



**REPUBLIC OF KENYA**

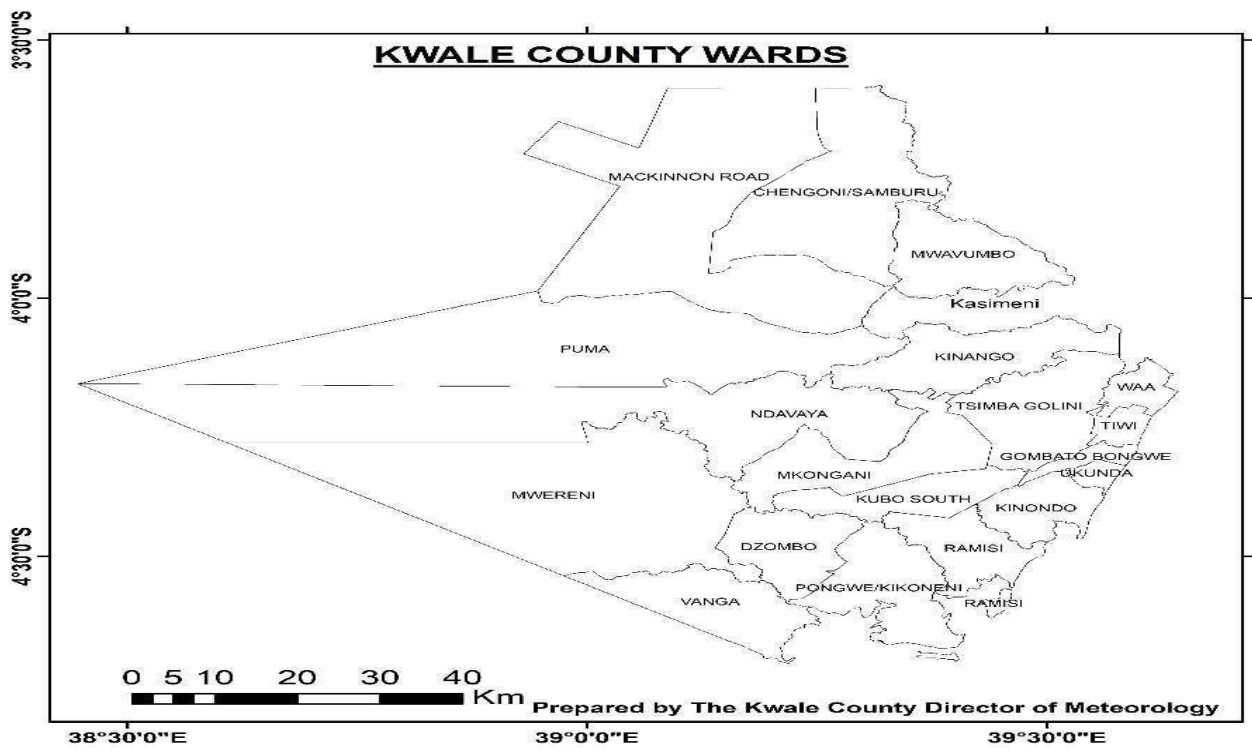
**MINISTRY OF ENVIRONMENT, CLIMATE CHANGE AND  
FORESTRY**

