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MAM 2025 CLIMATE OUT LOOK

CLIMATE OUTLOOK FOR THE "LONG RAINS" (MARCH-MAY) 2025 SEASON AND

REVIEW OF THE OCTOBER-DECEMBER 2024 "SHORT RAINS" SEASON

Issue Date: 06/02/2025

1 HIGHLIGHTS

1.1 Outlook for March-April-May (MAM) 2025

The MAM 2025 forecast indicates that Below average rainfall is expected over the entire County. During the season, it is likely that several areas will have a generally poor to fair distribution of rainfall in both time and space. The onset of the season is expected to be normal to late onset, with occasional dry spells. Occasional storms are likely to be experienced in some parts of the county during the season. The peak of the rains is expected to be in April for most regions.

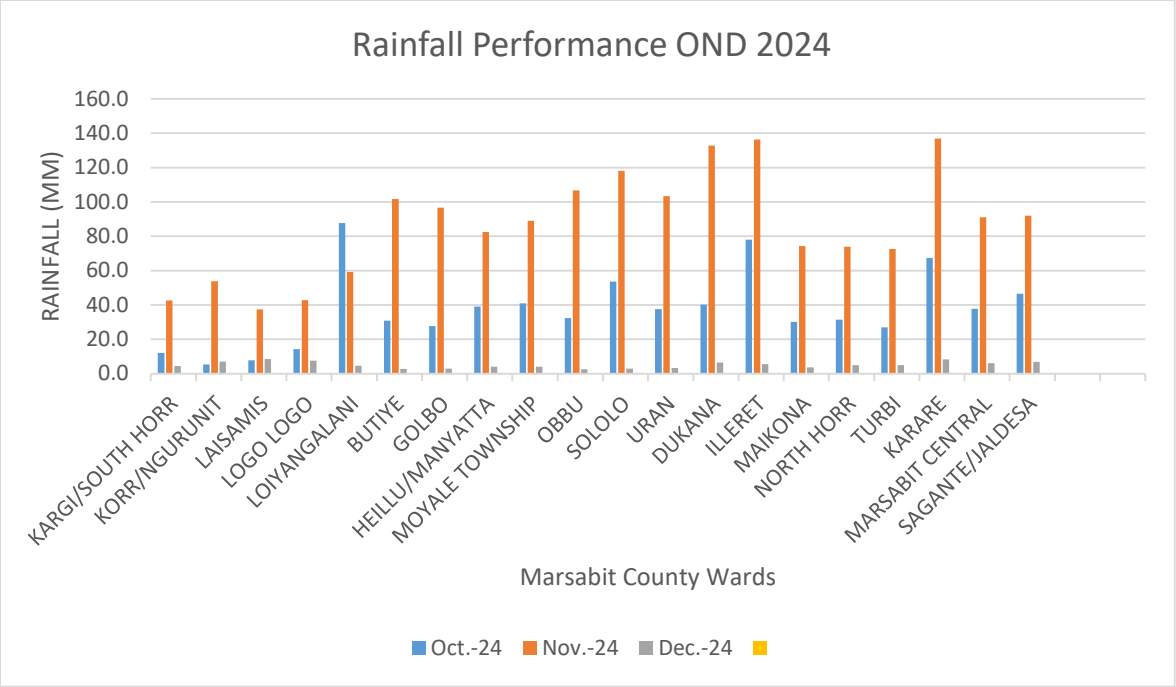
The temperature forecast indicates higher probabilities of warmer than average temperatures over the whole county.

1.2 Review of the October-November-December (OND) 2024 Rainfall Season

Below average rainfall was recorded in most areas across the County. The onset of the seasonal rainfall was during the Second and Third weeks of November, which was followed by a dry spell

The distribution was poor both in time and space and Rainfall Cessation was early,1st week of December.

The Graph Below Shows Rainfall Performance OND 2025 in Marsabit County.



2 FORECAST FOR MARCH-APRIL-MAY 2025 "LONG-RAINS" SEASON

2.1 MAM Rainfall Climatology

The March to May (MAM) period is the major rainfall season (long rains) over most parts of Kenya and much of the equatorial Eastern Africa. The highest seasonal rainfall amounts (greater than 300mm) are normally experienced over the Saku and Moyale Sub counties.

