



Kenya Meteorological Department
P.O. Box 30259-00100
machakos@meteo.go.ke, dominicrobert7@gmail.com

ADVISORIES FOR THE OCTOBER-DECEMBER 2022 (OND 2022) RAINY SEASON FOR MACHAKOS COUNTY

Contents

1	Weather Forecast	2
1.1	Highlights	2
1.2	Recommendations	2
2	Agro-Weather Advisories	3
2.1	General Responsibilities	3
2.2	General Farm Activities	3
2.3	When to Plant	3
2.4	Specific agro-weather Advisories for the Upper zones	3
2.5	Specific agro-weather Advisories for the Middle zones	4
2.6	Specific agro-weather Advisories for the Lower zones	4
2.7	General Analysis of Hazards/Risks and Opportunities (agriculture)	5
3	Specific advisories for Livestock farmers	5
4	Advisories for Other Livelihood Sectors	6
5	How to get Weather Updates	6

1 Weather Forecast

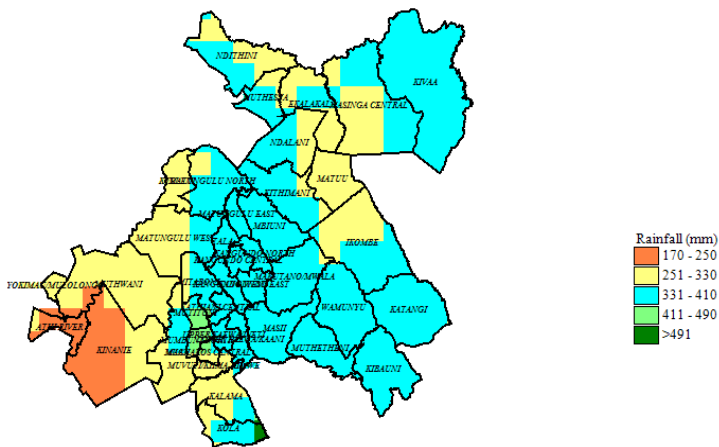
1.1 Highlights

The OND 2022 rainy season is expected to be **below normal** with a **late onset** (early November) and poor distribution within season (long dry days within season). The reasons for below normal rainfall are: (a) Negative Indian Ocean Dipole (IOD) and (b) Lanina conditions in the Pacific Ocean.

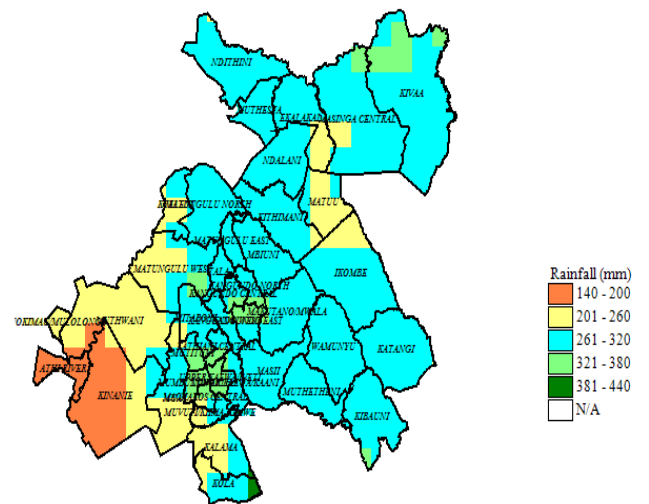
The rains will start between **1st November and 14th November** and end between **12th to 25th December 2022**. Rain period is expected to be between **42 to 55 days**.

The map below shows the spatial distribution of the amount of rainfall expected in the entire OND 2022 season (compared to a normal OND season):

OCTOBER-NOVEMBER-DECEMBER AVERAGE RAINFALL FOR MACHAKOS COUNTY



OCTOBER-NOVEMBER-DECEMBER 2022 FORECAST FOR MACHAKOS COUNTY



1.2 Recommendations

- i) Choosing the right crops to plant:
 - To minimize risks, choose the crops whose seasonal Crop Water requirement is within the lower limit value of the predicted range
 - Risk of long dry Spells within the rainy period:
 - At the moment we cannot reasonably predict the actual length of the dry spells and their impacts on various crops
 - We therefore advise farmers to choose crops that are least vulnerable to such long dry spells
 - Length of the rainy period (LRP):
 - The exact length of soil moisture is slightly higher than the LRP depending on soil type and the amount of moisture at the time of cessation.
 - Choose the crop whose length of growing period to maturity is not too far from the LRP.
- ii) Onset dates versus planting dates
 - For those wishing to do wet plant, it is advisable to wait for the weekly weather update which is more accurate