**KWALE CLIMATE OUTLOOK FOR THE “LONG RAINS” (MARCH-MAY) 2024  
SEASON**

BY DANSON IRERI

COUNTY DIRECTOR OF METEOROLOGICAL SERVICES

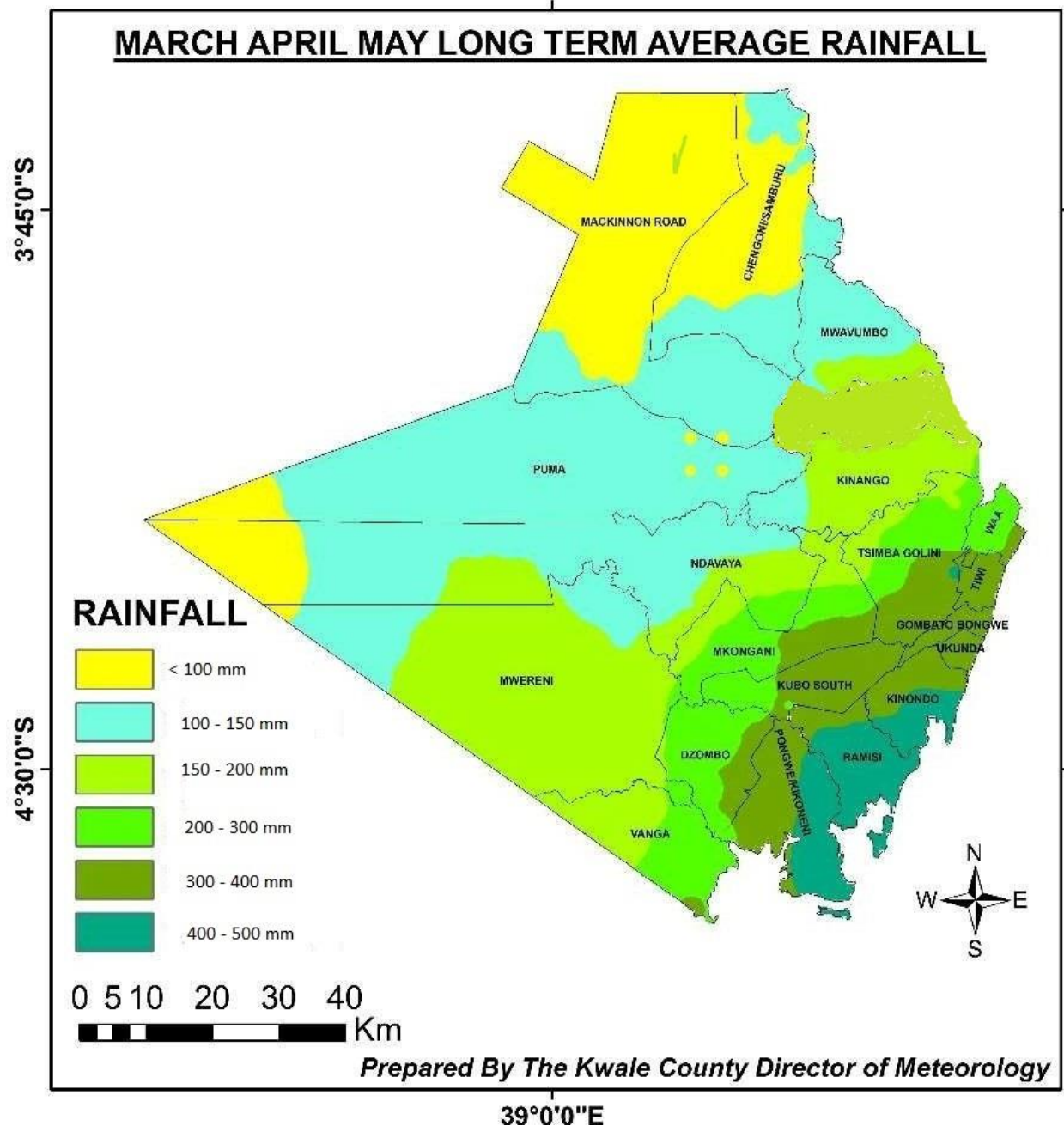
KWALE COUNTY



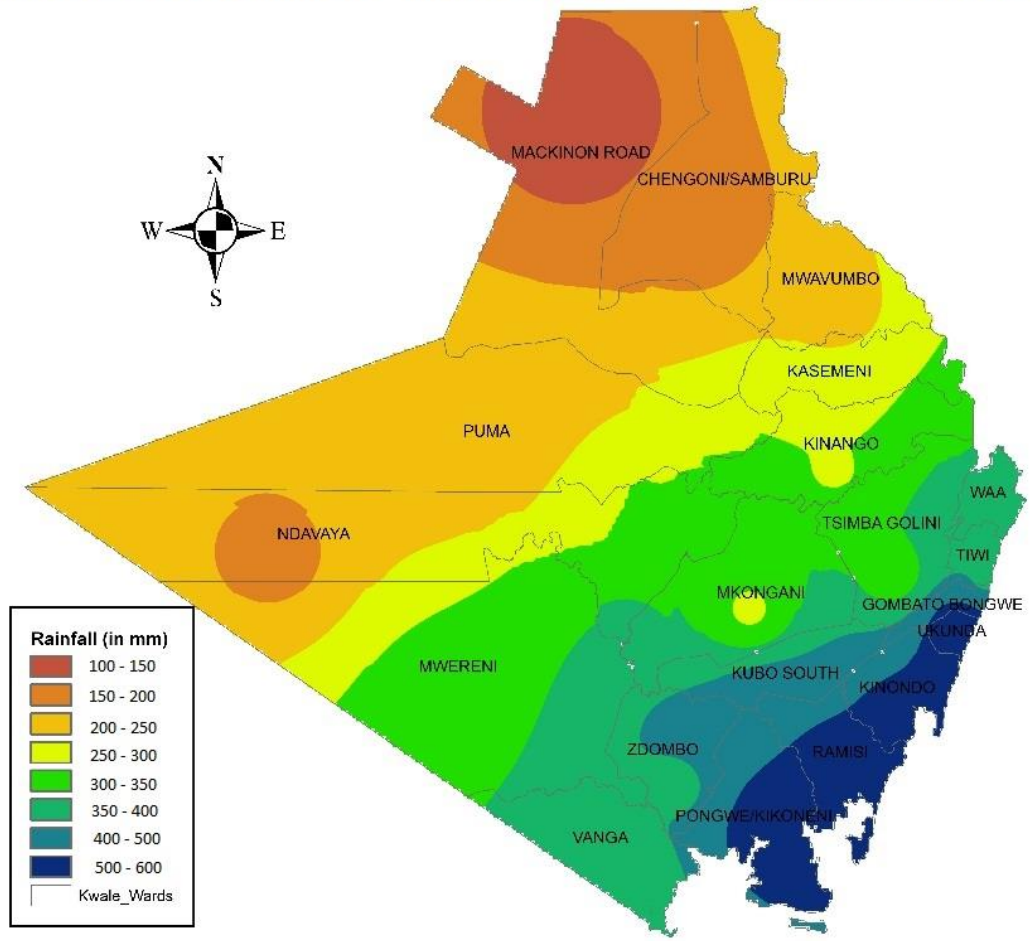
### **EXPECTED MARCH APRIL MAY 2024 RAINFALL**