The MAM 2025 forecast indicates that Below average rainfall is expected over the entire County. The temperature forecast indicates that for the larger part of the county, the season is likely to be warmer than average.

Figure 1a illustrates the rainfall climatology during the March to May rainfall season.

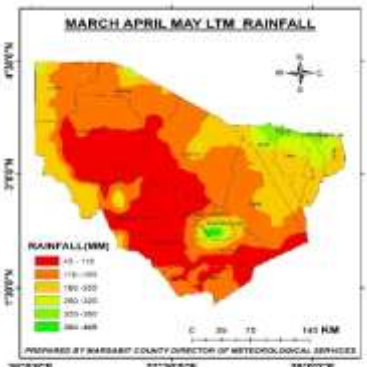


Figure 1a:Rainfall Climatology during March to May Rainfall Season

2. Rainfall Outlook for March-April-May 2025 “Long-Rains” Season

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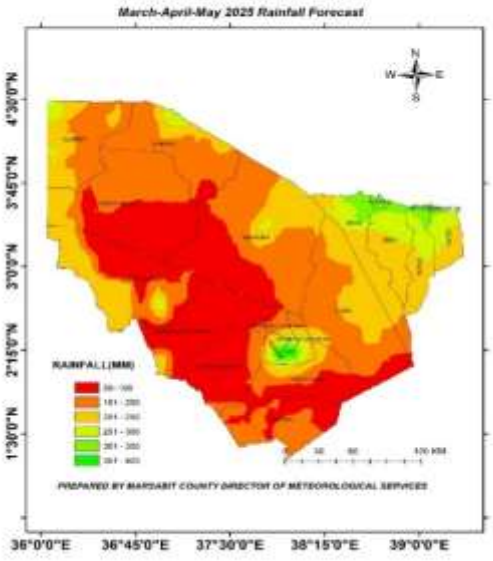

Figure 2b:MAM 2025' Long rains' Season Rainfall Outlook

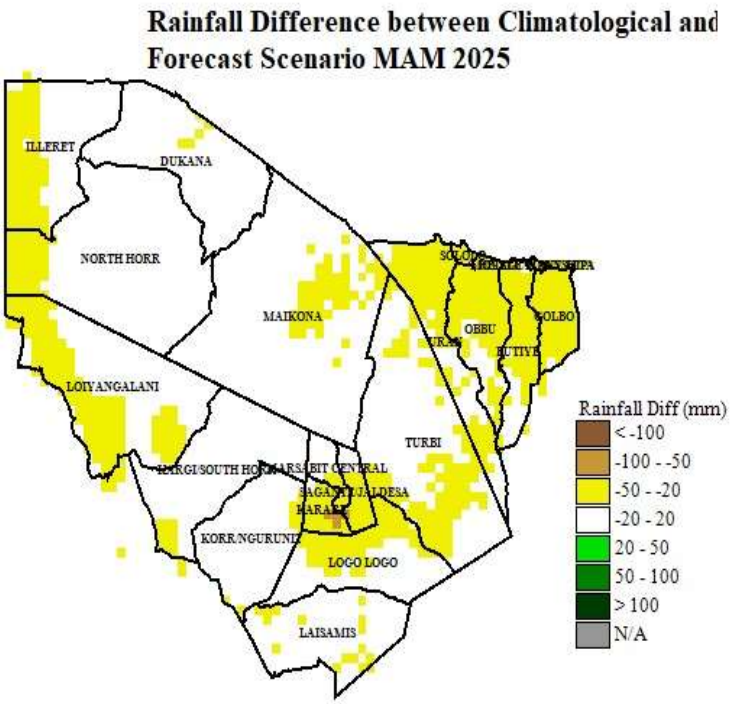

Figure 3C: RAINFALL DIFFERENCE BETWEEN CLIMATOLOGICAL AND FORECAST SCENARIO MAM 2025

2.1 Onset, Cessation, and Distribution of Rainfall

The predicted onsets, cessations, and distribution of rainfall were derived from dynamical Climate Model runs as well as statistical analyses of past years which showed similar characteristics to the current year. The analogue (similar) years are 2017 and 2021. The season is expected to experience a normal to late onset over most parts of the county.

