FAMINE EARLY WARNING SYSTEMS NETWORK

Democratic Republic of Congo

Monthly Climate and Weather

20 March 2025

Highlights

- In February 2025, weak below-average sea surface and subsurface temperatures were observed in the central and eastern Pacific Ocean, although negative anomalies remained at depth in the eastern Pacific. **ENSO-neutral** is expected to develop in the next month and persist through the Northern Hemisphere summer during June-August 2025 with a 62% chance according to the latest ENSO outlook.

- In February 2025, most areas of the Democratic Republic of Congo (DRC) experienced above-average **rainfall**, particularly in the northern, western, eastern, and southern provinces, with rainfall totals reaching 50-100 mm above-average. Equateur province had the highest rainfall surpluses of 100-300 mm. Conversely, northeastern, central, and western regions experienced below-average rainfall (10-50 mm), while Haut-Uele, Sankuru, and northern Kasai recorded 100 mm below-average. In April, northern and central-southeastern areas expect below-average rainfall. Southern provinces, however, anticipate above-average rainfall, particularly in Lomami and Haut-Lomami, with over 40% probability.

- The DRC recorded **maximum temperatures** of 1°C above-average in several regions, with central and eastern Bas-Uele, western Haut-Uele, southern Lualaba, southern Haut-Lomami, southern Tanganika, and Haut-Katanga experiencing anomalies of 3°C above-average. Most areas had near-normal **minimum temperatures**, though parts of northeastern, central, and southern regions reported mean minimum temperatures above average by 1-2°C. In April 2025, DRC is expected to face above-average temperatures.

- The **Standardized Precipitation Index (SPI)** analysis for February 2025 shows that much of the DRC experienced drier-than-average conditions, while northern, eastern, and southern regions saw near-normal to wetter than average weather conditions. The SPI forecast predicts drier conditions in west-central and eastern DRC. In contrast, wetter conditions are expected in northern, central, and southern areas. Near-average conditions are anticipated in the central and a few surrounding areas.

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.

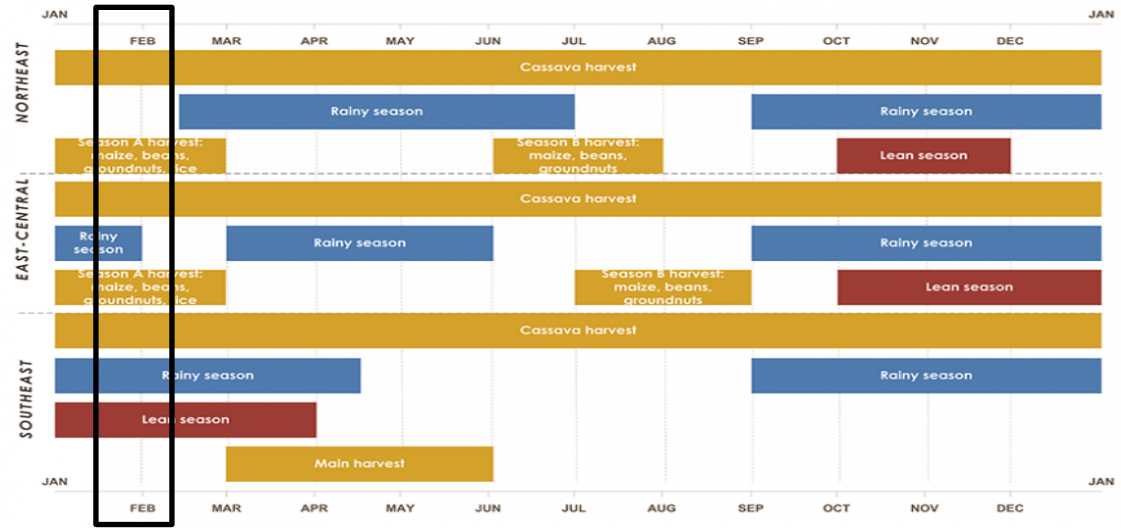


Figure 1: Seasonal calendar for DR Congo. **Source: FEWS NET**

Current Climate Modes and Teleconnections

- During February 2025, below-average sea surface temperatures (SSTs) weakened in the central and east-central equatorial Pacific Ocean. Below-average subsurface temperatures also weakened, but negative anomalies persisted at depth in the eastern Pacific and extended down to 200m in the central Pacific. Tropical Pacific atmospheric anomalies continued to indicate La Niña conditions. Low-level wind anomalies remained easterly over the western and central Pacific, while upper-level wind anomalies were westerly over the east-central Pacific.