- The long rains season is an important period for Kwale County.
- The rainfall onset is expected between the 18 and 31 of March 2024.
- The expected rainfall is expected to be slightly above normal within the season.
- The rainfall distribution is expected to be fair to good both in space and time during the season.
- Peak rainfall is expected to occur during the month of May 2024.
- Rainfall cessation will not occur within the season, but will continue into the month of June 2024.

MAM LTM AND THE MAM 2024 RAINFALL



# Kwale County March - May 2024 Seasonal Rainfall Forecast



@ County Meteorological Office, Kwale

SNO	Sub county	Ward	Seasonal Amount in mm		Probable onset dates	Probable Cessation dates	Probable distribution
			Normal (Long term mean 1991-2020)	Forecast for MAM 2024			
1	Kinango	McKinnon Road	100 – 150 mm	100 – 300 mm	18 to 31 March 2024	Continue to June 2024	Fair to good both in space and time with long dry spells within theseason. Occasional storms are likely in season
2		Chegoni Samburu	100 – 150 mm	150 – 250 mm			
3		Mavumbo	100 – 200 mm	200 – 300 mm			
4		Kasimeni	150 – 200 mm	250 – 350 mm			
5		Kinango	100 – 200 mm	250 – 350 mm			
6							
7	Matuga	Tsimba Golini	150 – 400 mm	300 – 500 mm	18 to 31 March 2024	Continue to June 2024	Fair to good both in space and time with long dry spells within theseason. Occasional storms are likely in season
8		Waa	200 – 400 mm	350 – 400 mm			
9		Tiwi	300 – 400 mm	350 – 400 mm			
10		Gombato Bogwe	300 – 400 mm	400 – 600 mm			
11		Kinondo	300 – 500 mm	400 – 600 mm			
12		Ukunda	300 – 400 mm	500 – 600 mm	18 to 31 March 2024	Continue to June 2024	Fair to good both in space and time with long dry spells within theseason. Occasional storms are likely in season
13		Ramisi	300 – 500 mm	400 – 600 mm			
14		Kubo South	200 – 400 mm	350 – 500 mm			
15		Mkongani	150 – 300 mm	250 – 400 mm	18 to 31 March 2024	Continue to June 2024	Fair to good both in space and time with long dry spells within theseason. Occasional storms are likely in season
16		Pongwe/ Kikoneni	300 – 500 mm	400 – 600 mm			
17		Vanga	150 – 300 mm	350 – 400 mm			
18		Dzombo	200 – 400 mm	350 – 500 mm			
19		Mwereni	100 – 300 mm	150 – 400 mm			
20		Ndavaya	100 – 300 mm	150 – 400 mm			
21		Puma	100 – 150 mm	150 – 350 mm			

## ADVISORIES

### VALUE CHAIN BASED ADVISORIES

#### PASSION, ABEC, CEREALS, AND PULSES VALUE CHAIN

	NORMAL SCENARIO	ABOVE NORMAL
<b>HAZARDS</b>  Janga	<ul style="list-style-type: none"> <li>Flash Floods in lowlands</li> </ul> Mafuriko katika nyanda za chini	<b>FLOODS</b>  Mafuriko katika sehemu za chini
<b>RISKS</b>  Hatari	<ul style="list-style-type: none"> <li>Water logging in lowland areas</li> </ul> Maji kusimama katika nyanda za chini <ul style="list-style-type: none"> <li>High infestation of pest and diseases</li> </ul> Mkurupuko wa wadudu na magonjwa ya mimea <ul style="list-style-type: none"> <li>Increased incidence of Disease both livestock and crops</li> <li>Matukio ya magonjwa kwa mimea na wanyama</li> <li>Soil erosion in slopy areas</li> </ul> Mmomonyoko wa udongo kwa sehemu zilizo inama/mitteremko <ul style="list-style-type: none"> <li>Leaching</li> </ul> Kuoshwa kwa rotuba ya mchanga <ul style="list-style-type: none"> <li>Increased weeds</li> </ul> Kuongezeka kwa magugu <ul style="list-style-type: none"> <li>Silting</li> <li>Kuletwa kwa mchanga kutoka sehemu zingine</li> </ul>	<ul style="list-style-type: none"> <li>Soil erosion</li> </ul> Mumonyoko wa udongo <ul style="list-style-type: none"> <li>Leaching</li> </ul> Kuoshwa kwa rotuba <ul style="list-style-type: none"> <li>Water logging</li> </ul> Mkusanyiko wa maji mengi kwa mimea <ul style="list-style-type: none"> <li>Salnity</li> </ul> Ongezeko wa chumvi kwa mchanga <ul style="list-style-type: none"> <li>Sweeping away of animal by water</li> </ul> Kubebwa kwa wanyama kwa maji <ul style="list-style-type: none"> <li>Outbreak of pest and diseases in livestock</li> </ul> Mkurupuko wa magonjwa kwa mifugo <ul style="list-style-type: none"> <li>Emergence of poisonous snake</li> </ul> Mchipuko wa nyoka wa sumu
<b>IMPACT</b>  Athari	<ul style="list-style-type: none"> <li>Low nutrients for crop growth in some areas</li> </ul> Hakuna rotuba ya kutosha ya kukuza mimea kwa sehemu chache. <ul style="list-style-type: none"> <li>Average to above production in both crops and livestock</li> </ul> Kupatikana kwa mazao wastani au Zaidi kwa mifugo na mimea	Low nutrients for crop growth and development Rotuba chache kwa kukuza mimea kwa sehemu chache <ul style="list-style-type: none"> <li>Average to above production in both crops and livestock</li> </ul> Kupatikana kwa mazao wastani kwa mifugo na mimea.

