



REPUBLIC OF KENYA

MINISTRY OF ENVIRONMENT, CLIMATE CHANGE & FORESTRY

KENYA METEOROLOGICAL DEPARTMENT

COUNTY METEOROLOGICAL SERVICE

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KIAMBUCOUNTY SEASONAL CLIMATE FORECAST VALID MARCH-APRIL- MAY (MAM) 2024

1. HIGHLIGHTS

1.1 Outlook for March – May 2024

- *Above average rainfall is expected over most parts of Kiambu County,*
- *The distribution of the rainfall is likely to be fair to good in both time and space over most parts of the county*
- *Seasonal rain expected to start between 3rd to 4th week of March 2024 and end by 4th week of May to 1st week of June 2024.*
- *The peak of the rains is expected to be in the month of April.*

1.2 February 2024 Weather review

- *Most parts of kiambu County experienced dry sunny conditions during the first 2 weeks of February.*
- *Occasional light to moderate rains were experienced as from 3rd week of February especially in high ground areas.*

1.4 Review of the Rainfall in October - November – December (OND) 2023

- *The short rains October – December onset were on 3rd week of October.*
- *The distribution was good in October and November and poor in December. The season was characterized by severe storms over most areas of the County*
- *Most parts of the County experienced above-normal that were extended up to the month of January 2024.*

The generally enhanced rainfall performance in the county was mainly as a result of the strong positive Indian Ocean Dipole owing to the prevailing warm Sea Surface Temperatures (SSTs) in the western Equatorial Indian Ocean adjacent to the East African Coast and the cool Sea Surface Temperatures (SSTs) in the eastern Equatorial Indian Ocean adjacent to Australia.

A warmer than average Sea Surface Temperatures (SSTs) over the Central and Eastern Equatorial Pacific Ocean suggested the presence of **El Nino** conditions which persisted throughout the season.

2. KIAMBU COUNTY LONG RAIN SEASON.

2.1 LONG TERM RAINFALL DISTRIBUTION

The county has four broad topographical zones: Upper Highlands found in Lari constituency which is very wet, steep and important as a water catchment area; Lower Highlands zones covering Limuru and parts of Gatundu North and Gatundu South, Githunguri and Kabete constituencies characterized by hills and high elevation plains (plateaus). The zone has a High rainfall regime characterized by tea and dairy farming, maize and horticulture farming and also pineapples in Thika constituency. The upper midland zone covers most parts of Juja. The lower midland zone partly covers Thika town (Gatuanyaga), Limuru with physical features like steep slopes and valleys. Large parts of Lari, Gatundu North/South sub counties.

The distinct agro-climatic zones receives varied rainfall amounts that determine the type of livelihood adopted, potential hazards among others. The rainfall amounts range from minimum of less than 350mm in Thika (Gatuanyaga, Kamenu), Ruiru (kiuu), Juja (Juja, Kalimoni,witeithie), Kikuyu (Nachu) to a Maximum of more than 600 mm in Lari (kijabe, Kinale).

Long term rainfall distribution for March –May “Long Rains” season in Kiambu is as shown in fig 1. Below

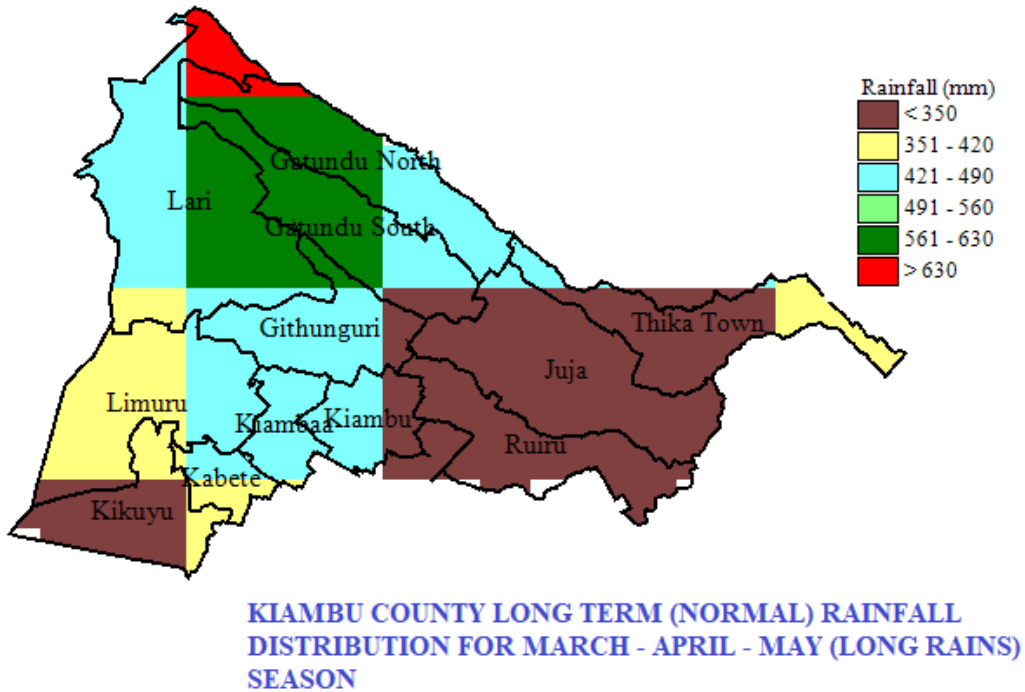


Fig 1: Kiambu County March – April – May Long Term Mean rainfall (Average)

2.2 FORECAST FOR MARCH - APRIL – MAY, (MAM) 2024 “LONG RAINS”

The “long rains” March – April – May (MAM) constitutes a major rainfall season in Kiambu County. During MAM 2024, it is expected that most parts of the county will receive above average rainfall which distribution is likely to be fair to good in both time and space that will, (*Fig 2*).

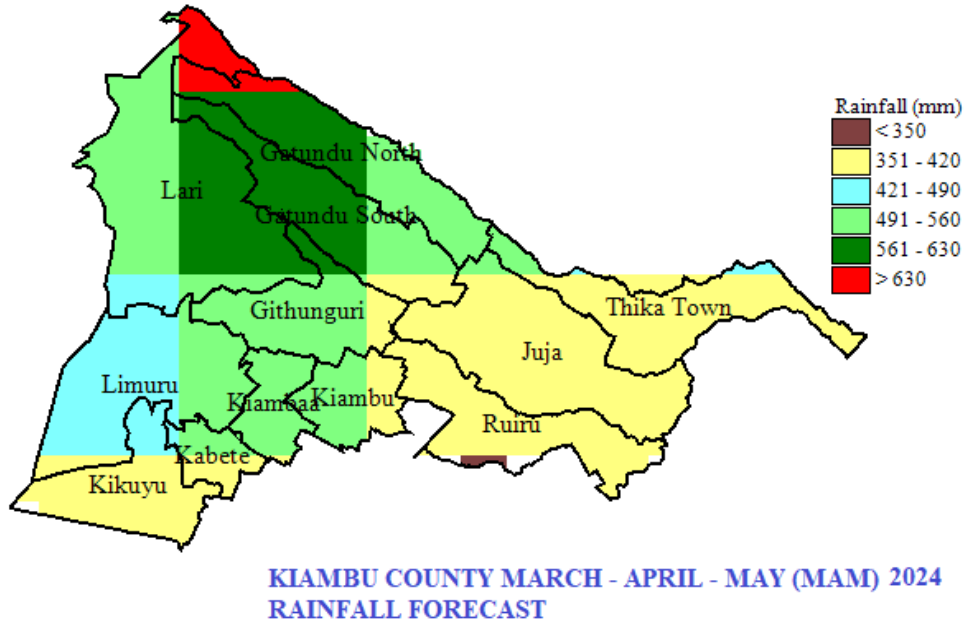


Fig 2: March – April - May (MAM) 2024 Above Average (Normal) Rainfall Scenario

2.3 RAINFALL DIFFERENCE BETWEEN CLIMATOLOGY AND FORECASTED RAINFALL

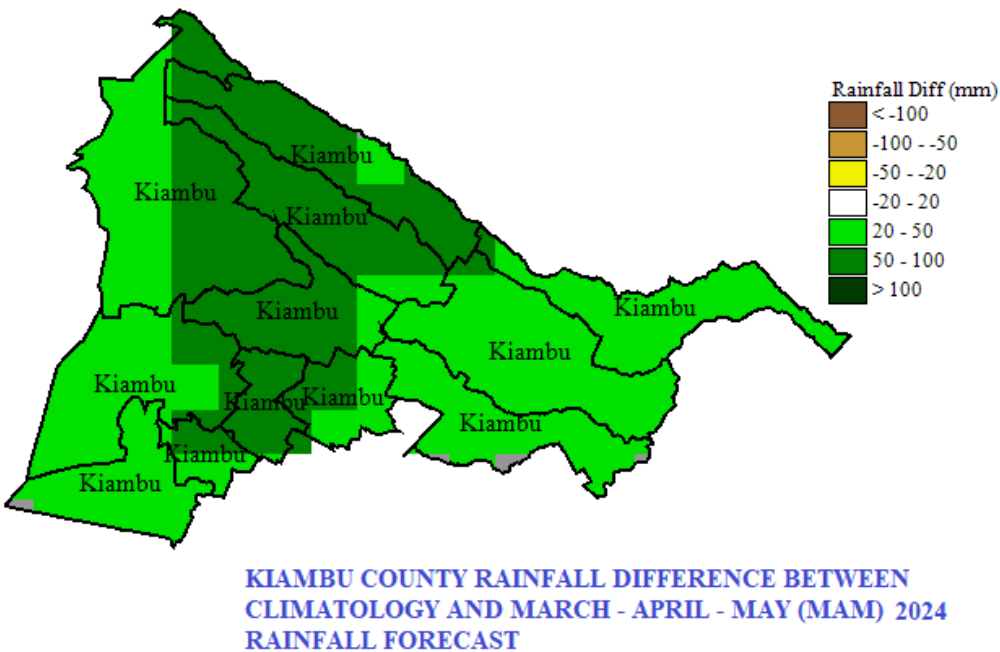


Fig 3: Difference between Climatology and March – April - May (MAM) 2024 Forecasted rainfall

2.4. ONSET AND CESSATION DATES

Seasonal rains expected to start between **3rd to 4th week of March 2024** and end by **4th week of May to 1st week of June 2024**.

2.5. EXPECTED DISTRIBUTION

The MAM 2024 rainfall distribution is likely to be fair to good in both time and space over most parts of the county

3. POTENTIAL IMPACTS OF THE MARCH - APRIL – MAY 2024 SEASONAL RAINS

The expected above average rainfall may cause both positive and negative impacts. Residence are advised to take maximum precautions and preparedness. By doing this, the County therefore will benefit from positive impacts while avoiding the negative ones.

3.1 Agriculture, Livestock Development and Food Security Sectors

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3.1 Agriculture, Livestock Development and Food Security Sectors

Positive Impacts

The above average rainfall which are expected in most areas of the County are favourable for

- Enhanced agricultural productions hence lowering food prices and improve nutrition
- Livestock production expected to increase due to availability of foliage.
- Improved water availability for future crops irrigation

Negative Impacts

- Manifestation of Crops and livestock pests and diseases
- Soil erosion, water logging leading to land degradation
- Excess moisture during crops maturity may lead to harvest losses and contamination
- Increased cost of weeds control

Farmers are advised to ensure

- *Early land preparation and planting of Fodders/Pastures.*
- *Plant on the onset of rains*
- *Use adequate manure fertilizer and other inputs*
- *Farmers are advised to liaise with Agriculture and livestock extension officers for advice on the appropriate variety and type of crops to plant.*
- *Prevention and control of pests and diseases for both crops and livestock through use of ion and use of appropriate pesticides*
- *Ensure runoff water harvesting is practised*
- *Implementation of effective marketing strategies to ensure accessibility to markets and to ensure value addition for surplus produce*
- *Practice of sustainable land management such as soil and water conservation measures*

3.2 Environment and Natural Resources Sectors

Positive Impacts

- Improved vegetation cover.
- Increased forest biodiversity
- Increased job opportunities for tree nurseries establishment
- Reduced fire risks

Negative Impacts

- Increased landslides and mudslides that may lead to soil degradation
- Tree and nurseries damage
- Siltations and sedimentation to water bodies
- Breeding ground of mosquitoes
- Spread of invasive alien species, adversely affecting forest health and productivity.
- Siltation and sedimentation of degraded mangrove areas, including the washing away of riverine forest seedlings.

Therefore kiambu residents are advised to;

- *Protect and rehabilitate water catchment areas by planting trees, sustainable exploitation and fencing*
- *Protect riparian corridor by planting vetiver grass, bamboo and indigenous trees*
- *Adopt soil conservation practices such as Mulching, Contour farming*

- *WEENR should work hand in hand with KFS and KEFRI to identify best tree varieties for these season*
- *Adhere to the early warning systems for environmental challenges*
- *Provide education and advisory services to communities on innovative water harvesting methods in both forest and arid areas.*
- *Raise awareness of environmental conservation and integrate forest management strategies through increased partnerships and stakeholder involvement.*
- *Invest in sustainable tree growing technologies, such as agroforestry and drought-resistant trees, to adapt to climate change.*

3.3 Water, Irrigation and Sanitation

Positive Impacts

- Increased surface and underground water recharge
- Reduced dust pollution through washout
- Water availability for both domestic and livestock use
- Surface water resource improvement
- Emergence of springs

Negative Impacts

- Floods
- Water siltation and sedimentation
- Water sources pollution both surface and underground
- Destruction of roads and bridges
- Destruction of crops especially those near river banks incase of overflowing
- Damage and destruction to water and sanitation infrastructure, including water intake structures, weirs, bridges, sewer lines, latrines, and septic tanks.

Therefore, residents are advised to;

- *Enhance rainwater harvesting from the slightest down pour. This water will then be used during dry spells*
- *Repair and improvement of drainage system by relevant County officers*
- *Construction of structures that can hold / withstand floods*
- *Ensure water treatment*
- *Soil conservation measures ensured to reduce siltation of water resources*
- *Desilting of dams and wells*
- *Monitoring and improving waste water and solid waste management*

3.4 Energy

Positive Impacts

- Increased feeds availability for biogas production
- Increased availability of biomass for domestic use

Negative Impacts

- Less use of solar power due to decreased irradiance
- Power supply disruption may lead to both social and economic losses

Therefore ;

- *Improve power transmission and distribution of infrastructure*
- *Dissemination of early warning and timely weather updates to residents*

3.5 Disaster Management Sector

Positive Impacts

- Reduced drought effects due to availability of food and nutrition
- Reduced resource based conflicts

Negative Impacts

- Increased floods and flash floods
- Landslides and mudslides especially in hilly grounds
- Damage of infrastructures
- Rising water levels in water sources
- Increased risks to Quarry operators

Therefore, residents are advised;

- *Not to walk or drive through flooded areas or to cross flooded rivers*
- *Temporary closure of the activities carried out close to water sources during the season*
- *To adhere to early warning updates disseminated through social media*
- *Communities, MDA, KENHA, County GOVT, MOH, Meteorological department, Kenya Redcross and disaster management team should work hand in hand*

3.6 Health Sector

Positive Impacts

- Increased food and nutrition due to water availability
- Reduced dust hence decreased effects of some of allergic diseases such as respiratory diseases

Negative Impact

- Water Related diseases such as malaria may increase due to breeding of mosquito and other vectors in the flooded area
- Waterborne diseases such as cholera are likely to increase as a result of contamination of drinking water by floods
- Destruction of infrastructures such as roads and bridges making it difficult to access health facilities in good time

Therefore,

- *Stocking of malaria drugs in health facilities such as malaria testing reagents.*
- *Provision of mosquito nets*
- *The Ministry of Health and Public Health officers should ensure sensitization on water treatment, education on disease prevention as well as sensitization for Water and Sanitation for Health (WASH) should be carried out.*
- *The County Government should procure and supply drugs for human treatment as well as water treatment chemicals before the onset of rainfall.*
- *Bushes should be cleared to check breeding of mosquitoes and other harmful insects*
- *Establish mental health support systems for residents affected by floods*

3.7 Transport and Public Safety Sector

The expected above average rainfall is likely to cause flash floods, slippery roads and poor visibility. This situation may worsen during the month of April which is the peak month of Long rains.

Therefore utmost care should be taken to minimise accidents to all Road users .

- *Roads repairs should therefore be done as well as clearing drainage systems. This will ensure smooth transportation of farm products*
- *Appropriate road designs such as putting culverts and storm water ways*

- *Pedestrians advised to take optimum care*
- *Drivers should avoid careless driving*
- *Appropriate road designs such as putting culverts and storm water ways*

N.B: This forecast should be used in conjunction with the weekly, monthly forecast and regular updates issued by this office

Signed,

A handwritten signature in blue ink, appearing to read 'Magdalene Gateri', with a horizontal line underneath.

**MAGDALENE GATERI
COUNTY DIRECTOR OF METEOROLOGICAL SERVICES KIAMBU_KENYA**