

### THE UNITED REPUBLIC OF TANZANIA

Ministry of Agriculture
P.O Box 2182, 40487 DODOMA. Telephone: +255-022-2862064,
Fax: +255-022-2862077, E-mail: ps@kilimo.go.tz

### National Food Security Bulletin



Volume 58-2025

28 FEBRUARY, 2025

#### NATIONAL HIGHLIGHTS

- In bimodal areas, harvesting activities for maize were on progress in most part except for some few parts where farmers had late planting and the crop was at grain filling to maturity stages. Stressed conditions were observed in some parts of Pwani, Arusha, Tanga, Manyara and Kilimanjaro due to insufficient soil moisture. Paddy was at different growth stage ranging from vegetative to reproductive stages. In additional, farmers in these areas continued with land preparations ready for the upcoming Masika rainy season. In unimodal areas, maize was observed at various growth stages, ranging from vegetative to reproductive stages (from tasseling to grain filling). Favorable condition was observed in most part of Southern Highland regions while stressed (Watch) conditions were observed in some parts of Lindi, Mtwara, Dodoma, Singida, Tabora and Morogoro regions due to prolonged dry spell which led to insufficient soil moisture.
- Cassava continues to thrive under favorable conditions nationwide, with the crop at various growth stages
- TABLE OF CONTENTS National Highlights.....1 Major Crop Conditions..... 1 Satellite-Based information...... 2 Rainfall Performance...... 6 Rainfall Outlook...... 7 Major Food Prices...... 8 Number of Permits.....9 Public Awareness......11 Terms and Definitions...... 12
- Maize prices were highest in Lindi, Kagera and Morogoro markets and lowest in Geita and Kigoma markets
- Rice wholesale prices were highest in Arusha, Manyara, Lindi, Iringa and Singida markets and lowest in Kigoma, Tabora and Mara markets.
- Dry beans prices were highest in Dar es salaam, Lindi and Morogoro markets and lowest in Kagera, Manyara, Njombe and Kigoma markets.

#### 2.0 CROP CONDITIONS FOR MAJOR FOOD CROPS

#### **Maize**

In bimodal areas, harvesting activities for maize were on progress in most part except for some few parts where farmers had late planting and the crop was at grain filling to maturity stages. Stressed conditions were observed in some parts of Pwani, Arusha, Tanga and Kilimanjaro due to reduced soil moisture. In unimodal areas, maize was observed at various growth stages, ranging from vegetative to reproductive stages (from tasseling to grain filling). Favorable condition was observed in most part of Southern Highland regions while stressed (Watch) conditions were observed in some parts of Lindi, Mtwara, Dodoma, Singida, Tabora, Morogoro and Iringa regions due to prolonged dry spell which led to insufficient soil moisture.



Source: Igunga DC in Tabora Region

#### **Beans**

In unimodal areas, beans were at vegetative stage, with favorable conditions observed in some parts. Stressed (Watch) condition were observed in some parts of Dodoma, Singida, Tabora and Morogoro regions. In areas where early planting occurred, the crop had progressed to grain filling and maturity stages. In bimodal areas, harvesting activities for beans was almost done, farmers were in progress with land preparations ready for the start of Masika rainy season.



**Source:** Mbinga DC in Ruvuma region

#### Cassava

Cassava is typically planted at different times depending on soil moisture availability, resulting in varying growth stages across the country. Favorable conditions were reported in most regions.



Source: Sikonge DC in Tabora Region

### **Paddy**

In both unimodal and bimodal areas, field management activities were ongoing in most regions. The crop was at different growth stage ranging from vegetative to reproductive stages. Stressed (Watch) conditions were observed in some parts of Lindi, Mtwara, Dodoma, Singida, Iringa, Tabora and Morogoro regions due to prolonged dry spell which led to insufficient soil moisture.