	<ul style="list-style-type: none"> <li>• Vaccination and treatment of livestock by the farmers Kuchanja na kutibu kwa mifugo</li> <li>• Increased income Ongezeko la mapato</li> <li>• Low market prices Kushuka kwa bei ya bidhaa</li> </ul>	<ul style="list-style-type: none"> <li>• Vaccination and treatment of livestock by the farmers. Kuchanja na kutibu kwa mifugo</li> <li>• Increased income in livestock Ongezeko la mapato kwa mifugo</li> </ul>
<p>OPPORTUNITIES Fursa</p>	<ul style="list-style-type: none"> <li>• Value addition Kuongeza thamani ya mazao</li> <li>• Water harvesting (surface runoff) Uvunaji wa maji</li> <li>• Sensitization meetings on IPM Mafundisho kuhusu mbinu mseto za kukabiliana na wadudu</li> <li>• Trainings on green technologies, Good Agricultural Practices (GAP) and entrepreneurial skills Mafunzo kuhusu mbinu muafaka za kilimo na kilimo biashara</li> <li>• Expansion of the acreage/area to be planted Kupanuliwa kwa mashamba yatakayopandwa mimea na kufanya kilimo</li> <li>• Pasture conservation Kuhifadhi chakula ya mifugo.</li> <li>• Buying of more livestock</li> <li>• Kuongeza mifugo</li> <li>• Crop diversification – pigeon peas, ground nuts, local vegetables, sweet potatoes, cassava etc Upanzi wa mimea mseto- mbaazi, njugu karanga papaya ,tunguja, mboga kienyeji viazi tamu,muhogo, n.k</li> </ul>	<ul style="list-style-type: none"> <li>• Value addition Kuongeza thamani kwa mimea na mifugo</li> <li>• Water harvesting Uvunaji wa maji</li> <li>• Sensitization meetings on IPM Mafundisho kuhusu mbinu mseto za kukabiliana na wadudu.</li> <li>• Trainings on green technologies ,good agricultural practices (GAP) and entrepreneur skills. Mafunzo kuhusu mbinu muafaka za kilimo na kilimo biashara.</li> <li>• Expansion of the acreage to be planted Kupanuliwa kwa mashamba yatakayopandwa mimea</li> <li>• Pasture conservation Kuhifadhi chakula ya mifugo</li> <li>• Expansion of fruit tree orchards Kupanuliwa kwa sehemu ya kupanda miti ya matunda</li> <li>• Buying of more livestock</li> <li>• Kuongeza mifugo</li> <li>• Crop diversification – pegeon pea,local vegetables ,sweet potatoes,cassava and ground nuts etc</li> </ul>

	<ul style="list-style-type: none"> <li>• Compost making /farm yard manure</li> </ul>	<p>Upanzi wa mimea mseto,mbaazi,njugu karanga,papaya,mboga kienyeji,viazi tamu,muhogo.</p> <ul style="list-style-type: none"> <li>• Compost making /farm yard manure</li> </ul> <p>Kuozesha majani na samadi</p>
<p>PLAN Mipangilio</p>	<ul style="list-style-type: none"> <li>• Early land preparation and acquisition of inputs Utayarishaji wa shamba mapema na kutafuta pembejeo mapema</li> <li>• Transport farm yard manure / compost to the farm for planting Usafirishaji wa mbolea kupeleka shambani.</li> <li>• Formation of cooperative to increase bargaining power Kuanzisha vyama vya ushirika ili kushughulikia soko na kupata bei bora</li> <li>• Promote value addition and cottage-based processing Kukuza uongezaji dhamana ya mazao</li> <li>• Crop insurance Kuchukua bima ya mimea</li> <li>• Undertake conservation agriculture (use of mulching/ zai pits; sunken beds; terracing) Kuzingatia kilimo hifadhi</li> <li>• Proper post- harvest handling of produce and repair/renovate stores Kuzingatia mbinu bora za kuvuna na kuhifadhi nafaka na kurekebisha magala ya kuhifadhia mazao</li> <li>• Choosing suitable certified varieties (PH4, DK 8033,TOSHEKA,TSAVO,DH04) Utumiaji wa mbegu zinazostahimili ukame ambazo zimeidhinishwa kama zifuatazo: (PH4, DK 8033,TOSHEKA,TSAVO,DHO4)</li> </ul> <p>Green grams-; KS20, N26</p> <p>Pojo: <i>KS20, N26</i></p> <p>Cowpeas-; <i>Ken kunde, K-80, M66</i></p> <p>Kunde: <i>Ken kunde, K-80, M66</i></p>	