- The latest ENSO outlook anticipates ENSO-neutral to develop in the next month and persists through the Northern Hemisphere summer during June-August 2025 with a 62% 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.

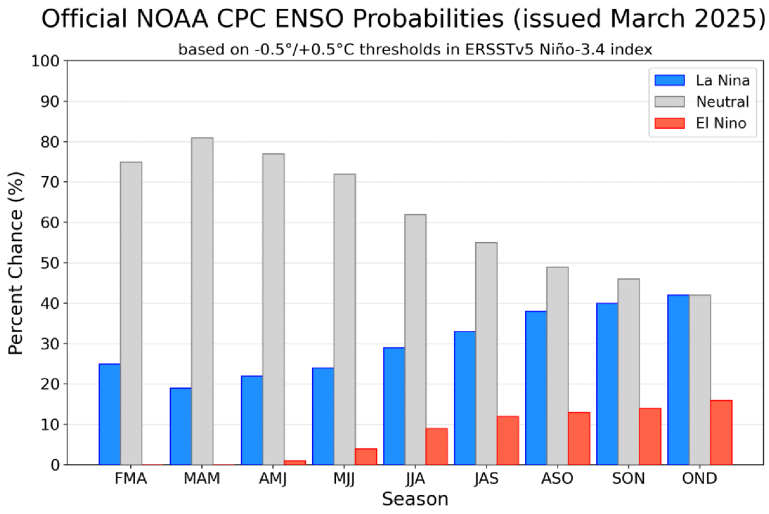


Figure 2: Official CPC ENSO probabilities outlook. **Source: NOAA/NCEP**

Extreme Events

- In the Democratic Republic of the Congo, 9,181 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 Haut-Katanga, with 8 fire alerts. This represents 0.22% of all alerts detected in the Democratic Republic of the Congo.

Rainfall/Precipitation

Past 3 months (December 2024 to February 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, the northern part of Tshopo, Haut-Uele, and Ituri, received rainfall between 75-300 mm. The heaviest rainfall, greater than 750 mm, occurred in the western and northern Equateur and the northern parts of Maniema provinces (**Fig. 3a)**.

- **Anomalies:** Rainfall was above average by 25 to 200 mm in parts of the western, eastern, and central regions of the DRC. Significant rainfall surpluses reaching 500 mm were observed in Equateur province. In contrast, parts of the northern, central, and southern regions experienced below-average rainfall (25 to 200 mm). Severe rainfall deficits were noted in the southern region, with provinces such as Kwilu, Kasai, Lualaba, Haut-Lomami, and Haut-Katanga recording 100 to 200 mm below-average rainfall. (**Fig. 3b)**.

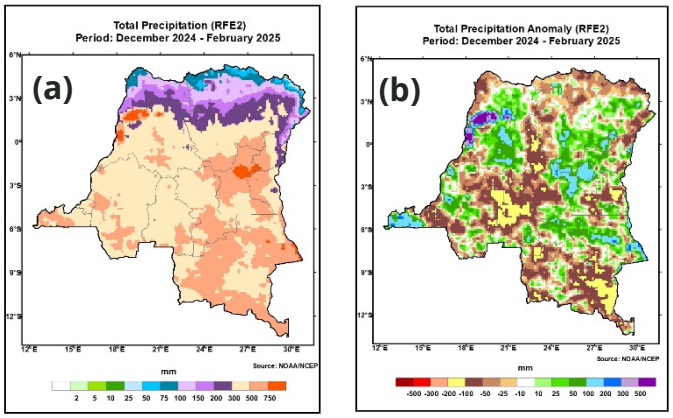


Figure 3: Spatial distribution for December 2024 – February 2025 (a) total precipitation and (b) total precipitation anomaly. **Source: NOAA/NCEP**

Past 1 Month (February 2025):

- **Totals:** Much of the DRC experienced heavy rainfall, reaching between 100 and 300 mm and exceeding 300 mm in pocket areas over Equateur, Maniema, and Sud-Kivu provinces. Parts of the northern region, including Sud-Ubangi, Nord-Ubangi, Bas-Uele, the northern part of Tshopo, Haut-Uele, and Ituri provinces, received 10-75 mm of rainfall (**Fig. 4a**).

- **Anomalies:** Above-average rainfall was recorded in most areas of the DRC. Parts of the northern, western, eastern, and southern provinces registered 50-100 mm above-average rainfall. The Equateur province received the highest rainfall, representing 100-300 mm above average. Conversely, northeastern, central, and western regions saw below-average rainfall (10-50 mm), and Haut-Uele, Sankuru, and northern Kasai recorded 100 mm below average (**Fig. 4b**).

