

No. 29 Special Issue: March to May (Masika) 2023 Rain Season Forecast issued on 22th February, 2023

HIGHLIGHT

- Normal to below normal rains are expected over most parts of bimodal areas except few areas of Dar es salaam, Pwani (including Mafia), northern Morogoro regions together with Unguja island where normal to above normal rains are expected.
- Periods of enhanced rainfall are expected during the month of May 2023 over the northern coastal areas.
- The *Masika* rains are expected to start during the month of March over most areas and are expected to end in the fourth week of May 2023 over the most parts, although off-seasonal rains are expected to continue during the month of June 2023 over few parts of the northern coast.
- Normal to below normal rains may lead to insufficient soil moisture and water availability for agricultural activities.
- Over the areas expected to receive normal to above normal rains, excessive soil moisture is likely to occur and may affect the growth of crops that do not need a lot of water.

CLIMATE SYSTEMS OUTLOOK DURING MAM, 2023

Near average to slightly warm Sea Surface Temperatures (SSTs) are expected over the Central Equatorial Pacific Ocean. Likewise, mainly near average SSTs are likely across most of the tropical Indian Ocean. On the other hand, slight warm SSTs are predicted over the eastern coast of the Atlantic Ocean (off Angola coast). These conditions are likely to weaken rainfall making mechanisms over the Lake Victoria basin, northern Kigoma, northeastern highlands and northern coast. Moreover, slight warm SSTs are expected over the Southwest Indian Ocean (Southeast of Madagascar) especially towards the end of the season. This situation is expected to enhance moisture from the ocean towards the eastern part of the country especially during the month of May 2023.

The *Masika* rainfall season is specific to areas of the northeastern highlands (Arusha, Manyara and Kilimanjaro regions), northern coast (northern part of Morogoro region, Pwani (including Mafia Isles), Dar es Salaam and Tanga regions, Unguja and Pemba isles), Lake Victoria basin (Kagera, Geita, Mwanza,

SEASONAL RAINFALL OUTLOOK DURING MAM, 2023

Shinyanga, Simiyu and Mara regions) and the northern part of Kigoma region. The *Masika* 2023 below normal rains are expected over most parts of Kagera, Geita, Mwanza, Shinyanga, Simiyu, Mara, Arusha, Manyara, Kilimanjaro and Tanga regions together with Pemba Island during *Masika*, 2023 rainfall season. However, normal to above normal rains are anticipated over Dar es Salaam, Pwani (including Mafia Island), northern part of Morogoro region and Unguja Island with periods of enhanced rainfall during May, 2023. Details of the rainfall season are as follows:

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

The *Masika* rains are expected to be normal to below normal over most parts of the Lake Victoria basin and northern part of Kigoma. The rains are expected to start during the first and second week of March 2023. Cessation is expected during the fourth week of May 2023.

Northern Coast areas and its Hinterlands: (Dar es Salaam, Tanga, and Pwani regions, Islands of Unguja and Pemba, and northern Morogoro areas):

Rains are expected to be normal to above normal over Dar es Salaam, Pwani (including Mafia Island), northern part of Morogoro region and Unguja Island while normal to below normal rains are likely over Tanga region and Pemba Island. The rains are expected to start during the second and third week of March 2023 and cease in June, 2023.

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

Normal to below normal rains are expected in these regions and are anticipated to start during the second and third week of March 2023. Rains are expected to cease during the third and fourth week of May 2023.

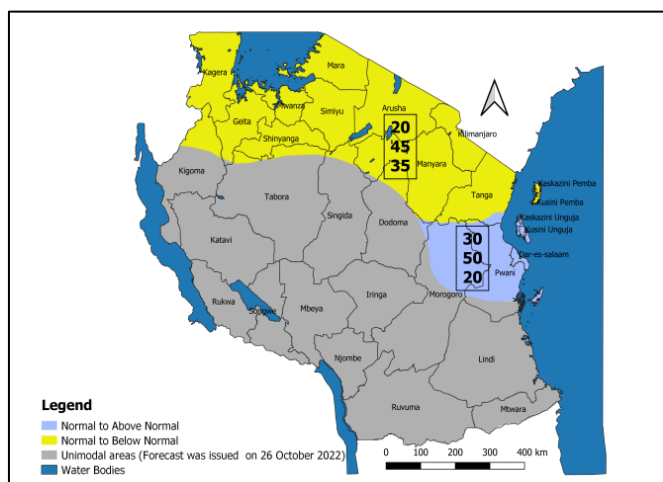


Figure 1: Rainfall outlook for coming rainfall season March to May 2023.

Note:

It should be noted that, events of heavy and short duration rainfall might occur even over areas with normal to below normal rainfall conditions.

EXPECTED IMPACTS AND ADVISORY DURING MAM, 2023

Agriculture, Fishing Industry, Livestock and Wildlife Production

During this rain season, normal agricultural activities are anticipated over most areas during the *masika* 2023. However, the areas expected to feature few and uneven distributions of rains will likely experience insufficient soil moisture and water availability for agricultural activities, thus affecting crop production, especially over the northeastern highlands and Lake Victoria region.

However, periods of excessive soil moisture may occur and affect the growth of some crops that do not need a lot of water, such as maize and leguminous crops, especially in the northern coastal regions that are expected to receive normal to above normal rainfall.

Farmers are advised to prepare their fields, plant, and weed, and use relevant farm inputs timely, and are further advised to use the best methods and technologies to prevent water stagnation in the field, erosion, and loss of soil fertility; and choose the right seeds and crops for this *masika* season. In addition, it is recommended to strengthen the agricultural infrastructure, including rainwater harvesting, and to control plant pests and diseases to reduce potential impacts.

Water and pasture availability for livestock, wildlife, and food for fish is expected to be normal.

However, in the situation of below normal rains during the season, water and pasture availability for livestock and fishery activities are likely to be affected and thus leading to a possible increase in wildlife migration which may in turn increase human-wildlife conflicts and associated diseases transmission from wildlife to livestock.

Disaster Management

The expected below normal rains in some areas is likely to cause soil moisture deficit, pasture and water scarcity. However, damage to infrastructure, loss of properties and negative impacts to human beings may occur due to possible events of short periods of heavy rains. Therefore, the relevant authorities and Disaster Management Committees at the regional, district, ward and village levels are advised to follow and make use of weather alert information and take appropriate measures.

NOTE: *The status of seasonal forecasting allows for the prediction of spatial and temporal averages over larger areas and may not fully account for all physical and dynamical factors that influence short-term climate variability. 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).*