.

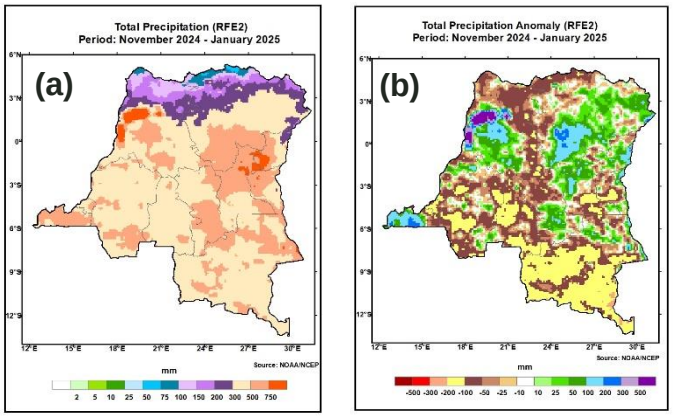


Figure 3: Spatial distribution for November 2024-January 2025 (a) total precipitation and (b) total precipitation anomaly. **Source: NOAA/NCEP**

Past 1 Month (January 2025):

- **Totals:** Much of the DRC experienced heavy rainfall, reaching between 100 and 300 mm and exceeding 300 mm in northern Equateur Province. The northern region received 25 to 100 mm of rainfall, and light rain (5-10) was recorded along the northern border (**Fig. 4a**).

- **Anomalies:** A blend of positive and negative anomalies was noted in the DRC. Most of the northern and central provinces experienced above-average rainfall, ranging from 10 to 100 mm. In the western and northern areas of Equateur province, rainfall surpluses exceeded 100 mm. Conversely, most southern provinces recorded below-average rainfall between 10 and 100 mm, with Kwango, Haut-Lomami, and Haut-Katanga provinces facing significant rainfall deficits of 100 mm (**Fig. 4b**).

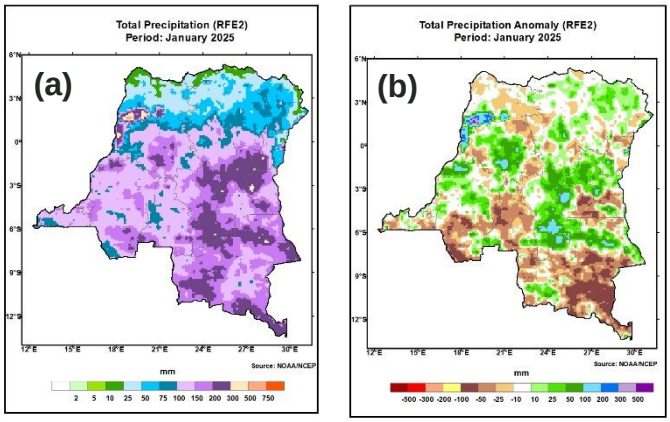


Figure 4: Spatial distribution for January 2025 (a) total precipitation and (b) total precipitation anomaly. **Source: NOAA/NCEP**

Monthly (March 2025) and Seasonal (March 2025 – May 2025) Forecasts:

- **Monthly:** In March, below-average rainfall is favored in pocket areas in the western and central regions. Localized places in Haut-Uele, Ituri, Nord-Kivu, Sankuru, Lualaba, and Haut-Katanga will likely experience below-average rainfall (**Fig. 5a**).

- **Seasonal:** Below-average rainfall is expected in the northern and central regions of the DRC. There is over a 40% probability of below-average rainfall occurring in the provinces of Tshuapa, Tshopo, Bas-Uele, and Haut-Uele. In contrast, parts of the southern region are expected to experience above-average rainfall, with a probability exceeding 40% in Tanganyika province (**Fig. 5b**).

