TANZANIA METEOROLOGICAL AUTHORITY

SEASONAL WEATHER FORECAST

No. 37 Special Issue: November to Aprili (NDJFMA) 2024/2025 Rain Season *Forecast Issued on 31 October 2024*

HIGHLIGHT

- Normal to Below Normal rains are expected over Kigoma, Tabora, Katavi, Rukwa, Songwe, Singida and Dodoma regions; northern and eastern parts of Lindi region, and northern parts of Mbeya and Iringa regions.
- Normal to Above Normal rains are expected over Njombe, Ruvuma, Mtwara, south and western parts of Lindi, southern parts of Mbeya, Iringa and Morogoro regions.
- Rains are expected to commence during the fourth week of October 2024 over Kigoma region, gradually spreading to other unimodal areas in November, 2024 and finally to Ruvuma region in December, 2024.
- The second half of the season (February-April, 2025) is expected to be wetter than the first half (November 2024-January 2025)
- Normal agricultural activities are anticipated in most areas during the Msimu, 2024/2025 season. However, excessive soil moisture and flooding may occur and negatively affect crops and farm management especially in areas expected to receive Normal to Above Normal rains
- Increased water levels in dams and river flow discharge are expected, leading to potential flooding especially in flood prone areas
- Communities living in flood prone areas are advised to take appropriate precautionary measures.

CLIMATE SYSTEMS OUTLOOK DURING NDJFMA 2024/2025

During the NDJFMA 2024/2025 rainy season, cooler than normal Sea Surface Temperatures (SSTs) are expected to persist over the Central Equatorial Pacific Ocean, signifying the presence of weak La Niña condition. Moreover, slight warmer SSTs are expected to persist in the eastern Indian Ocean during the NDJFMA rainy season whereas, normal SSTs are expected to prevail over the western Indian Ocean especially during the first half of the season (November, 2024- January, 2025). This condition is expected to reduce the flow of moist air from the Indian Ocean towards the country particularly during the first half of the season. On the other hand, normal to slightly warmer than normal SSTs are expected in the eastern Atlantic Ocean (off Angola coast). These conditions are expected to weaken the rainfall-making mechanisms over most of unimodal areas, especially during the first half of the season.

Furthermore, enhanced formation of low pressure systems is expected over the Mozambique channel and the eastern side of Madagascar, especially during the second half of the season.

The presence of these low pressure systems over those positions is expected to pull moist westerly winds from the Congo forest through some parts of the country leading to enhanced rainfall making mechanisms especially the south western highlands, southern region and the nearby areas.

SEASONAL RAINFALL OUTLOOK DURING NDJFMA (MSIMU), 2024/2025

Msimu rains are specific for the western, central, southwestern highlands, southern region, southern coast and southern part of Morogoro region. These regions experience unimodal rainfall regime, which starts in November and ends between April and May of the following year.

Based on the current and expected climate systems (as indicated in section 2 of this outlook), there is an elevated chance of Normal to Below Normal rains over

Kigoma, Tabora, Katavi, Rukwa, Songwe, Singida and Dodoma regions; northern and eastern parts of Lindi region, and northern parts of Mbeya and Iringa regions. However, Normal to Above Normal rains are expected over Njombe, Ruvuma, Mtwara, south and western parts of Lindi, southern parts of Mbeya, Iringa and Morogoro regions. In general, the second half of the season (February-April, 2025) is expected to be wetter than the first half (November, 2024- January, 2025). Details of the Msimu rainfall season are as follows:

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

Normal to Below Normal rains are expected in these regions. Rains have started in Kigoma region during the fourth week of October and expected to spread to other regions during the first week of November, 2024. Rains are expected to cease in the first week of May, 2025.

Central areas (Singida and Dodoma regions):

Rains over these regions are expected to be Normal to Below Normal and anticipated to start during the second and third weeks of November, 2024 and cease in the fourth week of April and first week of May, 2025.

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

Normal to Above Normal rains are expected over Njombe region, southern parts of Mbeya, Iringa and Morogoro regions while Normal to Below Normal rains are expected in Rukwa and Songwe regions, northern parts of Mbeya and Iringa regions. Rains are likely to commence during the first and second weeks of November, 2024 and cessation is expected in the first week of May, 2025.

Southern Coast and Southern Region: (Mtwara, Lindi and Ruvuma regions):

Normal to Above Normal rains are expected in Ruvuma, Mtwara together with south and western parts of Lindi regions while Normal to Below Normal rains are anticipated over northern and eastern parts of Lindi region. The rains are likely to commence during the first and second weeks of November, 2024 in Lindi and Mtwara regions and in the second and third weeks of December, 2024 in Ruvuma region. Rains are expected to cease in the first week of May, 2025 in Ruvuma and Mtwara regions; and during the fourth week of May, 2025 in Lindi region.

