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KITUI COUNTY MARCH- MAY (MAM 2024) LONG-RAIN SEASON

Contents

1	Introduction	2
2	MAM 2024 Seasonal Weather Forecast	2
2.1	Highlights	2
2.2	Probable MAM 2024 total Seasonal Rainfall vs Normal (Long term Mean).....	3
2.3	Summary of the MAM 2024 Seasonal Forecast by Wards	4
3	Recommendations	6
4	Agro-Weather Advisories	6
4.1	General Responsibilities	6
4.2	General Farm Activities.....	6
4.3	Specific Agronomic Advisories for the Upper zones: 300-500mm.....	7
4.4	Specific Advisories for Livestock Sector – Upper Zone	7
4.5	Specific Agro-weather Advisories for the Middle zones.....	7
4.6	Specific Advisories for Livestock Sector – Middle Zones	8
4.7	Specific Agro-weather Advisories for the Lower zones:.....	8
4.8	3.8 Specific Advisories for Livestock Sector – Lower Zone.....	8
4.9	General Activity plans	9
4.10	General Analysis of Hazards/Risks and Opportunities (agriculture).....	9
2	Other Specific advisories for Livestock farmers.....	10
3	Advisories for Other Livelihood Sectors	11
4	How to get Weather Updates	12
4.10.1	For More information Contact, the Nearest Agricultural Office: Ward, Sub County & County-Kitui	12
5	Annex 1: Kitui County Wards Map.....	12

1 Introduction

These advisories were Co-produced at a Participatory Scenario Planning workshop involving farmers, Agricultural Extension Staff, Indigenous traditional forecasters and Kenya Meteorological Department staff. The workshop was sponsored by the AICCRA Programme.

2 MAM 2024 Seasonal Weather Forecast

2.1 Highlights

The MAM 2024 rain season is expected to be **Normal to Above Normal**. The onset is predicted from **23rd March to 7th April** (Fourth week of March to first week of April). The cessation is expected to be; (a) in the first to second week of May (**1-14th May 2024**) for Lower Zone and; (b) second to third week of May (**8- 21st May 2024**) in both Middle Zone and Upper Zone. The rainfall distribution in time and space is expected to be **fair to bad** in Lower Zone and **fair to good** in both Middle Zone and Upper Zone. The length of the rain period will be **30-45 days**. The map below shows the spatial distribution of the amount of rainfall expected in the entire MAM 2024 season (as compared to a normal MAM season).