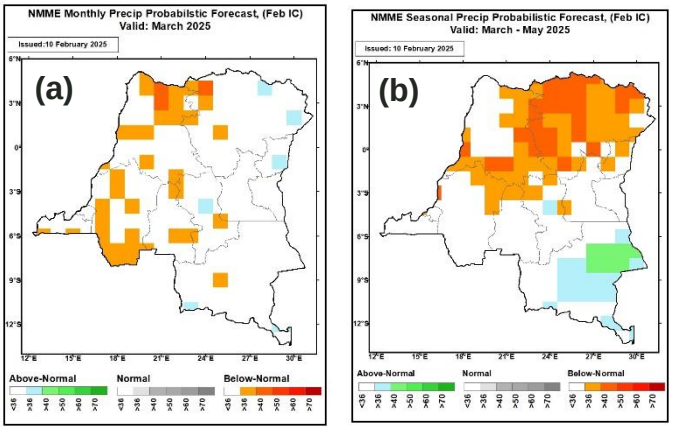


Figure 5: Rainfall forecast for (a) March 2025 and (b) March 2025 - May 2025. **Source: NOAA/NCEP**

Temperature

Past 3 months (November 2024 to January 2025):

- **Maximums:** Over the last three months, the DRC experienced maximum temperatures between 20 and 35°C, with most areas recording 1-3°C above-average. The northwestern and north-central regions observed 3°C above average, and southern Haut-Kantanga experienced 5°C above-average maximum temperatures. Near-average maximum temperatures were recorded in Kongo-Central, Kinshasa, western Kwango, eastern Tshopo, southern Haut-Uele, southern Ituri, Nord-Kivu, southern Sud-Kivu, and northeastern Tanganika provinces (**Fig. 6a**).

- **Minimums:** The mean minimum temperatures in the DRC over the past three months were 20°C in most areas of the country and 15°C along the northern and eastern borders and parts of the southern region. Near-average minimum temperatures were recorded in many areas of the DRC, except in the northeastern region and parts of the central and southern regions, which experienced slightly above-average minimum temperature anomalies of 1°C. Conversely, below-average minimum temperatures (2-3°C) were observed in southern Haut-Katanga province (**Fig. 6b)**.

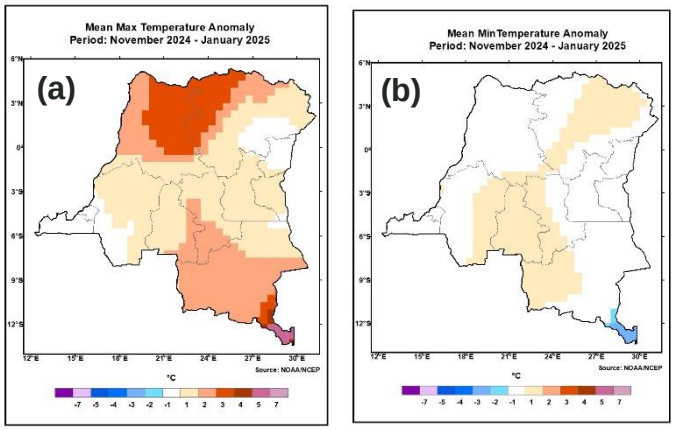


Figure 6: Spatial distribution for November 2024 – January 2025 (a) mean maximum temperature anomaly and (b) mean minimum temperature anomaly. **Source: NOAA/NCEP**

Past 1 Month (January 2025):

- **Maximums:** Mean maximum temperatures in the DRC ranged from 20°C to 35°C. The highest maximum temperatures (30°C) occurred in the Sud-Ubangi, Nord-Ubangi, Mongala, and Bas-Uele provinces. The country experienced above-average maximum temperatures (1°C) over many areas in the country. Parts of the northern and southern regions experienced anomalies ranging from 2°C to 3°C. The highest temperature anomaly of 4°C was observed in localized places in Bas-Uele province. Near-average maximum temperatures were recorded in Kongo-Central, western Kwango, southern Haut-Uele, and much of Nord-Kivu provinces (**Fig. 7a**).

- **Minimums:** The mean minimum temperature over the last month in the DRC ranged from 15°C to 20°C. The northern and eastern borders and parts of the southern regions experienced minimum temperatures of 15°C. Most of the country recorded near-normal minimum temperatures. Above-average mean minimum temperatures (1°C) were recorded in parts of the northeastern, central, and southern regions. Areas in Bas-Uele, Haut-Uele, and Tshopo provinces reported mean minimum temperatures that were above-average by 2°C. In contrast, below-average mean minimum temperatures of 2°C were observed in the southern part of Haut-Katanga provinces (**Fig. 7b**).