Do sensitization meetings to relevant stakeholders i.e., Ward Officers, Administrators, County Assembly among others.



## Health Sector

	<b>ABOVE NORMAL SCENARIO</b>	<b>NORMAL SCENARIO</b>
<b>HAZARDS</b>  <b>Janga</b>	<b>FLOOD (MAFURIKO)</b>	
<b>RISKS</b>  <b>Hatari</b>	<p>-Low hygiene levels</p> <p>Kiwango cha usafi kupungua.</p> <p>Low livelihood productivity</p> <p>Upungufu wa uzalishaji</p> <p>School absenteeism.</p> <p>Kutokuhudhuria shule kwa wanafunzi katika sehemu zitakazoathirika na mafuriko kama Vanga,Ramisi,Waa/Ng’ombeni.</p> <p>-Lack of sanitary hygiene materials.</p> <p>Upungufu wa sodo katika sehemu zitakazoathirika na mafuriko kama Vanga,Ramisi,Waa/Ng’ombeni.</p> <p>-Aflatoxicosis cases.</p> <p>Sumu ya chakula inayotokana na unyevu wa nafaka.</p> <p>-Vector borne and water -borne diseases outbreaks.</p> <p>Maradhi yanayosambazwa kwa utumiaji wa maji na wadudu kama mbu.</p> <p>-Sewerage discharge into water courses and bodies.</p> <p>Kuenea kwa maji taka katika vyanzo vya maji na mabwawa.</p>	<p>-Lack of sanitary hygiene materials.</p> <p>Upungufu wa sodo katika sehemu zitakazoathirika na mafuriko kama Vanga,Ramisi,Waa/Ng’ombeni.</p> <p>-Aflatoxicosis cases.</p> <p>Sumu ya chakula inayotokana na unyevu katika nafaka.</p> <p>-Vector borne and water -borne diseases outbreaks.</p> <p>Maradhi yanayosambazwa kwa utumiaji wa maji na wadudu kama mbu na vimelea kama konokono.</p> <p>-Sewerage discharge into water courses and bodies.</p> <p>Kuenea kwa maji taka katika vyanzo vya maji na mabwawa.</p>

<p><b>IMPACT</b></p> <p><b>Athari</b></p>	<p>-Outbreak of Water -Borne Disease</p> <p>Mkurukupo wa maradhi yanayotokana na matumizi ya maji.</p> <ul style="list-style-type: none"> <li>● Typhoid</li> <li>● Cholera</li> <li>● Schistosomiasis</li> </ul> <p>-Outbreak of Vector -Borne Diseases</p> <p>Mkurukupo wa maradhi yanayosambazwa na wadudu kama mbu na vimelea kama konokono.</p> <ul style="list-style-type: none"> <li>● Malaria</li> <li>● Bilharzia</li> </ul> <p>-Aflatoxin poisoning in maize and other cereals which are poorly preserved.</p> <p>Sumu ya chakula inayotokana na unyevu katika nafaka.</p> <p>-Water contamination.</p> <p>Uchafuzi wa maji.</p>	<p>-Outbreak of Water -Borne Disease</p> <p>Mkurukupo wa maradhi yanayotokana na matumizi ya maji.</p> <ul style="list-style-type: none"> <li>● Typhoid</li> <li>● Cholera</li> <li>● Schistosomiasis</li> </ul> <p>-Outbreak of Vector -Borne Diseases</p> <p>Mkurukupo wa maradhi yanayosambazwa na wadudu kama mbu na vimelea kama konokono.</p> <ul style="list-style-type: none"> <li>● Malaria</li> </ul> <p>-Aflatoxin poisoning in maize and other cereals which are poorly preserved.</p> <p>Sumu ya chakula inayotokana na unyevu katika nafaka.</p> <p>-Water contamination.</p> <p>Uchafuzi wa maji.</p>
<p><b>OPPORTUNITIES</b></p> <p><b>Fursa</b></p>	<ul style="list-style-type: none"> <li>● Community engagement. Ushirikishaji wa jamii</li> <li>● Stakeholders willing to build capacity of personnel.</li> </ul> <p>Washikadau walio na nia ya Kuelimisha wahudumu wa afya</p> <ul style="list-style-type: none"> <li>● Wedding, funerals, baraza and faith-based health institutions are good forums for promotion of health education.</li> </ul> <p>Fursa katika harusi, Matanga, baraza na mashirika ya kidini kueneza elimu ya afya.</p>	<ul style="list-style-type: none"> <li>● Community engagement. Ushirikishaji wa jamii</li> <li>● Stakeholders willing to build capacity of personnel.</li> </ul> <p>Washikadau walio na nia ya Kuelimisha wahudumu wa afya</p> <ul style="list-style-type: none"> <li>● Wedding, funerals, baraza and faith-based health institutions are good</li> </ul>