**Note:** In some irrigation schemes, paddy had reached the maturity stage, and harvesting activities were in progress.



Source: Igunga DC in Tabora Region

#### 3.0 SATELITE-BASED INFORMATION

## 3.1 Satelite-Based Vegetative Conditions

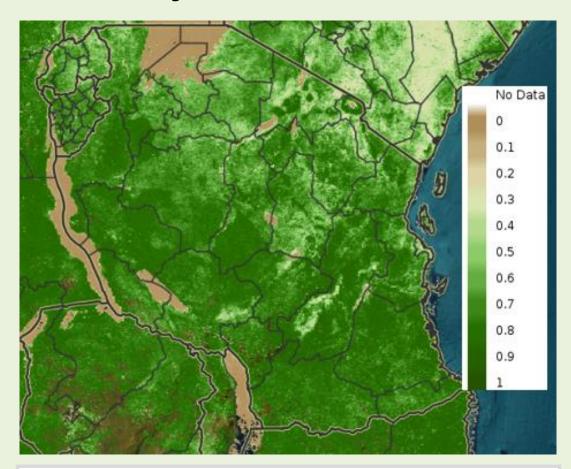


Figure .1: Normalized Difference Vegetation Index (NDVI) for 21st-28th February,

**Source:** (EWX) <a href="https://earlywarning.usgs.gov/fews/ewx/index.html?region=af">https://earlywarning.usgs.gov/fews/ewx/index.html?region=af</a>

In February 2025, the NDVI map of Tanzania shows extensive healthy vegetation, with most regions displaying values above 0.5, indicating robust plant cover.

In Northern parts (Arusha, Kilimanjaro, and Manyara) NDVI values range from moderate to low (0.3–0.6) suggesting drier conditions or extensive grazing lands with some green areas indicate moderate vegetation. In Eastern parts (Dar es Salaam, Pwani, Tanga and Morogoro) NDVI values indicates moderate to high (0.4–0.8).

In Central parts (Dodoma, Singida, and Tabora) indicates lower NDVI (0.2–0.5), leading to sparse vegetation. In Western parts (Kigoma, Katavi, and Rukwa) NDVI values are generally high (0.6–0.9), reflecting dense vegetation condition. In the Southern Highlands (Mbeya, Iringa, Njombe, and Ruvuma, exhibit some of the highest NDVI values (0.7–1.0) reflecting dense vegetation condition. In Southern parts (Lindi and Mtwara) NDVI indicates (0.7-0.8) reflecting dense vegetation condition. Parts of Lake Victoria (Mwanza, Mara, Kagera, Shinyanga, and Geita, presents moderate NDVI values (0.4–0.7) indicating moderate vegetation condition.

**Overall,** the highest NDVI values are observed in the Southern Highlands and western regions, where rainfall is abundant and forests are widespread. Meanwhile, central and northern Tanzania generally show lower NDVI, corresponding to drier climatic conditions. Coastal and Lake Victoria regions display moderate NDVI values, reflecting seasonal vegetation variations and mixed landuse patterns.

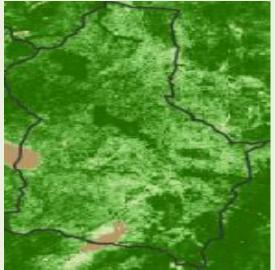
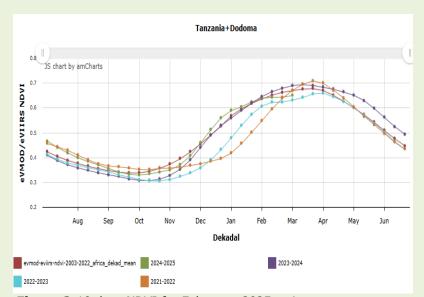


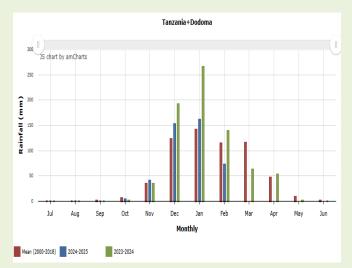
Figure 2: Normalized Difference Vegetation Index (NDVI) for Dodoma for 21-28 February, 2025

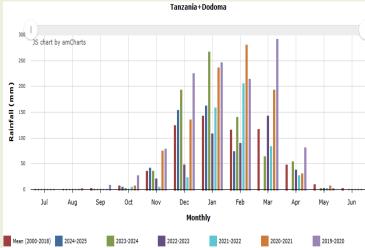


*Figure 3.* 10 days NDVI for February, 2025 as it compares to 2022, 2023, 2024 and the long term mean for Dodoma Region.