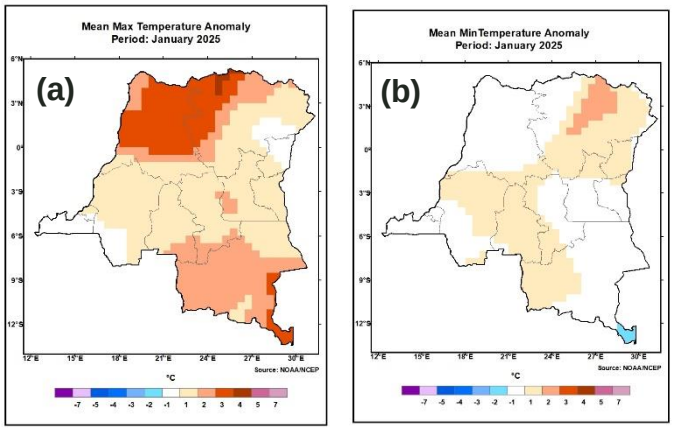


Figure 7: Spatial map for January 2025 (a) mean maximum temperature anomaly and (b) mean minimum temperature anomaly. **Source: NOAA/NCEP**

Monthly (March 2025) and Seasonal (March 2025 – May 2025) Forecasts:

- **Monthly:** In March 2025, DRC is expected to have above-average temperatures. Pocket areas in Tshopo province are favored to have a greater than 70% probability of above-average mean temperatures **(Fig. 8a)**.

- **Seasonal:** Above-average mean temperatures are expected in the DRC from March to May 2025. Parts of the western, central, and eastern provinces are favored to have a greater than 70% probability of above-average mean temperatures (**Fig. 8b)**.

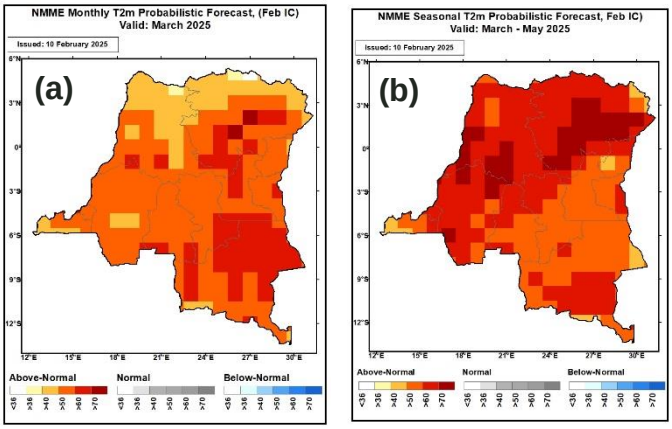


Figure 8: Spatial map for (a) March 2025 mean temperatures forecast and (b) March 2025 – May 2025 mean temperatures forecast. **Source: NOAA/NCEP**

Flooding and Areas of Inundation

- There have been no reports of flooding in the past month.

Drought and Dryness

The Standardized Precipitation Index (SPI) is used to characterize meteorological drought. SPI compares the precipitation over a specific period of time with the climatology from that same period. Therefore, the SPI values can be thought of as the number of standard deviations the observed anomaly deviates from the climatology. The 1-month SPI values are a good representation of the monthly precipitation anomaly as well as the soil moisture and vegetation health. The 3-month SPI values are a good representation of seasonal precipitation anomalies. The Standardized Precipitation Evapotranspiration Index (SPEI) is similar to the SPI, but it also takes evapotranspiration into account (and therefore the impact of temperatures on water demand).

Past 3 Months (November 2024 to January 2025):

- From November 2024 to January 2025, much of the DRC experienced drier-than-average conditions. Regions with an SPI greater than 2 standard deviations below the mean were observed in parts of the northern, western, and southern provinces. In contrast, near-average to wetter-than-average conditions were noted in some areas of the west-central and eastern provinces **(Fig. 9a)**.

Past 1 Month (January 2025):

- In January 2025, much of the DRC experienced drier-than-average conditions. Near-normal to wetter-than-average conditions were observed in parts of the northern, eastern, and southern regions **(Fig. 9b)**.