	<ul style="list-style-type: none"> <li>● Existence of other sectors.</li> </ul> <p>Uwepo wa idara tofauti zinazosaidia katika elimu ya afya.</p>	<p>forums for promotion of health education.</p> <p>Fursa katika harusi, Matanga, baraza na mashirika ya kidini kueneza elimu ya afya.</p> <ul style="list-style-type: none"> <li>● Existence of other sectors.</li> <li>● Uwepo wa idara tofauti zinazosaidia katika elimu ya afya.</li> </ul>
<p><b>PLAN</b></p> <p><b>Mipangilio</b></p>	<ul style="list-style-type: none"> <li>● Early warning and awareness creation. Onyo la mapema na uhamasishaji.</li> <li>● Public education on hygiene. Kuelimisha jamii juu ya afya na usafi.</li> <li>● Stockpiling of essential drugs and commodities including water treatment chemicals for household water in the low-lying areas like Vanga and Ramisi. Kuweka madawa ya kutibu maji ya matumizi katika nyumba.</li> <li>● Awareness creation and training on post-harvest management and grain storage technologies. Uhamasishaji juu ya teknolojia za kuhifadhi nafaka na maghala.</li> <li>● Strengthen coordination systems at all levels. Kuimarisha msingi wa kuratibu katika ngazi zote za uongozi.</li> <li>● Review meetings at the County and sub county levels, both monthly and quarterly forums. Mikutano ya kujadili maswala ya mikakati ya kushughulika na mvua nyingi katika ngazi zote za gatuzi.</li> <li>● Health education, dialogues, media engagement. Mijadala na midahalo kuhusu elimu ya afya na ushirikishaji wa vyombo vya Habari.</li> </ul>	<ul style="list-style-type: none"> <li>● Early warning and awareness creation. Onyo la mapema na uhamasishaji.</li> <li>● Public education on hygiene. Kuelimisha jamii juu ya afya na usafi.</li> <li>● Stockpiling of essential drugs and commodities including water treatment chemicals for household water in the low-lying areas like Vanga and Ramisi. Kuweka madawa ya kutibu maji ya matumizi katika nyumba.</li> <li>● Awareness creation and training on post-harvest management and grain storage technologies. Uhamasishaji juu ya teknolojia za kuhifadhi nafaka na maghala.</li> <li>● Strengthen coordination systems at all levels. Kuimarisha msingi wa kuratibu katika ngazi zote za uongozi.</li> </ul>

	<ul style="list-style-type: none"> <li>● Sensitization for improved sanitation. Usisitizaji wa umuhimu wa kufanya usafi.</li> <li>● Household water treatment and other WASH interventions. Kutibu maji ya matumizi ya nyumba na kuosha mikono .</li> <li>● Capacity building the CHVs. Kuboresha elimu ya wahudumu wa afya ya nyanjani kwa kujitolea.</li> <li>● Improved food inspections and sampling in markets, schools and other institutions. Ukaguzi wa migahawa ,masoko na shule.</li> <li>● Spraying of institutions and households to eradicate mosquitoes. Kunyunyiza dawa ya mbu katika majumba na mashule kupunguza mbu.</li> <li>● Continuous disease surveillance in areas like Vanga, Ramisi, Kinango, Ukunda and Tsimba/Golini. Mfululizo wa ulinzi wa maradhi katika sehemu zinazoathirika na mafuriko.</li> <li>● Bush clearance in the low-lying areas like Ramisi, Vanga, Waa/Ng'ombeni to avoid mosquito breeding . Kufyeka misitu kupunguza makazi ya mbu.</li> </ul>	<ul style="list-style-type: none"> <li>● Review meetings at the County and sub county levels, both monthly and quarterly forums. Mikutano ya kujadili maswala ya mikakati ya kushughulika na mvua nyingi katika ngazi zote za gatuzi.</li> <li>● Health education, dialogues, media engagement. Mijadala na midahalo kuhusu elimu ya afya na ushirikishaji wa vyombo vya Habari.</li> <li>● Sensitization for improved sanitation. Usisitizaji wa umuhimu wa kufanya usafi.</li> <li>● Household water treatment and other WASH interventions. Kutibu maji ya matumizi ya nyumba na kuosha mikono .</li> <li>● Capacity building the CHVs. Kuboresha elimu ya wahudumu wa afya ya nyanjani kwa kujitolea.</li> <li>● Improved food inspections and sampling in markets, schools and other institutions. Ukaguzi wa migahawa ,masoko na shule.</li> <li>● Spraying of institutions and households to eradicate mosquitoes.</li> </ul>
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		<p>Kunyunyiza dawa ya mbu katika majumba na mashule kupunguza mbu.</p> <ul style="list-style-type: none"><li>• Continuous disease surveillance in areas like Vanga, Ramisi, Kinango, Ukunda and Tsimba/Golini. Mfululizo wa ulinzi wa maradhi katika sehemu zinazoathirika na mafuriko.</li><li>• Bush clearance in the low-lying areas like Ramisi, Vanga, Waa/Ng'ombeni to avoid mosquito breeding . Kufyeka misitu kupunguza makazi ya mbu.</li></ul>
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## Water Sector