2.2 Probable MAM 2024 total Seasonal Rainfall vs Normal (Long term Mean)

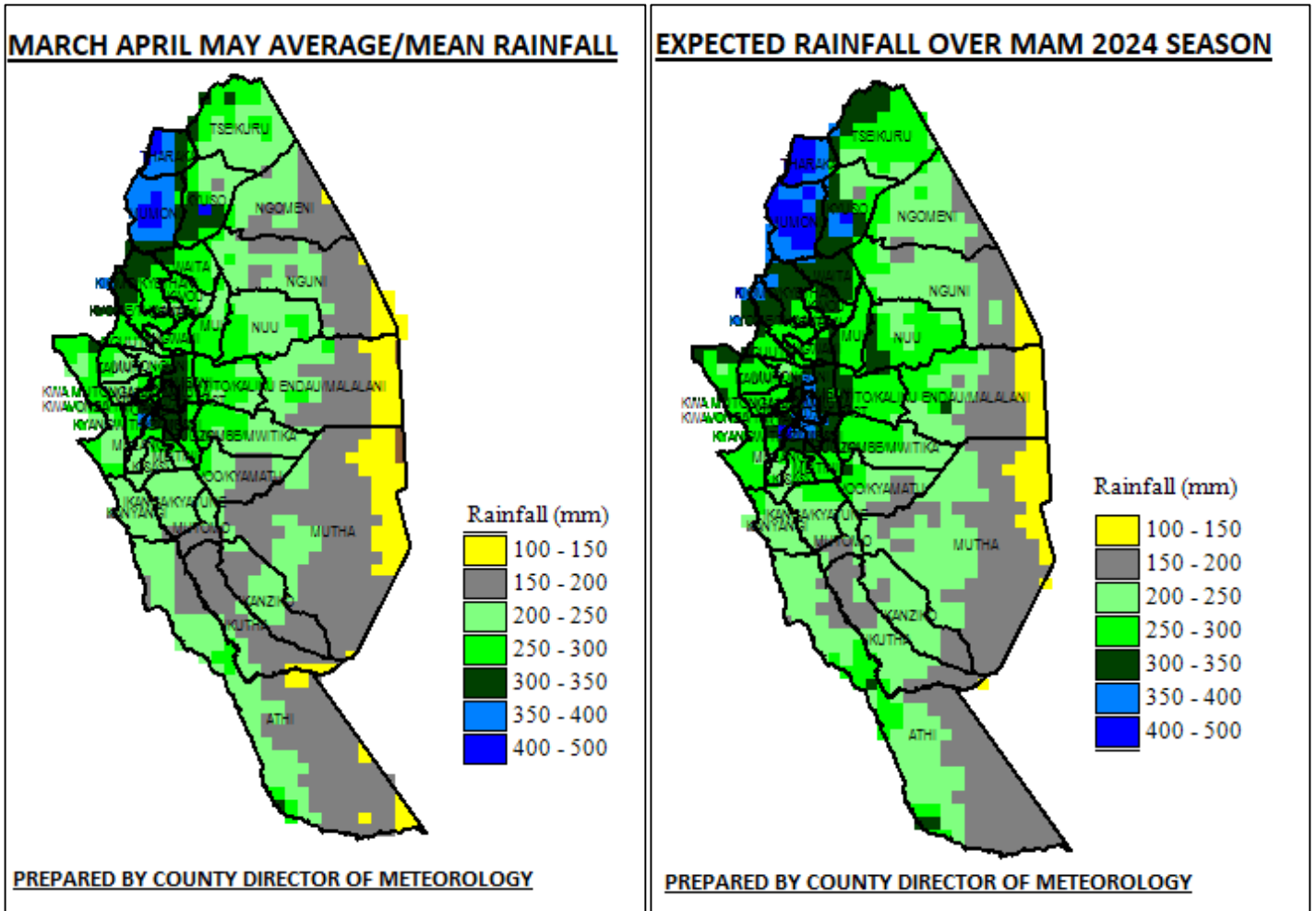


Figure 1: Climatological and forecast maps for MAM 2024

2.3 Summary of the MAM 2024 Seasonal Forecast by Wards

SNO	Sub county	Ward/ Climatic zone	MAM Seasonal Amount mm (see the exact areas in a Ward on the Maps above)		Probable Onset dates	Probable Cessation dates	Probable Length of Rain Period	Probable distribution
			Normal (Long Term Mean 1991- 2020)	Forecast MAM 2024				
1	Kitui East	Chuluni	250-300	250-30 and 300-350	23 rd Mar to 7 th April	8 - 21 st May 2024	30-45 days	Fair to good
2		Nzambani	250-300 and 300-350	300-350 and 350-400				
3		Mutito	250-300	300-350		1 - 14 th May 2024		Fair to bad
		Kaliku	200-250	250-300				
4		Nzombe	200-250	250-300		8 - 21 st May 2024		Fair to good
		Mwitika	150-200	200-250				
5		Kyamatu	200-250	200-250 and 250- 300		1 - 14 th May 2024		Fair to bad
		Voo	150-200	150-200				
6	Endau	150-200, 200- 250	200-250, 250-300					
	Malalni	<100, 100- 150, 150-200	100-150 and 150- 200					
7	Kitui South	Ikanga	200-250	200-250 and 250- 300	23 rd Mar to 7 th April	8 - 21 st May 2024	30-45 days	Fair to good
		Kyatune	150-200	150-200				
8		Mutomo/ Kibwea	150-200, 200- 250	150-200 and 200- 250		1 - 14 th May 2024		Fair to bad
9		Kanziko/ Simisi	150-200, 200-250	150-200 and 200- 250				
10		Mutha	80-100, 100- 150, 150-200, 200-250	100-150, 150-200 and 200-250				
11		Ikutha	100-150, 150- 200, 200-250	150-200 and 200-250				
12	Athi	100-150, 150- 200, 200-250, 250-300	150-200 200-250 250-300 and 300- 350					
13	Kitui Rural	Mbitini	200-250, 250- 300	250-300	23 rd Mar to 7 th April	8 - 21 st May 2024	30-45 days	Fair to good
14		Kisasi	200-250	200-250 and 250- 300				
15		Kanyangi	200-250	200-250 and 250- 300				
16		Yatta/ Kwa Vonza	200-250, 250- 300	250-300				
17	Mwingi West	Nguutani	200-250, 250- 300	250-300	23 rd Mar to 7 th April	1 - 14 th May 2024	30-45 days	Fair to bad
18		Kyome/ Thaana	200-300	200-300				
19		Kiomo/ Kyethani	200-250, 250- 300, 300-350	250-300 and 300- 350		8 - 21 st May 2024		Fair to good
20		Migwani	200-250, 250- 300	250-300 and 300- 350				
21	Mwingi Central	Central	250-300	250-300 and 300- 350	23 rd Mar to 7 th April	8 - 21 st May 2024	30-45 days	Fair to good
22		Kivou	200-250, 250- 300	250-300 and 300- 350				

SNO	Sub county	Ward/ Climatic zone	MAM Seasonal Amount mm (see the exact areas in a Ward on the Maps above)		Probable Onset dates	Probable Cessation dates	Probable Length of Rain Period	Probable distribution
			Normal (Long Term Mean 1991- 2020)	Forecast MAM 2024				
23		Waita	200-250, 250-300	250-300 and 300-350				
24		Mui	200-250, 250-300	250-300 and 300-350				
25		Upper Nuu	250-300	300-350				
		Lower Nuu	200-250	200-250 and 250-300				
26		Nguni	100-150, 150-200, 200-250	100-150 150-200 200-250 and 250-300				
27	Mwingi North	Ngomeni	150-200, 200-250	150-200, 200-250, 250-300				
28		Kyuso	200-250, 250-300, 300-350, 350-400, 400-500	200-250 250-300 300-350 350-400 and 400-500	8 - 21 st May 2024	Fair to good		
29		Tseikuru	200-250, 250-300	200-250 250-300 and 300-350				
30		Mumoni	300-350, 350-400, 400-500	300-350 350-400 and 400-500				
31		Tharaka (Kanthungu Location)	300-350, 350-400	350-400 and 400-500				
		Tharaka (Tharaka Location)	200-250, 250-300	200-250 and 250-300				
32		Kauwi	200-250	250-300				
33		Kwa Mutonga/ Kithumula	200-250, 250-300	250-300				
34		Upper Mutonguni	300-350	300-350 and 350-400				
		Lower Mutonguni	200-250, 250-300	250-300				
35		Matinyani	300-350	300-350 and 350-400				
36		Township	300-350	350-400				
37		Mulango	200-250, 250-300, 300-350	200-250 250-300 300-350 and 350-400				
		Kyangwithya East	300-350	250-300 300-350 and 350-400				
38		Kyangwithya West	250-300	250-300 300-350 and 350-400				
39		Miambani	250-300, 300-350	300-350				
40								

3 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 dry plant, it is advisable to plant in the 1st week of the forecasted onset dates.
 - For those wishing to wet plant, it is advisable to wait for the weekly weather update which is more accurate.
 - Wet Plant when the **weekly forecast** indicates at least **3 days** with rain of a total amount **greater than 20mm**

4 Agro-Weather Advisories

4.1 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 Meteorological Department (KMD) to provide weather updates (daily, 5-day, weekly, monthly, other)
- Agriculture, Livestock and Fisheries development to liaise with KMD
- Insurance companies to avail services on time

4.2 General Farm Activities

- Early land preparation: before 15th March
- Repair of soil and water conservation structures: Terraces, Zai Pits, basins, water ponds
- Repair of water storage structures: Desilting of farm ponds, weirs, water tanks, water pans, gutters
- Practices: Conversation 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

4.3 Specific Agronomic Advisories for the Upper zones: 300-500mm

Crops to plant	Wards: Kyangwithya East, Township, Upper Nzambani, Miambani, Matinyani, Upper Mutonguni, Migwani, Mumoni, Tharaka (Kanthungu Location) Probable MAM 2024 amount: 300-500 mm
1. Maize	Sungura, Haraka, Mituki, Duma 43, Makueni; Spacing 90x30cm
2. Beans	Nyota, Kat B1 (Ka Yellow), Katx 56, GLP 1000 (Mwezi moja), Kakunzu; Spacing 45x15cm
3. Cow Peas	M66, K80, KVVU-27-1 & KENKUNDE, Local variety (Kalitho & Ndamba); Spacing 60x20cm
4. Green grams	KS20 (Makueni), N26 (Nylon), Karembo, Biashara, Ndegus Tosha, Local varieties; Spacing 45x15cm
5. Grain vegetable	Grain amaranth (<i>Telele</i>); 90cm x 30cm by drilling
6. African leafy vegetables	Vegetable amaranth (<i>Telele</i>); 75cm x 30cm by drilling Managu (<i>Matulu</i>) Spider weed (<i>Sage</i>); 60cm x 20cm by drilling
7. Pasture grasses (Nyeki)	Mbeetwa, Ndata Kivumbu, Ikoka & Napier grass (<i>Kitothy</i>), Kiema Uvunie; Broadcasting (Seed rate 5kg per acre) & <i>Tumbukiza</i> (for Napier)

4.4 Specific Advisories for Livestock Sector – Upper Zone

	Recommended Actions
Activities on Livestock Sector	Pastures/Fodder to be established <ul style="list-style-type: none"> ●Panicummaximum (Mbwea) ●Chloris Roxburghiana (Kilili) ●Chloris Gayana (Boma Rhodes) ●Bracharia Species ●Eragrostis Superba (Mbeetwa)
	<ul style="list-style-type: none"> ●Ration feeding/Paddock/Conservation feeding ●Destocking for appropriate carrying capacity ●Adoption of home feed formulation
	<ul style="list-style-type: none"> ●Proper housing ●De-worming ●Tick control ●Restocking of fish ponds ●Rehabilitation of fish ponds

4.5 Specific Agro-weather Advisories for the Middle zones

Crops to plant	Wards: Kyangi, Yatta/Kwa Vonza, Kisasi, Mbitini, Ikanga/Kyatune, Zombe area, Mutito area, Lower Nzambani, Chuluni, Mulango, Kyangwithya West, Kauwi, Kwa Mutonga/Kithumula, Lower Mutonguni, Nguutani, Kiomo/Kyethani, Kyome/Thaana, Mui, Central, Kivou, Waita, Upper Nuu, Kyuso, Tharaka (Tharaka Location), Tseikuru wards Probable MAM 2024 amount: 200-300 mm
1. Cow Peas	K80, M66, KVVU-27-1, KENKUNDE, Local varieties (Ndamba & Kalitho); Spacing 60x20cm
2. Dolichos	DL1002; Spacing 100cm x 50cm
3. Green grams	KS20 (Makueni), N26 (Nylon), Biashara, Karembo, Ndengus Tosha; Spacing 45x15cm
4. Sorghum	Gadam, Sila, Seredo, Serena, advanta, KARI Mtama 1, Egerton F1; Spacing 60x20cm to 75x20cm
5. Millets	Pearl millet1, Pearl millet 2, Biofortified millet; Spacing 60x20cm

4.6 Specific Advisories for Livestock Sector – Middle Zones

Activities on Livestock Sector	Recommended Actions
Activities on Livestock Sector	Pastures/Fodder to be established ●Panicummaximum (Mbwea) ●Chloris Roxburghiana (Kilili) ●Chloris Gayana (Boma Rhodes) ●Bracharia Species ●Eragrostis Superba (Mbeetwa)
	●Ration feeding/Paddock/Conservation feeding ●Destocking for appropriate carrying capacity ●Adoption of home feed formulation
	●Proper housing ●De-worming ●Tick control ●Restocking of fish ponds ●Rehabilitation of fish ponds

4.7 Specific Agro-weather Advisories for the Lower zones:

Crops to plant	Wards: Athi, Ikutha, Kanziko/Simisi, Mutomo/Kibwea, Mutha, Mwitika area, Kaliku area, Voo/Kyamatu, Endau/Malalani, Nguni, Lower Nuu and Ngomeni wards Probable MAM 2023 amount: 100-200 mm
1. Cow Peas	M66, K80, KVVU-27-1, Ken Kunde, KK1, Locals varieties (Kalitho and Ndamba); Spacing 60x20cm
2. Green grams	KS20 (Makueni), N26 (Nylon), Biashara, Karemba, Ndengu Tosha; Spacing 45x15cm
3. Sorghum	Gadam, Sila, Seredo, Serena, advanta; Spacing 60x20cm to 75x20cm
4. Millets	Finger millet, KPM 1 & 2, Biofortified millet; Spacing 60x20cm

4.8 3.8 Specific Advisories for Livestock Sector – Lower Zone

	Recommended Actions
Activities on Livestock Sector	●Pastures/Fodder to be established ●Panicummaximum (Mbwea) ●Chloris Roxburghiana (Kilili) ●Eragrostis Superba (Mbeetwa) ●Cenchrus ciliaris (Ndata Kivumbu)
	●Proper housing ●De-worming ●Tick control ●Restocking of fish ponds ●Rehabilitation of fish ponds

4.9 General Activity plans

S/No.	Activity	When	By Whom	Remarks
1.	Land preparation	Ongoing until 23/03/2024	Farmers Service Providers	Use of CA is recommended
2.	Dry planting	Ongoing until 23/03/2024	Farmers Service Providers	Use of recommended certified seeds and plant varieties Application of manures and fertilizers
3.	Wet planting	23/03/2024 – 07/04/2024 Check the weekly weather update on KMD website https://meteo.go.ke/node/4942	Farmers Service Providers	Use of recommended certified seeds and plant varieties Application of manures and fertilizers
4.	Gapping, Thinning & Weeding	1 st – 3 rd Week of April 2024	Farmers Service Providers	Continuous activity
5.	Pest and Disease Control	From 1 st Week of April 2024	Farmers Spray Service Providers	Adherence to spray programs Continuous consultation with Agriculture Extension Officers
6.	Harvesting	From mid June to mid July 2024	Farmers Service Providers	Harvest at physiological maturity
7.	Post-harvest management and Marketing	From 3 rd Week of June 2024	Farmers Service Providers Marketing agents	Grains to be dried to the recommended moisture content (13.5% for cereals) Drying of vegetable leaves

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

Hazards /risks	Opportunities	Proposed actions
<ul style="list-style-type: none"> • Heavy floods (flash floods) • Soil erosion • Isolated incidences of water logging • Outbreak of crop pests and diseases • Leaching of nutrients • Destruction of farm structures 	<ul style="list-style-type: none"> • Maximizing yields and income through planting recommended varieties • 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 	<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

2 Other Specific advisories for Livestock farmers

Recommended Actions	Hazard/Risks	Opportunities	RESPONSIBLE
<ul style="list-style-type: none"> ✓ Pastures/fodder to be established • Panicum maximum (Mbwea) • African foxtail/Buffel grass Cenchrus ciliaris (Ndata Kivumbu) • Horsetail Chloris roxburghiana (Kilili) • Bracharia species • Pennisetum species • Cenchrus ciliaris • Sorghum Fodder • Sudan grass • Maasai love Eragrostis superba (Mbeetwa) 	<ul style="list-style-type: none"> • Livestock diseases, Parasite 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 	<p>Farmers WLPO Community Extension Volunteers,</p> <p>Inputs suppliers</p> <p>Service providers</p>
<ul style="list-style-type: none"> ✓ General actions • Ration feeding/Paddock/conservative feeding. • Restocking with young cows and culling old stock. • Conserving pasture and fodder. • 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. 			

3 Advisories for Other Livelihood Sectors

SECTOR	Impact	Hazards/ Risk	Opportunity	Intervention/Actions	Responsible
Water resources	Little water that should be harvested	Inadequate water infrastructures - Flashflood	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 wildfire 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
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 interest	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

4 How to get Weather Updates

You can get weekly weather updates from the Counties folder in the KMD Website <https://meteo.go.ke/node/4942> and via SMS messages every Monday evening or early Tuesday morning.

For More information Contact, the Nearest Agricultural Office: Ward, Sub County & County-Kitui

Kitui Meteorological Office mobile: 0715255171

5 Annex 1: Kitui County Wards Map