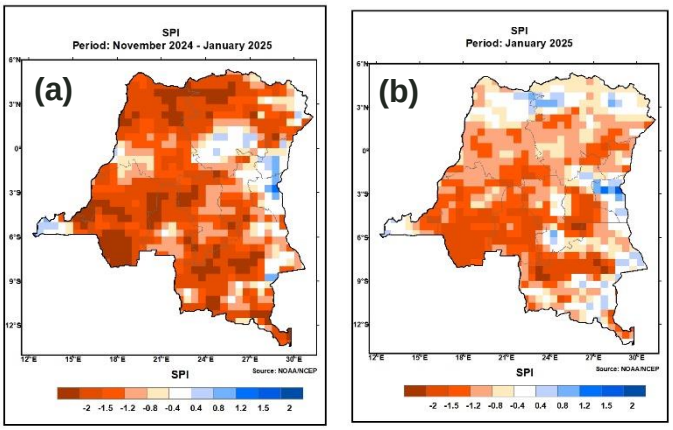


Figure 9: Spatial structure of Standardized Precipitation Index (SPI) (a) November 2024 – January 2025 (b) January 2025. Source: NOAA/NCEP. **Source: NOAA/NCEP**

Current/Forecast (7 November 2024 to 4 February 2025):

- The SPI forecast, constructed from observed precipitation from 3 December 2024 to 2 February 2025 and forecasted rainfall data from 3 February to 2 March 2025, suggests that drier-than-average conditions will prevail over west-central and eastern regions of the DRC. Near-normal conditions are expected over the western and central regions. An SPI greater than 2.0 standard deviations above the mean is expected in the pocket areas in the eastern region.

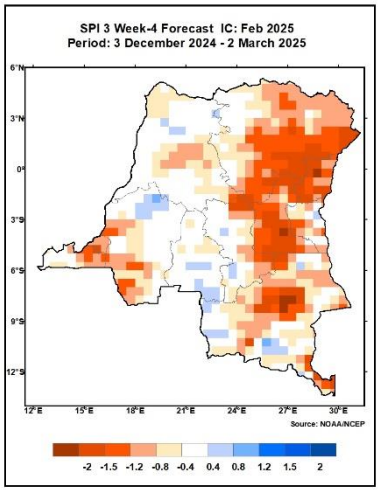


Figure 10: Spatial structure of SPI constructed from observations for 3 December 2024 to 2 February 2025 and 4 weeks forecast ending on 2 March 2025. **Source: NOAA/NCEP**

Water Requirement Satisfaction Index (WRSI)

- Not Available

GEOGLAM Crop Monitor

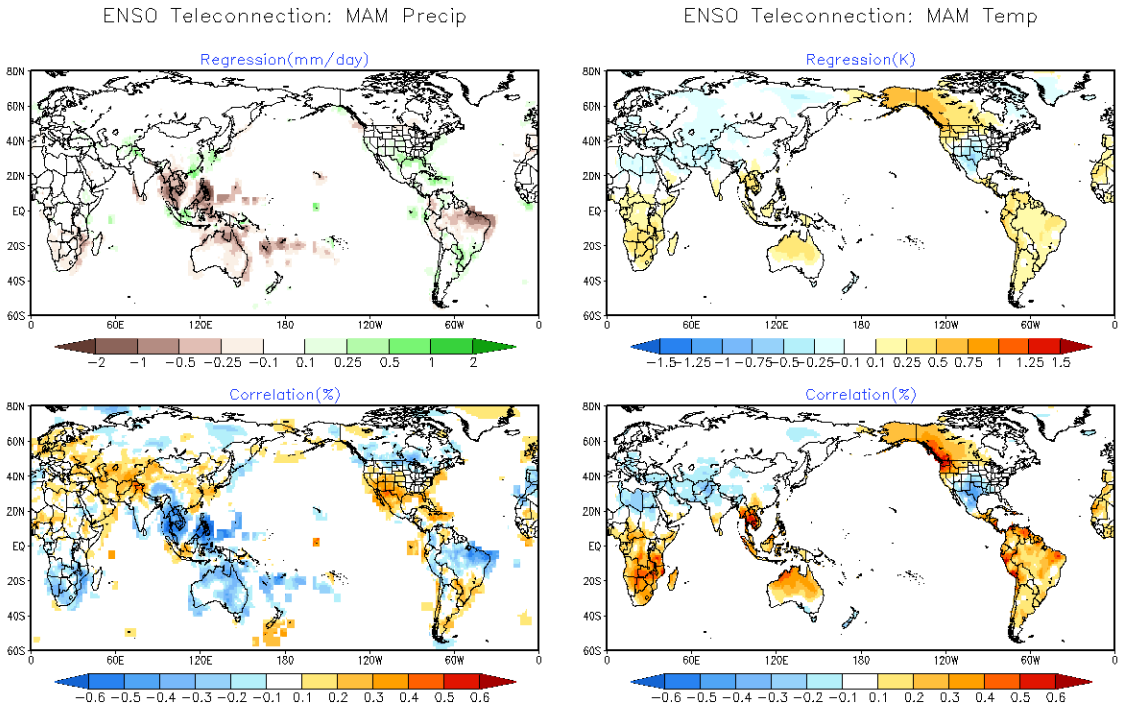
In the Democratic Republic of the Congo, the harvest of main season maize is nearing completion in the central and central-east regions, while the planting of second-season maize continues in the central and southeastern areas. Overall, conditions remain favorable despite below-average cumulative rainfall, with some areas experiencing the lowest amounts on record. Heavy rains returned to parts of Maniema, located in the central region, from mid-January to early February, which could affect harvesting activities.