	<b>NORMAL SCENARIO</b>	<b>ABOVE NORMAL SCENARIO</b>
<b>HAZARDS</b>  Janga	<ul style="list-style-type: none"> <li>• Soil erosion. Mmomonyoko wa udongo</li> </ul>	<ul style="list-style-type: none"> <li>• Soil erosion. Mmomonyoko wa udongo</li> <li>• Floods in a lowlands area. Mafuriko katika nyanda za chini.</li> </ul>
<b>RISKS</b> Hatari	<ul style="list-style-type: none"> <li>• Siltation of water pans and rivers in low lying areas. Kujaa kwa mchanga katika mabwawa na mito kwa sehemu za nyanda za chini kama Ramisi, Vanga, Puma, Mwereni (Mwakalanga).</li> <li>• Water borne diseases and vector borne diseases in areas Vanga, Pongwe/Kikoneni, Ramisi and Puma. Mkurupuko wa magonjwa yanayosababishwa na maji na wadudu kama mbu katika sehemu za Vanga, Pongwe/Kikoneni, Ramisi na Puma.</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Breakage of sewerage system in urban areas like Ukunda. Uharibikaji wa miundo mbinu ya Maji katika miji kama Ukunda.</li> <li>• Water borne diseases and vector borne diseases in areas Vanga, Pongwe/Kikoneni, Ramisi and Puma. Mkurupuko wa magonjwa yanayosababishwa na maji na wadudu kama mbu katika sehemu za Vanga, Pongwe/Kikoneni, Ramisi na Puma.</li> <li>• Death can occur. Vifo kutokea katika nyanda za chini kwa mifugo na binadamu kutokana na mafuriko na magonjwa ya maji.</li> <li>• Siltation of water pans and rivers in low lying areas. Kujaa kwa mchanga katika mabwawa na mito kwa sehemu za nyanda za chini kama Ramisi, Vanga, Puma, Mwereni (Mwakalanga).</li> </ul>
<b>IMPACT</b> Athari	<ul style="list-style-type: none"> <li>• High productivity for the mixed farming and agro pastoral zones. Ongezeko la uzalishaji katika sehemu za ufagaji na kilimo mchanganyiko.</li> <li>• Water pollution Uchafuzi wa maji kwa kemikali za kilimo, mchanga</li> </ul>	<ul style="list-style-type: none"> <li>• Displacement. Uhamishaji wa watu na huduma za afya katika nyanda za chini kama Vanga na Waa/Ng'ombeni (Matopeni), Vumbu.</li> <li>• Water pollution Uchafuzi wa maji kwa kemikali za kilimo, mchanga katika sehemu zilizo na Mmomonyoko wa udongo</li> </ul>

	<p>katika sehemu zilizo na Mmomonyoko wa udongo kama Samburu/Chengoni, Dzombo, Kubo South, Pongwe/Kikoneni na Mkongani.</p> <ul style="list-style-type: none"> <li>• Soil leaching. Chujuko la madini katika sehemu za nyanda za chini kama; Waa/Ng'ombeni, Vanga, Tiwi, Gombato/Bongwe, Pongwe/Kioneni, Kinango, Samburu/Chengoni, Puma, Tsimba/Golini na Kubo- south.</li> </ul>	<p>kama Samburu/Chengoni, Dzombo, Kubo South, Pongwe/Kikoneni na Mkongani.</p> <ul style="list-style-type: none"> <li>• Loss of biodiversity. Vifo vya wanyama, mimea na binadamu kwa sababu ya mafuriko katika sehemu za Ramisi, Vanga, Pongwe/Kikoneni, Puma.</li> <li>• Soil leaching. Chujuko la madini katika sehemu za nyanda za chini kama; Waa/Ng'ombeni, Vanga, Tiwi, Gombato/Bongwe, Pongwe/Kioneni, Kinango, Samburu/Chengoni, Puma, Tsimba/Golini na Kubo- south.</li> </ul>
<p>OPPORTUNITIES Fursa</p>	<ul style="list-style-type: none"> <li>• Water harvesting &amp; storage. Fursa ya kuvuna maji katika mabwawa, vidimbwi.</li> <li>• Reafforestation and Afforestation. Fursa ya upanzi wa miti katika sehemu kame kama Samburu/Chengoni, Puma, Kinango, Mwavumbo, Kasemeni, Ndavaya, Mwereni, Mackinon Road.</li> </ul>	<ul style="list-style-type: none"> <li>• Water harvesting &amp; storage. Fursa ya kuvuna maji katika mabwawa, vidimbwi.</li> <li>• Increase of water collection points along the roadside. Kuongezeka kwa vyanzo vya maji sehemu zote za gatuji la Kwale.</li> <li>• Reafforestation and Afforestation. Fursa ya upanzi wa miti katika sehemu kame kama Samburu/Chengoni, Puma, Kinango, Mwavumbo, Kasemeni, Ndavaya, Mwereni, Mackinon Road.</li> <li>• Reduced human-wildlife conflict. Kupungua kwa mizozo ya Wanyama pori katika sehemu zilizo karibu na mbuga kama Mkongani, Kubo -South.</li> </ul>
<p>PLAN Mipangilio</p>	<ul style="list-style-type: none"> <li>• Educate the community the importance of water harvesting structures. Kuelimisha jamii juu ya umuhimu wa kutengeneza na kuchimba vidimbwi vya maji na kuweka maji.</li> <li>• Educate the community of safety measures.</li> </ul>	<ul style="list-style-type: none"> <li>• Desilting of water pans. Kuzibua mchanga katika mabwawa.</li> <li>• Construction of water harvesting structures. Kuchimba vidimbwi vya kunasa maji wakati wa mvua nyingi.</li> <li>• Distribution of water treatment chemicals. Kusambaza dawa za kutibu maji.</li> </ul>