2 Agro-Weather Advisories

2.1 General Responsibilities

- Farmers to implement the advisories
- Agricultural Officers to advise farmers
- Input suppliers to ensure inputs are available on time
- Community Extension Volunteers to advise farmers
- Kenya Met Department to provide weather updates (weekly and others)
- Agriculture, Livestock and Fisheries development put in place capacity to help farmers
- Insurance companies provide insurance policy for crops and livestock

2.2 General Farm Activities

- Early land preparation: **before 31st October**
- Repair of soil and water conservation structures: Terraces, Zai Pits, Basins
- Repair of water storage structures: Desilting of farm ponds, weirs, water tanks, water pans, Gutters
- Practices: Conservation Agriculture (CA): Ripping, Planting stations.
- Pre-germination (seed soaking); Seed preparation
- Scale up manure and fertilizer application (basal & top dressing)
- Timely weed control
- Timely and proper pests and disease control.
- Proper spacing of crops
- Plant ecologically suitable certified seeds as indicated above
- Pitting for fruits and forest Trees

2.3 When to Plant

- We recommend wet planting be done when the **weekly forecast** indicates at least **3 days** with rain of a total amount **greater than 20mm**.

2.4 Specific agro-weather Advisories for the Lower zones

- Athi river, Muvuti, Matuu Wards: 140-260 mm
- Kivaa, Ikombe, Kathiani Wards: 261-320 mm
- Kalama, Machakos Central, Mwala, Kangundo, Kola Wards : 321-440mm

Crops to plant	Athi river, Muvuti, Matuu Wards: Probable OND 2022 Amount: 140-260 mm	Kivaa, Ikombe, Kathiani Wards: Probable OND 2022 Amount: 261-320 mm	Kalama, Machakos Central, Mwala, Kangundo, Kola Wards: Probable OND 2022 Amount: 321-440mm
1. Maize	Sungura F1, Haraka, KDV1, Locals	DHO ₂ , Duma43, Sungura F1, Kishindo, Haraka, Duma series, Pannar, Sawa, Mituki, KDV, Tsavo 4141, DK 8031	Haraka, Duma series, and DK series,
2. Beans	Mwezi Moja, Kat B1, Locals (Kasalu)	KatB1, GLP 92, KatX56, Kat B9,	Locals, KatX69, Nyota,
3. Cow Peas	K80, M66, KVU-27 Locals Ken Kunde, Kunde mboga,	K80, M66, KVU-27 Locals Ken Kunde, Kunde mboga,	Kunde Tamu, Kunde Soko
4. Pigeon peas	Mituki, Mpesa, Mbaazi 2	Mbaazi 1, Mbaazi 2, Kionza	Mbaazi 1, Mbaazi 2, Kionza
5. Dolichos	DL 1002, DL 1009	DL 1002, DL 1009	DL 1002, DL 1009

Crops to plant	Athi river, Muvuti, Matuu Wards: Probable OND 2022 Amount: 140-260 mm	Kivaa, Ikombe, Kathiani Wards: Probable OND 2022 Amount: 261-320 mm	Kalama, Machakos Central, Mwala, Kangundo, Kola Wards: Probable OND 2022 Amount: 321-440mm
6. Cassava	KME 1, Mucericeri, KME 61, Kibanda Meno Varieties, Locals)	KME 1, Mucericeri, KME 61, Kibanda Meno Varieties, Locals)	KME 1, Mucericeri, KME 61, Kibanda Meno Varieties, Locals)
7. Sweet Potatoes	Locals, KSP 20, Kemp 10, SPK 004	Locals, KSP 20, Kemp 10, SPK 004	Locals, KSP 20, Kemp 10, SPK 004
8. Sorghum	Gaddam, Serena, Seredo, Kari Mtama 1	Gaddam, Serena, Seredo, Kari Mtama 1	Kari Mtama 1, Macia, Silas
9. Millets	Finger millet, Pearl Millet	Finger millet, Pearl Millet	Finger millet, Pearl Millet

2.5 Specific Agro-weather Advisories for the Middle zones

- Mwala-Makutano Masii Wards 261 -320mm
- Kathiani, Kangundo Central Wards 321-400mm

Crops to plant	Mwala-Makutano Masii Wards Probable OND 2022 Amount: 261 -320mm	Kathiani, Kangundo Central Wards: Probable OND 2022 Amount: 321-400mm
1. Cow Peas	Locals Ken Kunde, Kunde mboga, Kunde Tamu, Kunde Soko	Same crops
2. Pigeon peas	ICEAP 00936, ICEAP 00554	Same crops
3. Dolichos	DL 1002, DL 1009	Same crops
4. Cassava	KME 61, Red Stemmed Varieties, Locals	KME 1, Mucericeri, KME 61, Red Stemmed Varieties, Locals
5. Sweet Potatoes	Locals, KSP 20, Kemp 10, SPK 004	Same crops
6. Sorghum	Gaddam, Serena, Seredo, Kari Mtama 1, Macia, Sila	Same crops
7. Millets	Finger millet, Pearl Millet	Same crops
8. Green Grams	K80, M66	Same crops