**Source:** (EWX) <a href="https://earlywarning.usgs.gov/fews/ewx/index.html?region=af">https://earlywarning.usgs.gov/fews/ewx/index.html?region=af</a>

When compared to the long term mean NDVI and the NDVI anomalies for February 2022, 2023 and 2024, the NDVI for Dodoma in February 2025 were higher than February 2022, 2023 and the long-term mean but it was below than the NDVI for February 2024 (Fig.3).





**Figure 4 a:** Climatology of Dodoma region indicates how rainfall performs in 2024/2025 season as compared to 2023/2024 season

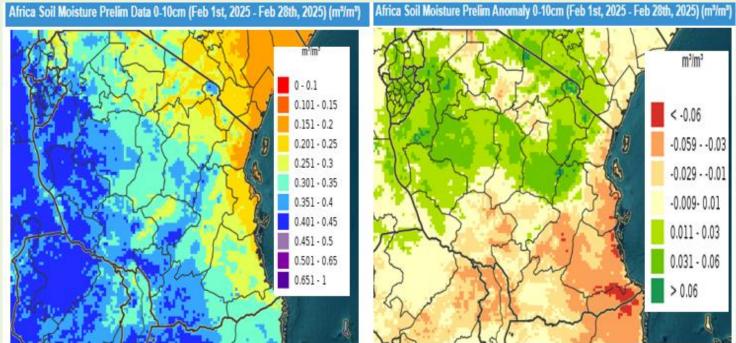
**Figure 4 b:** Climatology of Dodoma Region for Five years comparison indicates how rainfall performed for five consecutive years.

Source: (EWX) <a href="https://earlywarning.usgs.gov/fews/ewx/index.html?region=af">https://earlywarning.usgs.gov/fews/ewx/index.html?region=af</a>

The figures illustrate the climatology of rainfall in **Dodoma region**, comparing the **2024/2025** season to **2023/2024** (Figure 4a) and five-year rainfall trends (Figure 4b). Below is a detailed interpretation:

- The highest rainfall occurs from December to March, consistent with Dodoma's rainy season.
- The 2024/2025 season shows below-average rainfall compared to the long-term mean, especially in February 2025.
- Rainfall patterns differ significantly between years, with 2020-2021 and 2022-2023 seasons recording some of the highest peaks.
- These seasons generally follow the expected trend, with rainfall peaking between January and February, though 2023/2024 appears wetter than 2024/2025 in January and February.
- The 2020-2021 season had particularly high rainfall, while 2021-2022 and 2019-2020 were drier in comparison.

#### 3.2 Satelite-Based Moisture Conditions



**Figure 5:** Soil Moisture condition for  $1^{st}$  –  $28^{th}$  February, 2025; Observed soil moisture (left) and deviation from long term monthly mean (right).

**Source:** (EWX) <a href="https://earlywarning.usgs.gov/fews/ewx/index.html?region=af">https://earlywarning.usgs.gov/fews/ewx/index.html?region=af</a>

The provided maps illustrate soil moisture conditions across Tanzania for February  $1^{st} - 28^{th}$ , 2025.

## **Left Map: Observed Soil Moisture (0-10cm Depth)**

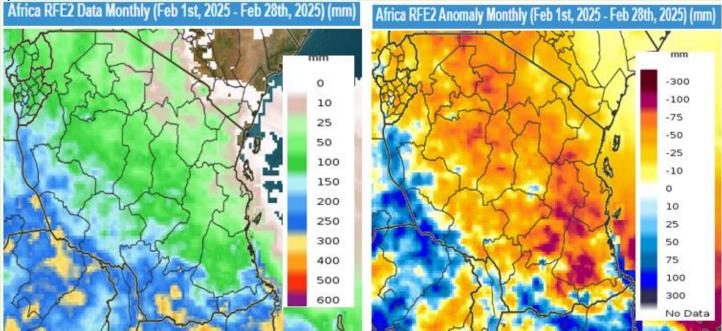
- o The color scale indicates the soil moisture values, ranging from 0 to 1 m<sup>3</sup>/m<sup>2</sup>.
- The map shows high soil moisture levels in the western regions of (Kigoma, Rukwa, Katavi and Tabora) as well as southern highland regions like Mbeya and Songwe, with values generally above 0.4 m<sup>3</sup>/m<sup>2</sup> which indicates favorable condition for crop growth.
- Drier regions are observed in the northern parts of Tanzania, including Arusha, Manyara and Kilimanjaro, and the eastern regions like Tanga, Pwani and Morogoro, with soil moisture values below 0.2 m³/m² which indicates stress condition for crop growth.

## Right Map: Soil Moisture Anomaly (Deviation from Long-Term Average)

- $_{\odot}$  The color scale indicates the magnitude and direction of the anomaly, ranging from -0.06 to 0.06 m<sup>3</sup>/m<sup>2</sup>.
- Positive anomalies (wetter than average) are observed in the western regions of Tanzania, such as Kigoma and Tabora, as well as the central regions like Dodoma and Singida, with values generally above 0.01 m<sup>3</sup>/m<sup>2</sup>.
- Negative anomalies (drier than average) are observed in the northern parts of Tanzania, including Arusha and Kilimanjaro, and the eastern regions like Mtwara, Lindi, Tanga and Morogoro, with values below -0.01 m<sup>3</sup>/m<sup>2</sup>.

## 4.0 Rainfall Performance During February, 2025

In February 2025, most areas of the country experienced dry conditions with warm to hot temperatures, particularly from the second week of the month. On the other hand, some areas of the country, particularly in the west, southwestern highlands, southern region and southern coast experienced some periods of rainfall.



**Figure 6:** Tanzania Rainfall Distribution for  $1^{st} - 28^{th}$  February, 2025; as total (left) and deviation from long term monthly mean (right).

The two maps illustrate rainfall conditions across Tanzania for February  $1^{st}$  –  $28^{th}$ , 2025 in terms of total precipitation (left) and deviation from the long-term monthly mean (right).

## 1. Rainfall Distribution (Left Map)

- The western regions of Tanzania, such as Kigoma, Tabora, Katavi and Rukwa, exhibit high rainfall levels which indicates favorable condition for crop growth.
- The central regions of Tanzania, including Dodoma and Singida also show inadequate rainfall which indicates unfavourable condition for crop growth.
- The northern regions of Tanzania, like Arusha, Manyara and Kilimanjaro, as well as the eastern regions, such as Tanga, Morogoro, and Coast, have relatively lower rainfall levels.

## 2. Rainfall Anomaly (Right Map)

- The western regions of Tanzania, including Kigoma, Tabora, and Rukwa, exhibit positive anomalies, indicating wetter-than-average conditions, with values generally above 50 mm.
- In contrast, the northern regions of Tanzania, like Arusha and Kilimanjaro, as well as the eastern regions, including Tanga, Morogoro, and Coast, have negative anomalies, indicating drier-than-average rainfall conditions, with values below -25 mm.

## 4.1 Agrometeorological Impact During February, 2025

Favourable soil moisture was experienced in most parts of unimodal areas with insufficient soil moisture experienced in some parts of Lindi, Mtwara, Dodoma, Singida and Morogoro. Farmers were actively engaged in various field management activities with the crops advanced to vegetative to reproductive stages. In bimodal areas, dry condition was experienced in most part, Farmers were engaged in Harvesting and postharvest handling of the produce from *Vuli* cropping season.

## 4.2 Weather Outlook for March, 2025

During the month of March, 2025 Masika rains are anticipated to commence over bimodal areas while Msimu rains are expected to continue across most of the unimodal areas. Additionally, some areas are likely to experienced enhanced rainfall, which may lead to localized flooding. Conversely, temperatures are expected to slightly decrease during the month, however warm to slightly hot conditions are expected to persist in areas with insufficient rainfall. Details of the weather outlook for March as per Tanzania Meteorological Authority (TMA) is as follows;

# Northern Coast (Tanga, Pwani, Dar es Salaam regions, northern part of Morogoro region, Mafia, Unguja and Pemba Islands):

Rainfall expected in some areas during the month. However, slightly enhanced rains are anticipated over a few areas during the second week of the month.