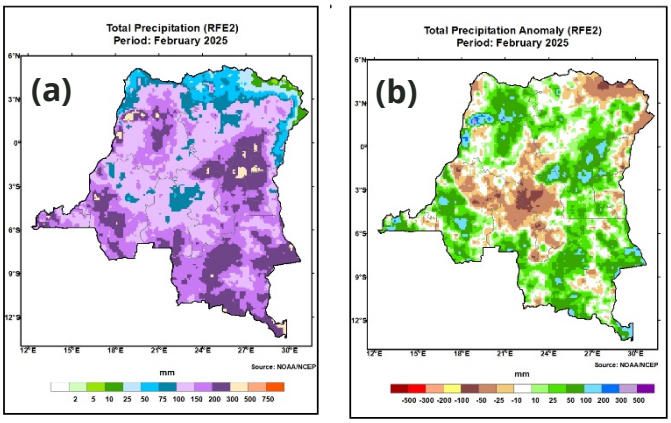


Figure 4: Spatial distribution for February 2025 (a) total precipitation and (b) total precipitation anomaly. **Source: NOAA/NCEP**

Monthly (April 2025) and Seasonal (April 2025 – June 2025) Forecasts:

- **Monthly:** In April, below-average rainfall is favored in parts of the north and pocket areas in the central and southeastern provinces, with a probability exceeding 40% in parts of Nord-Ubangi, Mongala, and Bas-Uele provinces. In contrast, above-average rainfall is expected in parts of the southern provinces, with a probability greater than 40% in the pocket areas of Lomami and Haut-Lomami provinces (**Fig. 5a**).

- **Seasonal:** Below-average rainfall is expected in pocket areas of Bas-Uele and Ituri provinces. In contrast, parts of west-central, northeastern and southern regions are expected to experience above-average rainfall with a probability exceeding 40% in parts of Lomami and Tanganyika provinces (**Fig. 5b**).

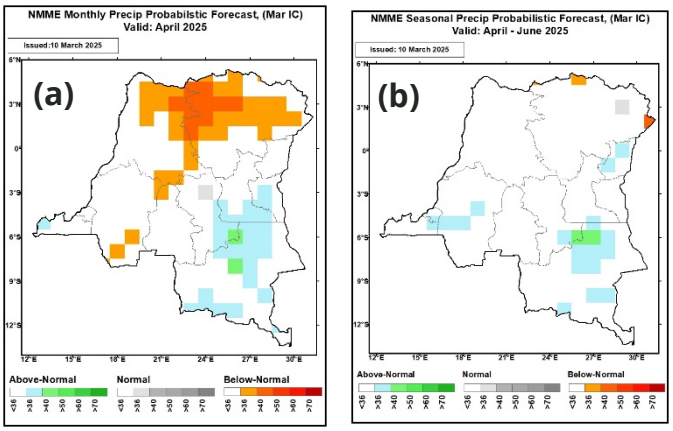


Figure 5: Rainfall forecast for (a) April 2025 and (b) April 2025 - June 2025. **Source: NOAA/NCEP**

Temperature

Past 3 months (December 2024 to February 2025):

- **Maximums:** Over the last three months, the DRC experienced maximum temperatures between 20 and 35°C. Areas in the northern region near the border recorded the highest temperature at 35°C. Most of the DRC recorded above-average maximum temperatures, with some areas in the west-central and northeastern regions experiencing near-average maximum temperatures. The northwestern,

north-central, and southern regions saw significant maximum temperatures of 3-4°C above average, with southern Haut-Katanga province registering maximum temperatures 5-7°C above average (**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 1-2°C. Conversely, below-average minimum temperatures (2°C) were observed in southern Haut-Katanga province (**Fig. 6b)**.