2.6 General Analysis of Hazards/Risks and Opportunities (agriculture)

Hazards /risks	Opportunities	Proposed actions
<ul style="list-style-type: none"> • Soil erosion • Isolated incidences of water logging • Outbreak of crop pests and diseases • Leaching of nutrients • False on-set of rains • Poor germination and loss seeds • Destruction of farm structures • Low land productivity • Low crop yields • Loss of inputs and poor crop establishment • Food insecurity and poor farm incomes 	<ul style="list-style-type: none"> • Increased area under crop and farm forest cover • Water harvesting for crop production and household use • Availing of certified farm inputs by agro-dealers • Kitchen gardening • Insuring of crops against 	<ul style="list-style-type: none"> • Establish new and Repair existing soil and water conservation structures and farm facility structures • Staggered planting • Timely procurement of inputs • Embrace Integrated Pest Management and Integrated Crop Management • Procurement of crop insurance

3 Specific advisories for Livestock farmers

Recommended Actions	Hazard/Risks	Opportunities	RESPONSIBLE
<ul style="list-style-type: none"> ✓ Pastures/fodder to be established • Panicum maximum • Chloris Roxburghiana (Kilili) • Bracharia species • Pennisetum species • Cenchrus ciliaris • Sorghum Fodder • Sudan grass • Eragrostis Superba (Mbeetwa) 	<ul style="list-style-type: none"> • Livestock diseases, Parasites infestation, Poor pasture and fodder establishment • Inadequate pasture and fodder • Reduced milk production • Low birth rates • Poor body condition • Low prices of animals • Reduced water availability • Reduced household income 	<ul style="list-style-type: none"> • Feed Conservation • Breed improvement-for adaptable breeds • Value addition • Water harvesting and storage • Increase of small stock number • Breed improvement-for adaptable breeds • Value addition • Water harvesting and storage • Increase of small stock number • Feed Conservation 	Farmers WLPO Community Extension Volunteers, Inputs suppliers Service providers
<ul style="list-style-type: none"> ✓ General actions • Ration feeding/Paddock/conservative feeding • Destocking for appropriate carrying capacity. • Adopt Home feed formulations. • Breed management • Rehabilitation of Existing and establishment of new water harvesting structures • Bush management for pasture improvement • Deworming • Tick control • Vaccinate the animals against weather related diseases • Proper housing for livestock protection. • Timely harvesting and preservation of pastures and fodder • Rehabilitation of fish ponds • Restocking of fish ponds. 			

4 Advisories for Other Livelihood Sectors

SECTOR	Impact	Hazards/ Risk	Opportunity	Intervention/Actions	Responsible
Water resources	Little water that should be harvested	Inadequate water infrastructures -Flash flood	Water harvesting & conservation	Water trucking, adopt Water harvesting structures e.g. dams, ponds, water tanks	Dept of water and development partners
Disaster management	Few disasters likely to happen	Likelihood of La nina phenomenon to persist	Leverage on salvaged produce	Emergency /contingency plans	National Drought Management Authority, NGOs,Governments,Faith Based Organization
Wildlife /forestry	Increased Human /wildlife conflict, Incidences of wild fire breakout.	Loss of livelihood Loss of wildlife	Conservation and strict protection of the current biodiversity	Human /wildlife conflict minimization through budgetary allocation for compensation, electric fencing, surveillance and enforcement, Afforestation programs	KWS National & County Government Farmers

SECTOR	Impact	Hazards/ Risk	Opportunity	Intervention/Actions	Responsible
Trade, industry and finance	commodity price increase Reduced per capita incomes	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	Electrocution, Temporary blackouts	Maintenance of KPLC infrastructures, Investment on alternative energy sources	Allocate emergency funds, subsidy on fuel especially for domestic use	Kenya Power
	Power outages	Short-circuiting	Energy saving	Alternative supply e.g., solar, generators	Kenya Power
	Increased cost of Energy	Reduced electric energy generation	Intensified use of solar energy	Power rationing, Subsidies on solar power equipment	
Transport /communication	Poor transport & communication networks	Flash floods	Road for water harvesting	Diversion channels Emergency funds /personnel, declogging of culverts	Dept of Transport, NTSA, National Government, County Government
Health	Increased Food insecurity	Increased Malnutrition, Increased food deficient related ailments	Leverage on Nutrition, Increase food supplements for young children and the elderly	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, Faith Based Organizations, Parents

5 How to get Weather Updates

You can get weekly weather updates from the Counties folder in the KMD Website <https://meteo.go.ke/node/4191> and via SMS messages every Monday evening or early Tuesday morning.

For More information Contact, the Nearest Agric Office: Ward, Sub County & County-Machakos

MACHAKOS COUNTY DIRECTOR OF MET 0721384681

Website : <https://meteo.go.ke/node/4191>