## North Eastern Highlands (Kilimanjaro, Arusha and Manyara regions):

Rainfall is anticipated over some areas during the month, with increased rainfall expected during the second week of the month.

## Lake Victoria basin (Kagera, Geita, Shinyanga, Mwanza, Mara and Simiyu regions):

Rainfall is expected over some areas during the month. A slight enhancement in rainfall is anticipated over a few areas during the second week.

## Western regions (Kigoma, Katavi and Tabora regions):

Rainfall is expected over some areas during the month, with a slight enhancement anticipated over a few areas during the second week

## **Central areas (Dodoma and Singida regions):**

Rainfall is expected over some areas, with a slight enhancement anticipated over few areas during the second week of the month.

## Southwestern Highlands (Rukwa, Songwe, Mbeya, Njombe, Iringa regions and Southern part of Morogoro region):

Rainfall is expected to continue over some areas during the month. A slight enhancement over few areas is anticipated between the first and second weeks.

## **Southern Coast (Mtwara and Lindi regions):**

Rainfall is expected over some areas with a slight enhancement during the second week of the month.

## **Southern Region (Ruvuma region):**

Rainfall is expected over some areas with a slight increase in rainfall anticipated during the first and second week

### 4.3 Further Outlook for the month of April, 2025

During the month of April, 2025 rainfall is expected to continue over some areas of the country. Additionally, slightly enhanced rains are expected over some areas.

#### **5.0 FOOD PRICES FOR MAJOR FOOD CROPS**

On weekly basis, the national average wholesale prices for major food crops (Maize, Rice and Beans) varied as follows;

#### Maize

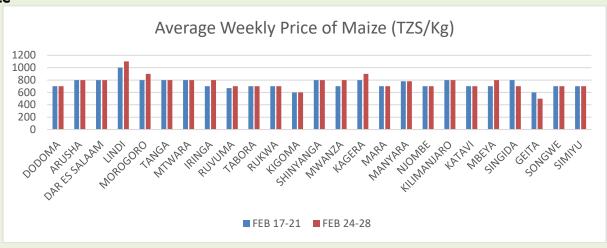


Figure 7: Average weekly prices of maize grain at major markets

 Maize prices were highest in Lindi, Kagera and Morogoro markets and lowest in Geita and Kigoma markets.

#### **Rice**

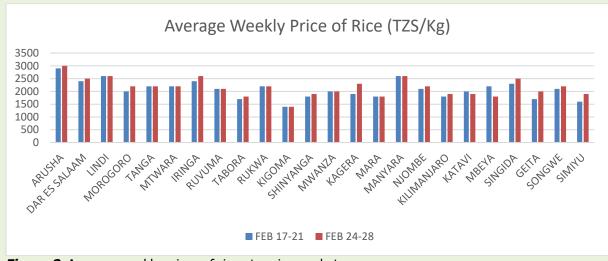


Figure 8: Average weekly prices of rice at major markets

 Rice wholesale prices were highest in Arusha, Manyara, Lindi, Iringa and Singida markets and lowest in Kigoma, Tabora and Mara markets.

#### **Beans**

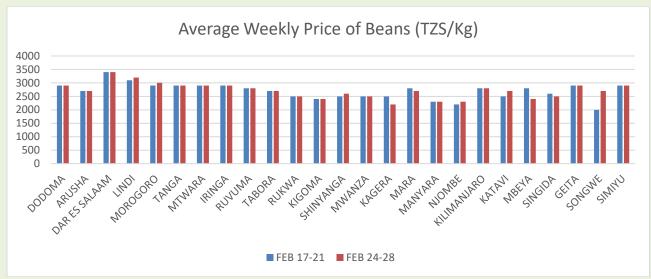


Figure 9: Average weekly prices of dry beans at major markets

 Dry beans prices were highest in Dar es salaam, Lindi and Morogoro markets and lowest in Kagera, Manyara, Njombe and Kigoma markets

## 6.0 Number of Permits and Quantity (MT) of Maize, Maize Flour, Rice, and Beans Issued During the Month of February 2025 to Various Countries

In February 2025, the Cereals and Other Produce Regulatory Authority (COPRA) issued a number of export permits for Food crops, including 75 permits for maize, 11 permits for Maize flour, 113 permits for Rice, and 63 permits for Beans.