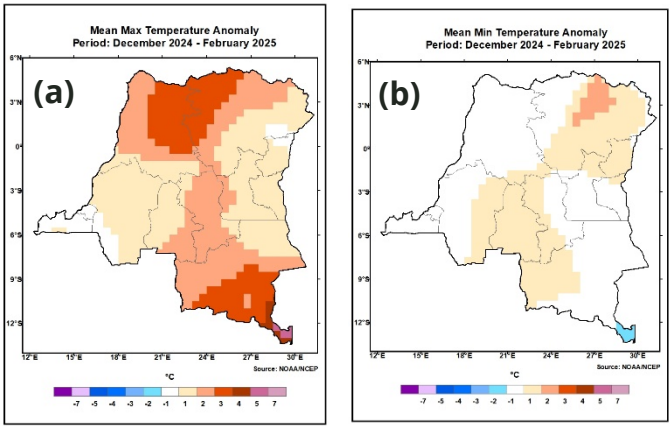


Figure 6: Spatial distribution for December 2024 – February 2025 (a) mean maximum temperature anomaly and (b) mean minimum temperature anomaly. **Source: NOAA/NCEP**

Past 1 Month (February 2025):

- **Maximums:** Mean maximum temperatures in the DRC ranged from 20°C to 35°C. The highest maximum temperatures (35°C) occurred in the Sud-Ubangi, Nord-Ubangi, northern Mongala, Bas-Uele, and northern Haut-Uele provinces. The country experienced above-average maximum temperatures (> 1°C) over many areas in the country. Central and eastern Bas-Uele, western Haut-Uele, southern Lualaba, southern Hau-Lomami, southern Tanganika and Haut-Katanga provinces experienced anomalies of 3°C above-average (**Fig. 7a**).

- **Minimums:** The mean minimum temperature over the last month in the DRC ranged from 15°C to 20°C. Parts of the north, 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 (1-2°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 (**Fig. 7b**).

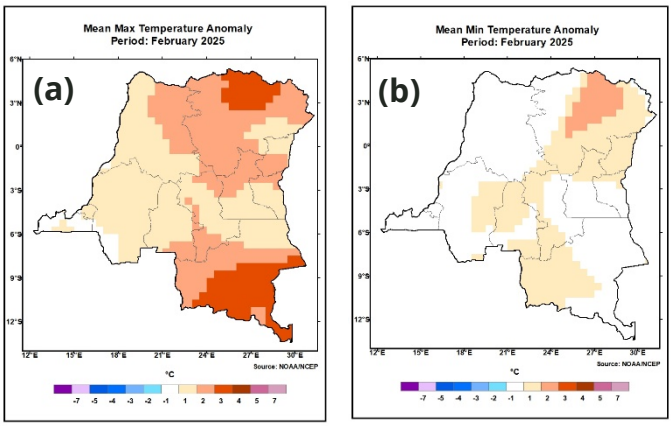


Figure 7: Spatial map for February 2025 (a) mean maximum temperature anomaly and (b) mean minimum temperature anomaly. **Source: NOAA/NCEP**

Monthly (April 2025) and Seasonal (April 2025 – June 2025) Forecasts:

- **Monthly:** In April 2025, DRC is expected to have above-average temperatures. Pocket areas in Tshuapa, Sankuru, Tshopo, Bas-Uele, Haut-Uele, Ituri and Nord-Kivu provinces 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 April to June 2025. Parts of the northern and central provinces are favored to have a greater than 60% probability of above-average mean temperatures (**Fig. 8b)**.

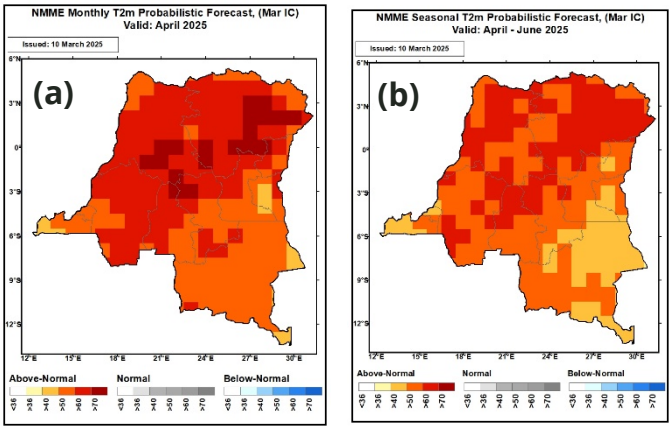


Figure 8: Spatial map for (a) April 2025 mean temperatures forecast and (b) April 2025 – June 2025 mean temperatures forecast. **Source: NOAA/NCEP**

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 (December 2024 to February 2025):

- From December 2024 to February 2025, much of the DRC experienced drier-than-average conditions. Regions with SPI values greater than 2 standard deviations below the mean were observed in parts of Kwango, Maniema provinces and pocket areas in the central and southern regions. In contrast, near-average to wetter-than-average conditions were noted in Sud-Kivu province and pocket areas of the country **(Fig. 9a)**.