The rainfall outcomes of the analogue years should not be interpreted as forecasts for the season. Rather, they provide a sense of the possible rainfall outcomes under broadly similar global climate conditions. They also offer indicative information on the temporal distribution associated with specific seasonal rainfall totals

The expected onset and cessation dates for the various Sub-Counties are as indicated in Table 1 below.

	Region	Expected On Set	Expected Cessation	Distribution
1	Saku Sub –County- Marsabit Central, Jirime,Sagante,Karare,Wards	1ST Week April to 2ND Week April	Undefined	Poor to Fair
2	Moyale Sub-County, Township,Butiye,Heilu Manyatta,Sololo,Obu,Golbo Wards	1ST Week April to 2ND Week April	Undefined	Poor to Fair
3	North Horr Sub-County, Maikona,North Horr,Kalacha,Loiyangalani Wards	2nd Week April	Undefined	Poor
4	Leisamis Sub County, Korr,Ngurnit,Loglogo,Kargi, Leisamis Wards	2nd Week April	Undefined	Poor

2.2 Temperature Forecast

Warmer than average temperatures are expected over the whole country, with increased probabilities over the Coastal and Northern parts, as shown in

3.0 POTENTIAL IMPACTS OF THE MAM 2025 RAINS

The potential impacts likely to be experienced were co-produced with the various sector leads as indicated.

3.1 Agriculture, Food Security and Livestock Development Sectors

Positive Impacts

❖ The rainfall expected over the western sector of the country is likely to enhance agricultural and livestock production, which will in turn lead to enhanced food accessibility and improvement in nourishment ❖ Availability of water for agricultural activities. ❖ Reduction in agricultural and agro-resource conflicts

Negative Impacts

❖ Increased incidences of livestock disease outbreaks may occur in some areas of the County

❖ Livestock body condition may worsen due to insufficient pasture and long trekking distances to watering points. This is likely to lead to reduced agricultural production and livestock fatalities.

❖ Reduced agricultural production in areas expected to receive depressed rainfall

❖ There may be an increase in agricultural based conflicts

Key mitigation and management strategies

❖ Embrace livestock offtake (both government and private)

❖ Prevention and control of disease through routine surveillance, control and prevention

❖ Restoration and recovery of pasture and rangeland management

❖ Diversification of agricultural enterprises

❖ Capacity building for farmers on coping technologies, innovations and management practices through agricultural extension and research

❖ Provision of insurance packages for crops and livestock (such as Index based livestock and crop insurance) to cushion farmers against adverse weather

❖ Adopting climate smart technologies such as minimal tillage and grazing management

❖ Promotion of early maturing, drought tolerant and adaptive fodder, pasture and crops

❖ Promote agricultural resource conflict management and peace building led by farmers organizations

3.2 Disaster Management Sector

Areas expected to receive near to below normal rainfall (ASAL areas)

❖ There may be an upsurge in resource-based conflicts

❖ Food insecurity may be experienced

❖ Increase in school dropouts

❖ Wildfires may increase

❖ Increase in child abuse cases Key mitigation and management strategies

❖ Dissemination of early warning and advisories to all, especially the most vulnerable

❖ Mapping of hotspot areas and risk assessment for drought, floods and conflict areas

❖ Enhancing peace building initiatives

❖ Coordinate support for school feeding programs

❖ Strengthening mechanisms for coordination, partnership and collaboration among all sectors

❖ Coordinate drought-risk rapid assessments

3.3 Transport and Public Safety Positive impacts

❖ Minimal disruption to transport systems

❖ The environment is likely to be favorable for implementation, construction of infrastructure and maintenance works in areas expected to receive near to below average rainfall

❖ Increased transport demand from increased pastoralists laying off their livestock and for water trucking leading to increased revenue for transport operators

Negative impacts

❖ Disruption of road transport

❖ Reduced visibility from heavy storms and heavy Fog especially in Saku Sub-County Mountain area.

❖ Increased environmental pollution as a result of dusty earth and gravel roads.

❖ Increased risk of insecurities on roads along livestock conflict area.

Key mitigation and management strategies

❖ Unblocking and desilting existing drainage structures

❖ Advice on alternative routes and modes of transport (Aircraft, mass rapid transit systems)

❖ Repair and restoration of damaged infrastructure

❖ Proper road marking and signage

❖ Regular weather updates

❖ Sensitization of motorists not to over speed

❖ Upgrading of earth and gravel roads to bitumen standards

3.4 Water Resources Management Sector

Negative Impacts

❖ There may be an increase in water allocation based conflicts especially in the ASAL areas

❖ Over abstraction of ground water may lead to drying of boreholes and reduced aquifer recharge in areas expected to receive below average rainfall

❖ Water shortage may lead to contamination

❖ Drying of water pans

Key mitigation and management strategies

❖ Enhance conflict management strategies such as mapping of water supply disruption prone areas and community barazas

❖ Mapping of available water sources

❖ Water trucking

❖ Encourage water harvesting

❖ Public awareness on water conservation, water abstraction surveys and enforcement of water allocation plans

❖ Enhanced monitoring and early warning information

3.5 Health Sector Positive Impacts: -

Negative Impacts:

Water scarcity could cause waterborne diseases, heat stress, and increased respiratory diseases

Malnutrition may increase among under-fives, pregnant women, and lactating mothers –

Mental health stress may rise due to the compounded effects of flooding and water scarcity

Key Mitigation and Management Strategies:

For vector-borne diseases, implement proper waste disposal, unclog drainage systems, conduct indoor residual spraying, and distribute LLITNs, malaria drugs, and testing kits à

For waterborne diseases, intensify hygiene promotion, distribute WASH commodities, separate animal and human water points, and conduct water sampling and testing

To address malnutrition, stockpile nutrition commodities, set up screening centers, and provide nutrition counselling and education

To reduce health system stress, stockpile drugs, organize mobile medical camps, and strengthen real-time disease surveillance systems

For heat stress, develop climate-smart cooling systems and sensitize communities on rehydration and heat stress management

To address mental health, establish psychosocial support programs and provide mental health services for high-risk communities

3.6 Environment and Forestry Sectors Positive Impacts

❖ Enhanced business opportunities for establishment of tree nurseries to raise stock for tree growing

❖ Widespread afforestation, reforestation and restoration opportunities

❖ Increased forest biodiversity

Negative Impacts

❖ Landslides and mudslides may be experienced over the mountain and hilly areas

❖ There may be an increase in the spread of invasive alien species

❖ Increase in human-wildlife conflicts

❖ Increased forest fires and biodiversity loss

❖ There may be an increase in forest grazing, overdependence of forest resources in areas expected to receive below average rainfall

Key mitigation and management strategies

❖ Create awareness and community engagement on tree growing

❖ Enhance forest health monitoring and reporting

❖ Enhance fire management practices including community education and awareness

❖ Mapping of hotspots of forest fires

❖ Provide watering points for wild animals

3.7 Media

The media holds a critical role in safeguarding public preparedness during the March-April-May (MAM) 2025 season.

Media organizations are urged to proactively procure, track, and promptly disseminate forecasts and cautionary details as they emerge, ensuring timely access to vital information for the populace.

To enhance the reliability and relevance of weather advisories, collaboration with experts—such as meteorologists, government officials, and disaster management specialists—is essential during the formulation, production, and distribution of these alerts. This ensures the content is both scientifically accurate and actionable for end-users.

Additionally, adopting plain language in communication is strongly advocated to bridge the gap between technical forecasts and public understanding, enabling communities to grasp risks and respond effectively.

By prioritizing clarity, accuracy, and accessibility, the media helps families and communities stay safe, make informed choices, and support one another through the challenges of the MAM 2025 season

Abdi J Dokata - County Director, Marsabit County.