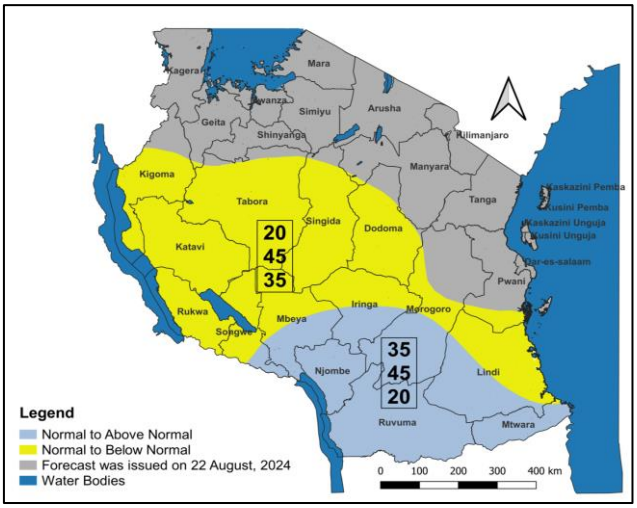

Figure 1: Rainfall outlook for November to April (NDJFMA) 2024/2025

EXPECTED IMPACTS AND ADVISORY DURING NDFMA, 2024/2025

Agriculture, Fishery and Livestock,

The availability of water and sufficient moisture for agricultural activities is expected in some unimodal areas. However, insufficient moisture may occur, especially during the first half of the season.

Periods of excessive moisture and flooding may occur and affect crop growth in areas expected to receive Normal to Above Normal rainfall. In addition, pests and plant diseases associated with increased moisture such as fungal diseases, are expected to increase and affect crops like potatoes, maize, rice, tomatoes, sesame and beans. Similarly, insufficient moisture may also occur in areas expected to receive Normal to Below normal rainfall. This condition could negatively affect the growth of agricultural crops.

Farmers are advised to prepare their fields, plant, weed, and use appropriate inputs while considering soil moisture conditions. They should apply best practices and technologies to prevent waterlogging in fields, conserve water on farms, and prevent erosion and nutrient loss caused by prolonged water stagnation or flooding. It is also advised to strengthen agricultural infrastructure and control plant diseases and destructive pests in a timely manner to reduce potential damages.

Farmers are encouraged to seek accurate information from agricultural extension officers based on the seasonal forecast for their specific districts when selecting appropriate seeds and crops. Additionally, both farmers and agricultural extension officers are advised to continue using daily and ten-day forecasts as appropriate.

In areas expected to receive Normal to Above Normal rains, livestock keepers and fishers are likely to benefit from availability of pasture, water and food for fish. However, outbreaks of livestock diseases such as rift valley fever, foot and mouth disease, and breeding of vector-borne insects may occur.
Deficit of rainfall particularly during the first half of the season (November, 2024 to January, 2025) is expected to affect availability of water and pasture for livestock leading to possible conflicts between pastoralists and other land users.

Livestock keepers are advised to put in place good plans for the use and conservation of water and animal feeds. In addition, pastoralists and fishers are advised to use weather forecast updates and adhere to the advice provided by extension officers in order to minimize possible adverse impacts and capitalize on expected favorable conditions during the season.

Disaster Management

During the rainy season, periods of heavy rains may occur resulting into floods and landslides that may lead to damage of infrastructure, environment, loss of property and harm to humans. Thus, the Disaster Management Department is advised to continue coordinating the implementation of plans that will help reduce the effects that may arise. Furthermore, environmental management authorities are advised to adhere to and make the best use of the forecast. In addition, sectors, relevant authorities and Disaster Management Committees at the Regional, District, Ward and Village/Street levels are advised to take appropriate measures including providing awareness and guidance to the public and all relevant stakeholders for appropriate actions as well as encouraging food reserve.

Note 1: It should be noted that extreme weather events including incidences of heavy rainfall might occur despite suppressed rainfall condition that are expected.

Note 2: The seasonal rainfall outlook provided is focused on six months of the Msimu rainy season and averaged over large spatial and temporal scales. Features and systems that influence small scales temporal and spatial climate variability will be addressed in the subsequent daily and monthly forecast. Users of this outlook are, therefore urged to make good use of daily, ten-day and monthly updates issued by the Tanzania Meteorological Authority (TMA).