Past 1 Month (February 2025):

- In February 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)**.

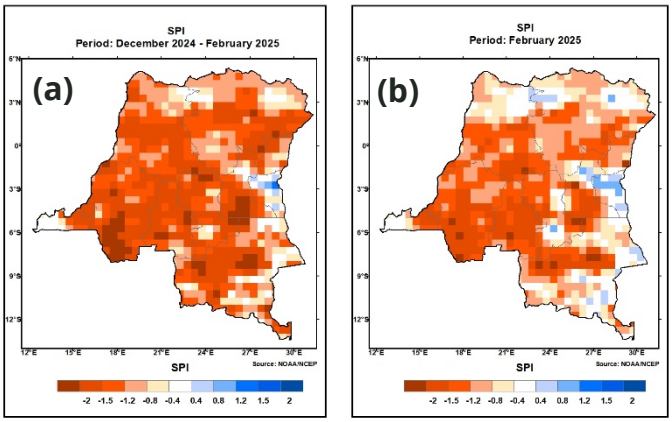


Figure 9: Spatial structure of Standardized Precipitation Index (SPI) (a) December 2024 – February 2025 (b) February 2025. Source: NOAA/NCEP. **Source: NOAA/NCEP**

Current/Forecast (02 March 2025 to 28 March 2025):

The SPI forecast suggests that drier-than-average conditions will occur in the west-central and parts of the eastern regions of the DRC. Pocket areas in Kongo-Central, Tshopo, Nord-Kivu, Maniema and Tanganika provinces will experience SPI 1.5 to 2.0 standard deviations below the mean. In contrast, wetter-than-average conditions are expected in parts of the north, central, and southern regions, with SPI greater than 2.0 standard deviations above the mean expected in parts of Sud-Ubangi, Nord-Ubangi, Mongala, Bas-Uele and Tshopo provinces. Near average conditions is likely to occur in the central region and a few places in the country **(Fig. 10)**.

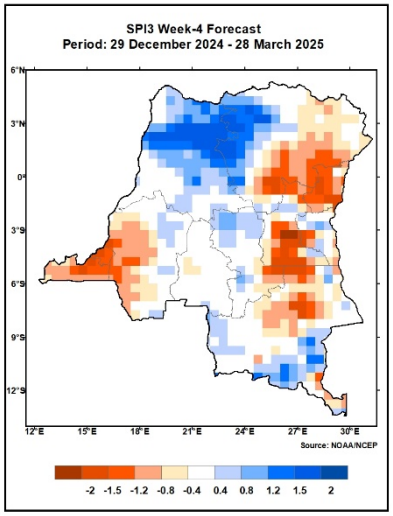


Figure 10: Spatial structure of SPI constructed from observations for 29 December 2024 to 1 March 2025 and 4 weeks forecast ending on 28 March 2025. **Source: NOAA/NCEP**

Water Requirement Satisfaction Index (WRSI)

- Not Available

GEOGLAM Crop Monitor

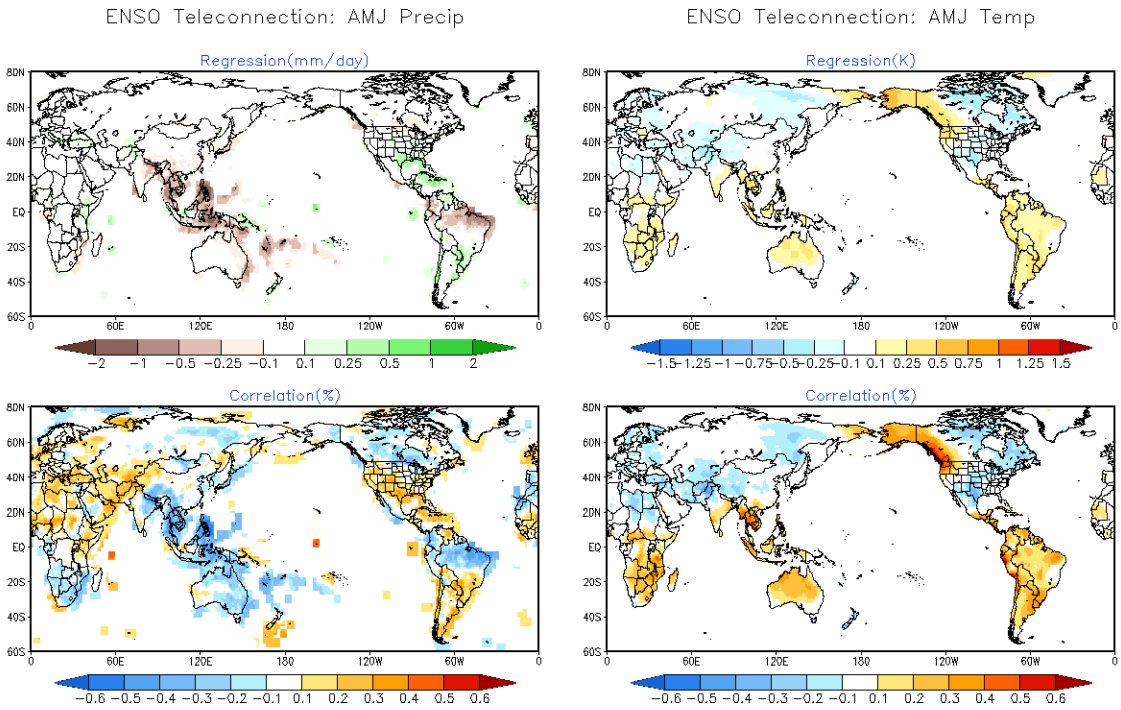
In the Democratic Republic of the Congo, harvesting of the main season cereals was finalized in the east while planting and development continue in the southeast and central regions. Additionally, planting and development of second season maize is underway in the southeast, central, and northern regions. Overall conditions remain favorable despite heavy rains and flooding in the east from early to late February.