Additional Resources

https://www.sadc.int/pillars/meteorology

https://fews.net/node/32023/print/download

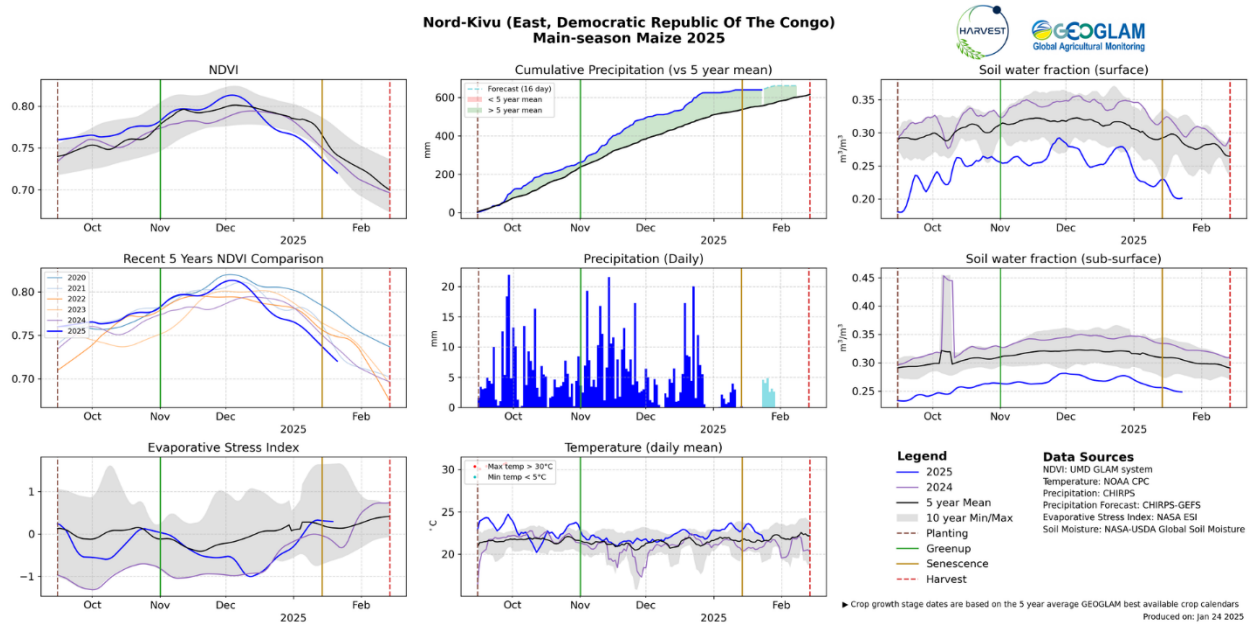
Annex



GEOGLAM Agro-meteorological Earth Observation Indicators:

First-Season Maize

Nord-Kivu:



Sud-Kivu: