



**Kenya Meteorological Department
P.O. Box 30259-00100**

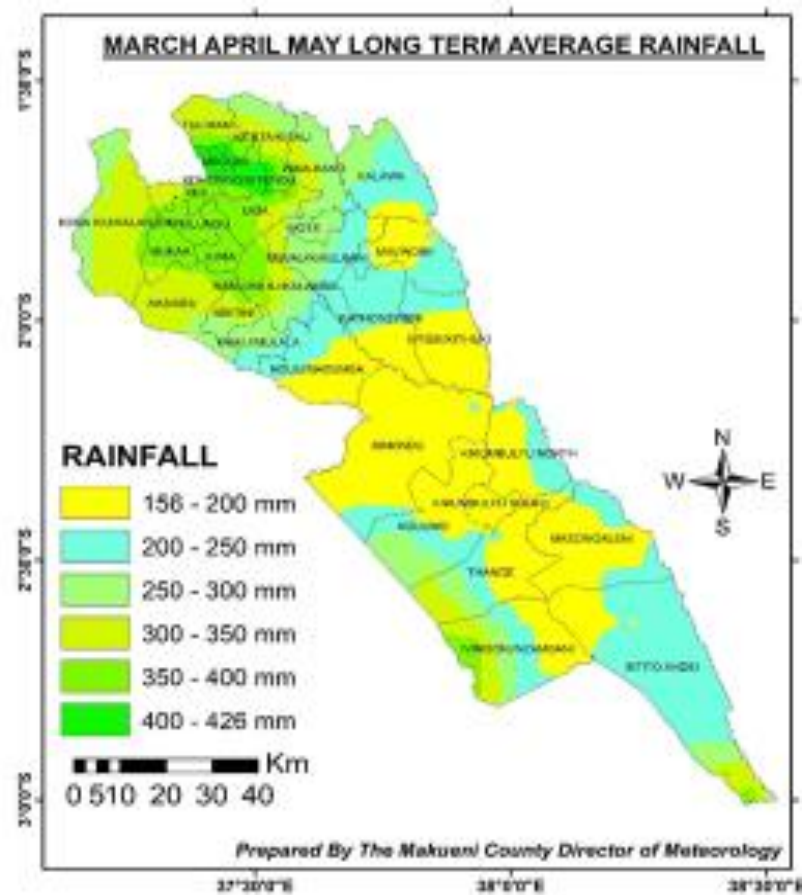
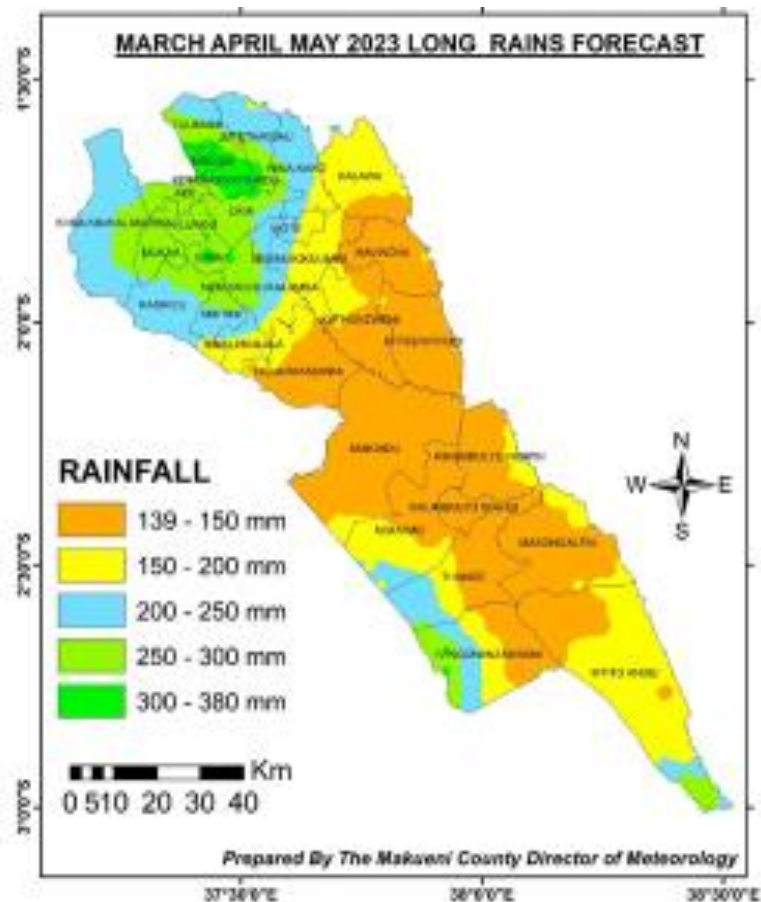
MAKUENI COUNTY

MARCH-MAY 2023 SEASONAL AGRO-WEATHER ADVISORIES

For More enquiries, Contact

- 1) County Director of Meteorological Services (CDMS) Mobile Contact: 0795929926.***
- 2) Ward, Subcounty or County Agricultural Extension Offices***

1 MARCH-APRIL-MAY 223 SEASONAL FORECAST



| Upper Zone | Middle Zone | Lower Zone |
|--|--|--|
| Onset: 1 st to 14 th April, 2023 Cessation: 14 th TO 21 st May, 2023 Status: Below Normal (300-380 mm). Distribution: Poor both in time and space | Onset: 1 st to 14 th April, 2023 Cessation: 14 th TO 21 st May, 2023 Status: Below Normal (200-300 mm). Distribution: Poor both in time and space | Onset: 1 st to 14 th April, 2023 Cessation: 14 th TO 21 st May, 2023 Status: Below Normal (139-250 mm). Distribution: Poor both in time and space |

2 AGRONOMIC ADVISORIES

2.1 Upper AEZ zones (Wards: Mbooni, Mukaa, Kithungo/Kitundu, Mbitini)

| | Recommended Actions | Responsible |
|---------------------------------|--|---------------------------|
| Hazards and Risks | <ul style="list-style-type: none"> ▪ Drought, ▪ famine ▪ flash floods, ▪ pests and diseases outbreak | NGOs,MDAs |
| Advisories for Maize | <ul style="list-style-type: none"> ○ Crop varieties to plant <ul style="list-style-type: none"> ▪ DUMA 43; DK8031; SUNGURA F1; HARAKA 301; DK 8031; DH04; DHO2 ○ Planting dates: 27th March to 7th April 2023 ○ Maturity dates: June 2023 ○ Harvest dates: Mid-June 2023 | Farmers, VCAs, WAOs |
| Advisories for Beans | <ul style="list-style-type: none"> ○ Farmers are advised to plant the following crop varieties <ul style="list-style-type: none"> ▪ KAT X56; KAT B1; KAT X 69; NYOTA; MWITEMANIA ○ Planting dates: Planting dates: 27th March to 7th April 2023 ○ Maturity dates: June 2023 ○ Harvest dates: Mid June 2023 | Farmers, VCAs, WAOs |
| Measures for water conservation | Terracing ,contour farming, farm yard manure application, road runoff harvesting into retaining ditches, water ponds, water pans, mulching, planting of cover crops like pumpkins and sweet potatoes Roof water harvesting | Farmers, VCAs, WAOs |
| Cow peas | •K80; KV-27; M66; Faulu; Ken kunde | |
| Sweet potatoes | Irine | |
| Risks | <ul style="list-style-type: none"> • Drying up of planted trees; Reduced crop yield; Reduced animal pasture and fodder • Low water levels; Animal-human conflicts; Human-human conflicts; Forest fires | Farmers, VCAs, WAOS |
| opportunities | <ul style="list-style-type: none"> • Adopting DTCs; Water harvesting; Fodder harvesting; Hay harvesting; Vegetable preservation • Income from sale of water | Farmers, vcas, VBAs, WAOs |
| Impacts | <ul style="list-style-type: none"> ✓ Food and nutrition insecurity ✓ poverty ✓ Increase in insecurity ✓ Natural pasture improvement ✓ Increased human wildlife conflict. ✓ Increased school dropouts ✓ Early marriages | |

2.2 Middle AEZ zones (*Tulimani, Kako/waia Kisau/Kiteta, Kasikeu, Kiima/Kiu, Kalamba, Mavindini, Emali/Mulala, Wote, Muvau/Kikumini*)

| | Recommended actions | Responsible |
|---------------------|--|-------------------------------------|
| Maize | crop varieties: DUMA 43; Kishindo; Sungura 301; DK 8031; Pan3m-5; Haraka 101; Tosheka <ul style="list-style-type: none"> ▪ Planting dates – 4th week of March to 1st week of April ▪ Dates of maturity – June 2023 ▪ Harvest dates – Mid June 2023 | Farmers, VCAs, WAOs |
| Beans | <ul style="list-style-type: none"> ▪ Crop varieties: Nyota; KAT X56; KAT B1 ▪ Planting dates- 4th week of Mach to 1st week of April 2023 ▪ Dates of maturity – June 2023 ▪ Harvest dates – Mid June 2023 | Farmers, VCAs, WAOs |
| Green grams | Varieties: Biashara; Karembo; KS20; N26 Planting dates- 4 th week of Mach to 1 st week of April 2023 Dates of maturity – June 2023 Harvest dates – Mid June 2023 | |
| Cow peas | Crop varieties <ul style="list-style-type: none"> ▪ KVU-27-1; M66; K80; Ken kunde; Black eye ▪ Planting dates- 4th week of Mach to 1st week of April 2023 ▪ Dates of maturity – June 2023 ▪ Harvest dates – Mid June 2023 | Farmers, VCAs, WAOs |
| Dolichos lablab | Variety: Black | Farmers, VCAs, WAOs |
| Sorghum | Variety: Gadam; Seredo | Farmers, VCAs, WAOs |
| Finger millet | Variety: Serena; Sila | Farmers, VCAs, WAOs |
| Pear Millet | Variety: Kari Mtama1; Kivila kya ivui | Farmers, VCAs, WAOs |
| Water conservations | <ul style="list-style-type: none"> ▪ Farm ponds: Zai pits; Cut off drains; Conservation agriculture (CA) ▪ Regenerative agriculture (RA); Terraces (Fanya Juu); Roof water harvesting | Farmers WAOs, VCAs |
| Risks | <ul style="list-style-type: none"> • Drought; Resource based conflicts; Reduced crop yields; Low water levels • Forest fires; Increased incidences of pests and diseases; Domestic violence • Prostitution | Governments at both levels NGOs |
| opportunities | <ul style="list-style-type: none"> • Pasture/feed conservation; Water harvesting; Adoption of Climate Smart Agriculture • Hay harvesting; Water business | Governments at both levels; NGOs |
| Impacts | <ul style="list-style-type: none"> ✓ Food and nutrition insecurity; High cost of living; Poverty; Increased incidences of human wildlife conflicts. ✓ Poor performance in schools; Early marriages; High incidences of divorce ✓ HIV/AIDS increase | Governments at both levels; NGOs |

2.3 Lower AEZ zone (Makindu, Nguu/Masumba, Kalawa, Kikumbulyu South, Kikumbulyu North, Nguumo, Thange, Nzambani/Vingoni, Mavindini, Kathonzweni, Kitse/kithuki, Masongaleni, Mtito Andei)

| Crops | Recommended actions | Responsible |
|---------------------|--|---|
| Green grams | Crop varieties <ul style="list-style-type: none"> ▪ KS20; N26; Biashara; Karemba; Nakueni | Farmers WAOs, VCAs |
| Sorghum | Crop varieties <ul style="list-style-type: none"> ▪ Gadam; Seredo;KARI mtama1 | Farmers, WAOs, VCAs |
| Cowpeas | Crop varieties <ul style="list-style-type: none"> ▪ K80; M66; KVU-27-1; Local varieties | Farmers, WAOs, VCAs |
| Pearl Millet | Varieties: Advanta | Farmers, WAOs, VCAs |
| Finger Millet | Varieties <ul style="list-style-type: none"> •Serena; Sila | |
| Water conservations | <ul style="list-style-type: none"> ▪ Farm ponds; Zai pits; Cut off drains; Basins; Conservation agriculture (CA) ▪ Regenerative agriculture (RA); Terraces (Fanya Juu);Roof water harvesting | Farmers, WAOs, VCAs |
| Risks | <ul style="list-style-type: none"> • Drought; High rates of school drop outs; Insecurity (thefts) • Increased incidences of domestic violence; Prostitution increase • Increased incidences of resource-based conflicts; Migration | County and national governments NGOs |
| opportunities | <ul style="list-style-type: none"> • Pasture/feed conservation; Water harvesting; Adoption of DTCs • Adoption of dry lands agricultural technologies; • Hay harvesting; Water business | County and national governments NGOs |
| Impacts | <ul style="list-style-type: none"> ✓ Food and nutrition insecurity ✓ Malnutrition ✓ Insecurity ✓ Poor performance in schools ✓ Increased incidences of resource based conflicts. ✓ Increased incidences of domestic violence ✓ High school dropouts ✓ Increase in divorce cases ✓ High crime rates. ✓ Prostitution ✓ Increase in HIV/AIDS cases | County and national governments NGOs |

3 Livestock Advisories in Upper, Middle and Lower Zones

| | Recommended Actions | Responsible |
|--------------------------------|--|--|
| Activities on Livestock | Pastures/fodder to be establishment <ul style="list-style-type: none"> • Panicum maximum (mbwea); Chloris Roxburghiana (kilili) • Bracharia species; • Pennisetum species • Cencrus ciliaris; Sorghum fodder; Sudan grass • Fragrostis Superha(mbweetwa) | Farmers WLPOs Community Extension Volunteers Input suppliers |
| | <ul style="list-style-type: none"> •Ration feeding/paddock/conservation feeding • Destocking for appropriate carrying capacity • Adoption of home feed formulation • Breed management • Rehabilitation of existing and establishment of new water harvesting structures • Bush management for pasture improvement •Deworming •Tick control • Vaccination of livestock against weather related diseases • Proper housing for livestock • Timely harvesting and preservation of pastures and fodders • Rehabilitation of fish ponds •Restocking of fish ponds | Farmers Community extension volunteers Service providers |
| Hazards/Risks | Livestock diseases, parasite infestation, poor pasture and fodder establishment | |
| Impacts | <ul style="list-style-type: none"> • Inadequate pasture and fodder; Reduced milk production • Low birth rates; Poor animal body conditions • Low animal prices; Reduced water availability; Reduced household income | |
| Opportunities | <ul style="list-style-type: none"> •Feed conservation • Breed improvement for adaptable breeds • Value addition of animal products • Water harvesting and storage • Increase of small stocks number which require less feed | |

4 Other Sectors-Upper Zone, Middle zone and Lower zone.

| SECTOR | Impact | Hazards/ Risks | Opportunity | Intervention/ Action plan | Responsible |
|---------------------|--|---|---|--|--|
| Water resources | <ul style="list-style-type: none"> • Little water that should be harvested • Drought • Poverty • Malnutrition • Marriage breakage • Food insecurity • High cost of living • Increase in resource-based conflicts • High crime rates • Increased incidences of school drop outs | <ul style="list-style-type: none"> • Drought • Migration • High incidences of school drop outs • Insecurity • Drying up of planted trees • Forest fires • Reduced livestock feeds • Low water levels in water sources • Resource based conflicts increase • Marriage breakage • Prostitution increase • Increased incidences of pests and disease outbreaks | <ul style="list-style-type: none"> •Water harvesting & conservation • Pasture/feed conservation • Water business | Water trucking, adopt Water harvesting structures e.g. dams ,ponds ,water tanks and drought response interventions | NDMA,Dept. of water, Department of Agriculture, Livestock, Irrigation and development partners |
| Disaster management | <ul style="list-style-type: none"> • Drought • Upsurge of resource-based conflicts • Water scarcity • Food insecurity | <ul style="list-style-type: none"> • Below normal rainfall • Limited resources • High cost of living | <ul style="list-style-type: none"> • Anticipatory planning • Development of contingency plans | Activation of Emergency /Contingency plans | National Drought Management Authority, NGOs, Governments, Faith Based Organization |
| Wildlife /forestry | <ul style="list-style-type: none"> • increased Human /wildlife conflicts • Incidences of wild fire breakouts in forests • Loss of biodiversity | <ul style="list-style-type: none"> •Loss of livelihood • Wildlife deaths • Environmental degradation through unwanton felling of trees for charcoal. | <ul style="list-style-type: none"> •Conservation and strict protection of the current biodiversity • Surveillance to deter illegal activities | Human /wildlife conflict minimization through budgetary allocation for compensation ,electric fencing ,surveillance and enforcement,Afforestation programs | KWS National & County Government Farmers Conservationists |

| SECTOR | Impact | Hazards/ Risks | Opportunity | Intervention/ Action plan | Responsible |
|-----------------------------------|---|---|---|--|--|
| Trade, industry and finance | <ul style="list-style-type: none"> • commodity price increase • Reduced per capita incomes • Unavailability of commodities | Famine/ drought/starvation | Prudent utilization of current food reserves, Importation of essential food commodities | Subsidized trader Reduced credit interests | Dept of Trade, Business Community, National & County Government |
| Energy | Energy infrastructure network collapse | <ul style="list-style-type: none"> • Temporary blackouts • Reduced businesses | Maintenance of KPLC infrastructures, Investment on alternative energy sources | Allocate emergency funds, subsidy on fuel especially for domestic use | Kenya Power (kplc) |
| | Power outages | Short-circuiting | Energy saving | Alternative supply e.g. solar, generators | Kenya Power (kplc) |
| | Increased cost of Energy | Reduced electric energy generation | Intensified use of solar energy | Power rationing, Subsidies on solar power equipment | |
| Health | Increased Food insecurity | Increased Malnutrition, Increased food deficient related ailments | Leverage on Nutrition, Increase food supplements for young children and the elderly (vulnerable groups) | Emergency /mobile clinic, Increase Health personnel, Enhanced public health activities, Prepositioning of drugs in health facilities | Ministry Of Health, Private Hospitals, Stakeholders |
| Education | Disruptions of education due to hunger at home, Increased school drop outs | Poor school infrastructure due to parent's low incomes | Initiation of School feeding Program | Early warning and preparedness | Dept of Education, NGOs, CDMU, Faith Based Organizations, Parents |

5 Crop Calendar

| | | | |
|--|---|--|--|
| <ul style="list-style-type: none"> •Long rains •Planting •Weeding •Thinning •Fertilizer application | <ul style="list-style-type: none"> •Long dry spell •Long rains harvests •Post-harvest mgt. •Kidding (September) | <ul style="list-style-type: none"> •Short rains • Planting • Weeding • Thinning/Gapping •Fertilizer application | <ul style="list-style-type: none"> •Hot and dry spell (Short hot and dry spell) • Harvesting •Post-harvest mgt. |
| | | | |
| March-April-May-2023 | June, July, August, September 2023 | Oct, Nov, Dec. 2023 | January – February |

ADDITIONAL INFORMATION: This seasonal forecast is based on the existing conditions and there is always a possibility for the trend to change especially in advent of cyclones development which are unpredictable.

Farmers advised to keep monitoring the monthly and weekly forecasts issued by Kenya Meteorological Department (KMD) and the County Meteorological Office from time to time and make changes as required.

Farmers are encouraged to seek advice and additional information on application of climate information from the nearest Agriculture/livestock/fisheries extension office.

Prepared by the County Director of Meteorological Services (CDMS) – Makueni County (0795929926).