Additional Resources

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

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

Annex

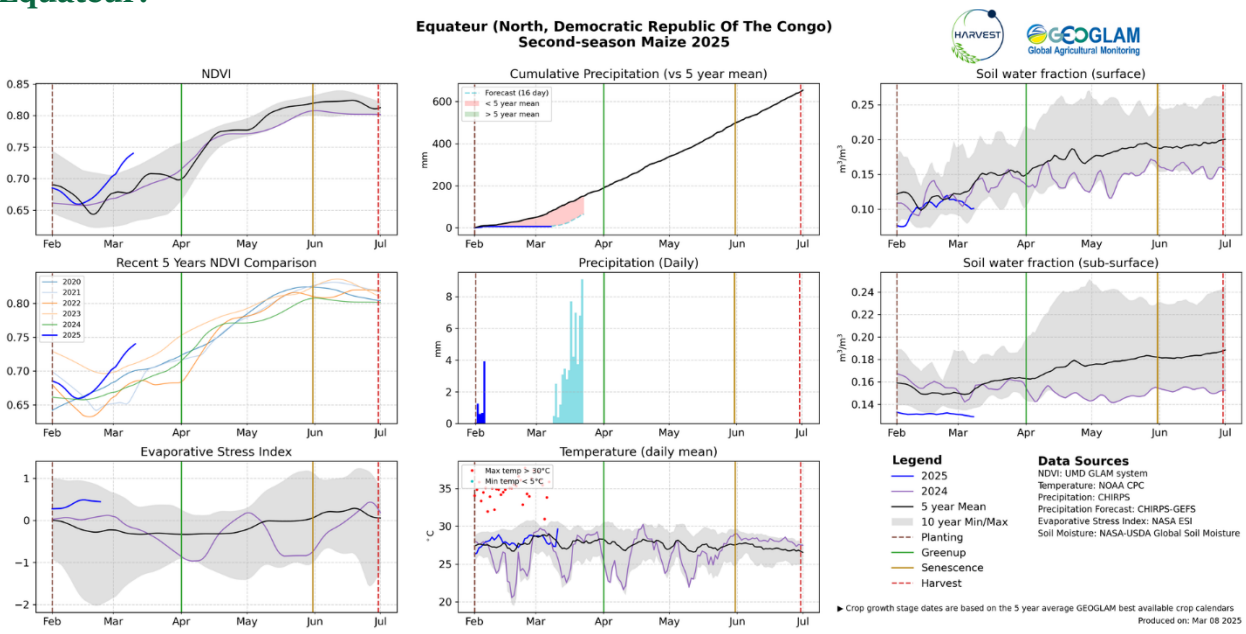


For three month season (April – June 2025; AMJ), precipitation and temperature anomalies are regressed onto the standardized Niño-3.4 index (upper panel). In the bottom panel, the correlation is calculated between Nino-3.4 and the anomalies

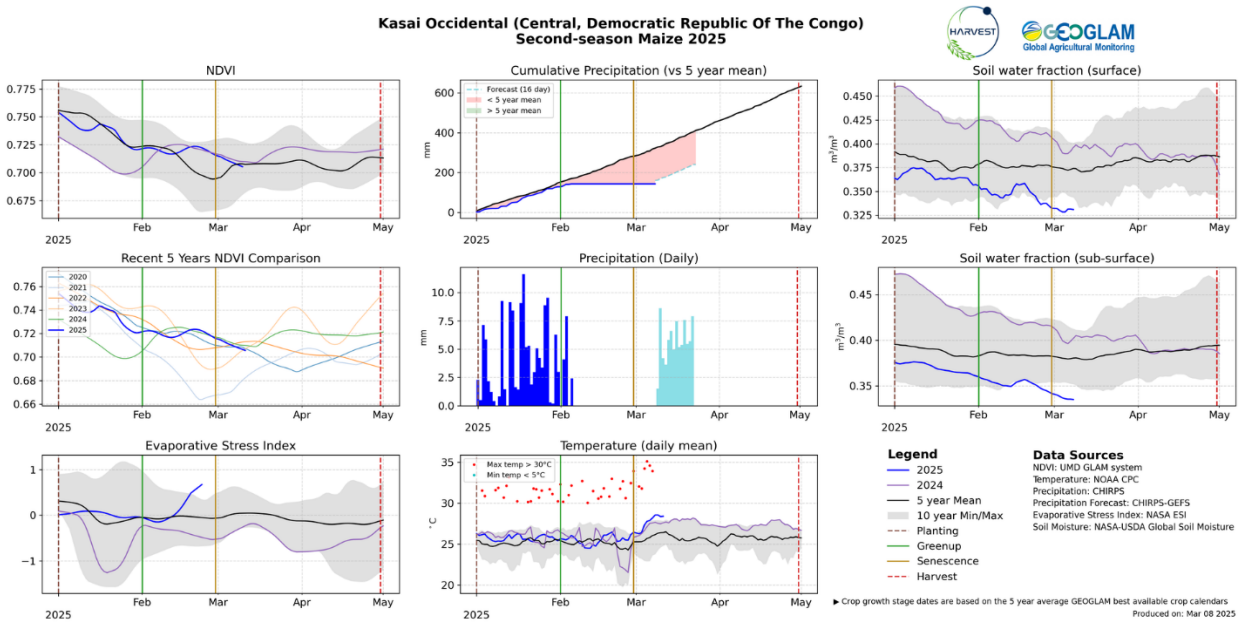
GEOGLAM Agro-meteorological Earth Observation Indicators:

Second-Season Maize

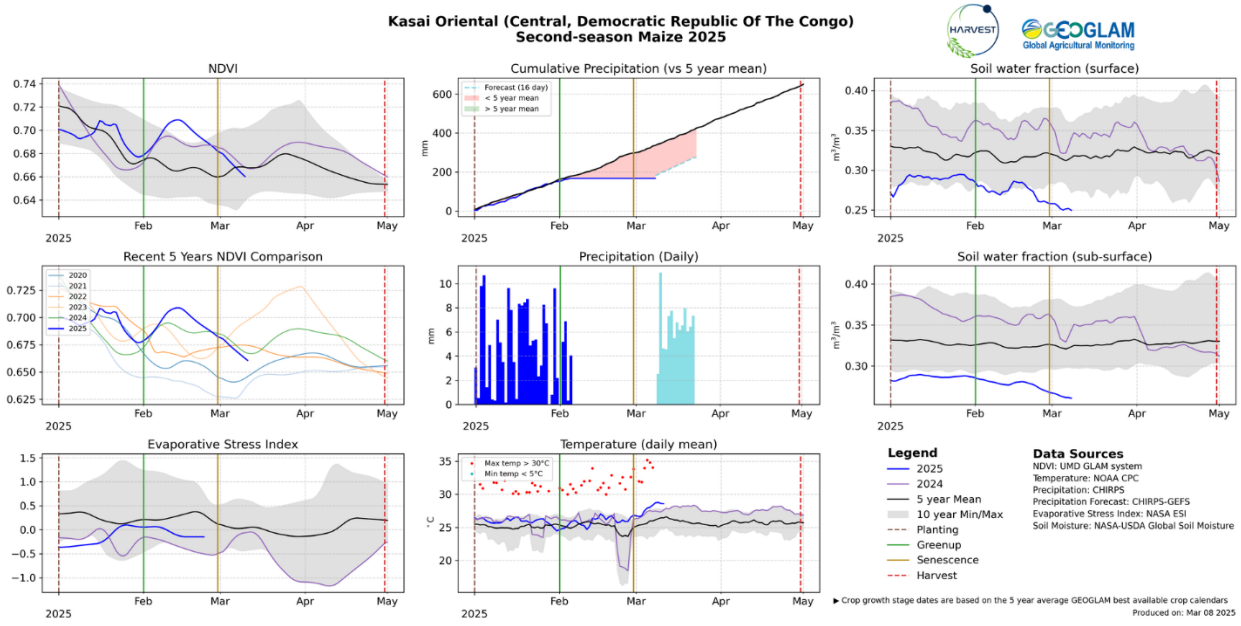
Equateur:



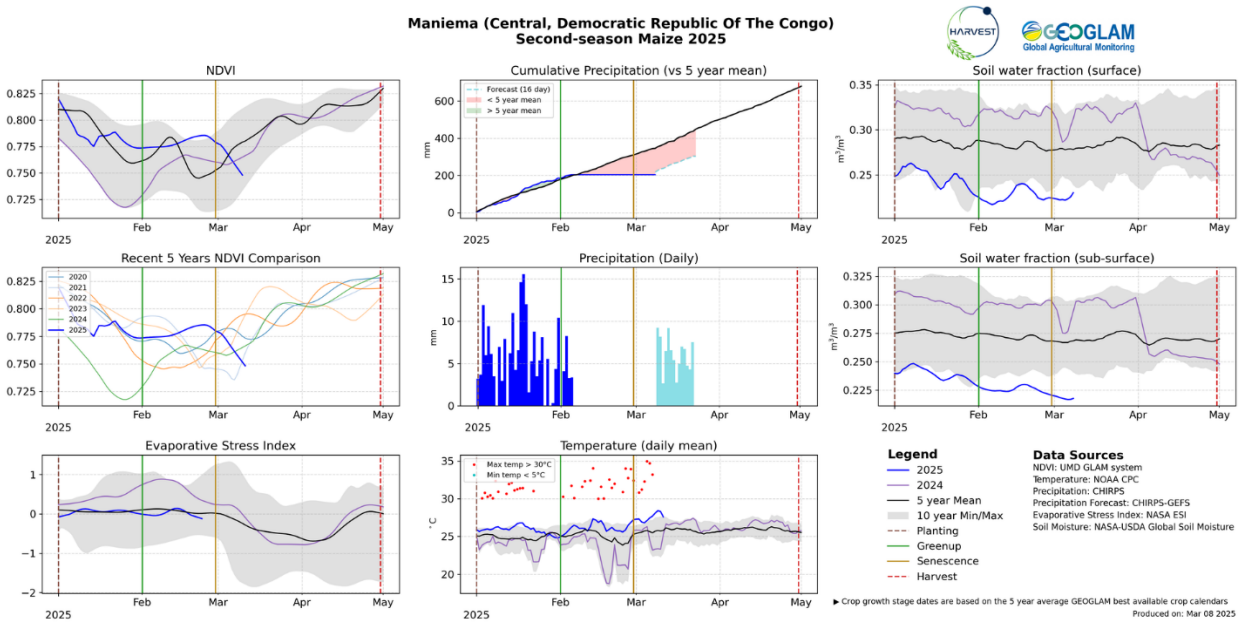
Kasai Occidental:



Kasai Oriental:



Maniema:


Maniema (Central, Democratic Republic Of The Congo)
Second-season Maize 2025
HARVEST
GEOGLAM
Global Agricultural Monitoring
NDVI
Cumulative Precipitation (vs 5 year mean)
Forecast (16 day)
< 5 year mean
> 5 year mean
Soil water fraction (surface)
Recent 5 Years NDVI Comparison
2020
2021
2022
2023
2024
2025
Precipitation (Daily)
Soil water fraction (sub-surface)
Evaporative Stress Index
Temperature (daily mean)
Max temp > 30°C
Min temp < 5°C
Feb
Mar
Apr
May
mm
°C
m³/m³
Legend
2025
2024
5 year Mean
10 year Min/Max
Planting
Greenup
Senescence
Harvest
Data Sources
NDVI: UMD GLAM system
Temperature: NOAA CPC
Precipitation: CHIRPS
Precipitation Forecast: CHIRPS-GEFS
Evaporative Stress Index: NASA ESI
Soil Moisture: NASA-USDA Global Soil Moisture
► Crop growth stage dates are based on the 5 year average GEOGLAM best available crop calendars
Produced on: Mar 08 2025