Additionally, out of the 75 permits issued for Maize, a total of 125,272.7 Tons were approved for export. Of these, 86,900 Tons were allocated to the National Food Reserve Agency (NFRA), while 12,150 Tons were approved for the World Food Programme (WFP). Other agricultural produce and their respective permits are as indicated in **table1**. Furthermore, the consignments and quantities that had already been exported during this period are detailed in **table 1**.

Table 1. Number of Permits and Quantity (MT) of Maize, Maize Flour, Rice, and Beans Issued During the Month of February 2025

The	The number of permits and the quantity of maize, flour, rice, and beans issued and the quantity exported in February 2025							
No	Food Crop/Commodity	Number of permits	Quantity (MT)		Consignments	Quantity (MT) of Food Crops/Commodity exported		
1	Maize	75	125,272.7		596	19,637.50		
2	Maize flour	11	7,983.0		94	3,078.38		
3	Rice	113	37,093.0		742	23,219.31		
4	Beans	63	6,005.5		365	6,112.09		

#### 7.0 NATIONAL FOOD SECURITY

Over the past four consecutive years, food security situation in Tanzania has progressively improved, with production increasing from 17,148,290 tons in 2021/2022 to 22,803,316 tons in 2023/2024, representing a 32.9% increase. Furthermore, based on the Self Sufficiency Ratio (SSR), over the past ten consecutive years, the country has been self-sufficient at a level ranging from 114% to 128%. In 2024/2025, the country has reached a self-sufficiency ratio of 128%, which indicates a surplus status.

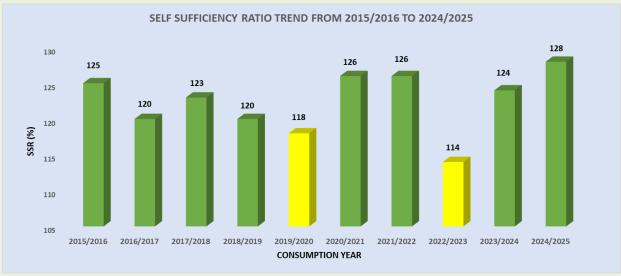


Figure 10: Self Sufficiency Ratio Trends (2015/2016-2024/2025)



Figure 11: Region Level - Self Sufficiency Ratio for the 2024/2025 consumption year

#### **8.0 PUBLIC AWARENESS**

## 8.1 Africa Crop Monitor for Early Warning in February, 2025

In northern **East Africa**, a delayed and below-average start of the short rains is impacting the start of the season in Ethiopia. In the south, there is concern for planting and development of main season cereals in most areas due to early season dry conditions that are forecast to continue during March to May. In **West Africa**, planting for the 2025/2026 main cropping season is expected to begin in March. In the **Middle East & North Africa**, expanding dry conditions are causing concern for wheat in most areas, and significant production declines are expected in Morocco and northwestern Algeria. In **Southern Africa**, significant rainfall improvements since January have improved cropping prospects in parts of Namibia, Zimbabwe, Zambia, Malawi, and Mozambique. However, pockets of dry conditions remain in some areas, and poor rainfall outcomes are expected to degrade overall yield prospects in some main producing areas of South Africa.

**Source:** www.cropmonitor.org

## 9.0 ACRONYM TERMS AND DEFINITIONS

MoA	Ministry of Agriculture
TMA	Tanzania Metrological Agency
NDVI	Normalized Difference Vegetative Index. The NDVI is used to measure and monitor plant growth, vegetative cover, and biomass production.
BIMODAL	Areas receiving rains twice a year. This means that the majority of precipitation falls in two distinct seasons a year i.e. short rains Vuli-September to December, Long rains Masika - March to May.
UNIMODAL	Areas receiving rains once a year Msimu rains i.e. from November to April
SSR	Self Sufficiency Ratio
EWX	Early Warning explorer