	<p>Kuelimisha jamii juu ya usalama kutokana na mafuriko.</p>	<ul style="list-style-type: none"> <li>• Tree planting to reduces soil erosion in degraded areas. Upanzi wa miti katika sehemu zilizo na mmonyoko wa udongo kama:Puma,Ndavaya,Waa/Ng'ombe ni, Tsimba/Golini.</li> <li>• Educate the community the importance of water harvesting structures. Kuelimisha jamii juu ya umuhimu wa kutengeneza na kuchimba vidimbwi vya maji na kuweka maji.</li> <li>• Educate the community of safety measures. Kuelimisha jamii juu ya usalama kutokana na mafuriko.</li> </ul>
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## Transport Sector

	ABOVE NORMAL SCENARIO	NORMAL SCENARIO
<p>HAZARDS</p> <p>Janga</p>	<ul style="list-style-type: none"> <li>• Destruction of roads (uharibifu wa barabara)</li> <li>• Flooded roads (mafuriko barabarani)</li> <li>• Overflowing(mafuriko)</li> <li>• Loss of lives(vifo)</li> </ul>	<ul style="list-style-type: none"> <li>• Slippery roads making transport difficult (kuteleza kwa barabara inafanya usafiri kuwa mgumu)</li> </ul>
<p>RISKS</p> <p>Hatari</p>	<ul style="list-style-type: none"> <li>• Loss of lives(vifo)</li> <li>• Damage of farm products due to transport delays(uharibifu wa bidhaa shambani kwa sababu ya shida usafiri)</li> <li>• High cost living to the community (kuongezeka kwa gharama za maisha)</li> <li>• Loss of human life due to poor transport(vifo vinavyoletwa na barabara mbovu)</li> <li>• High transport cost due poor road network( kuongezeka kwa gharama za usafiri kwa sababu ya barabara mbovu)</li> <li>• Business interruption( kuharibu uendeshaji wa biashara)</li> <li>• Damaged warehouses due to flooding</li> <li>• Increased costs related to emergency road repairs(kuongezeka kwa gharama za kutengeneza barabara)</li> <li>• delayed flow of labor hence inefficient service delivery in public amenities e.g hospitals and schools( wafanyikazi kupata shida kwa usafiri huleta shida pia kwa utendaji kazi kwa shule na hospitalini)</li> <li>• River Ramisi, river mwache, river mkurumuji and river mwena breaking banks and sweeping over motorists(uharibifu wa mito na madaraja ambapo huleta vifo na watu kubebwa na maji)</li> <li>• Breakage of roads making transport difficult e.g shimoni-perani road (kuharibika kwa barabara hufanya usafiri kuwa mgumu ,kw mafano barabara ya shimoni –perani)</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced visibility hence increased cases of accidents( madereva wa magari wanakosa kuona mbele ambapo husababisha ajali nyingi)</li> <li>• Slippery roads from the farmers makes it difficult for transport of farm products to the market( barabara za kuteleza inasababisha bidhaa za mashambani kufika masokoni kuchelewa)</li> </ul>

<p>IMPACT Athari</p>	<ul style="list-style-type: none"> <li>• Disrupted transport of humans( usafiri wa watu kuharibika)</li> <li>• Hikes on transportation costs( gharama ya usafiri kupanda)</li> <li>• Hikes on farm product prices( bei za bidhaa za shambani kupamda bei kupita kiasi)</li> <li>• Collapse of electricity posts on roads causing electrocution risks( miti ya umeme kuanguka barabarani ambapo huleta maafa)</li> </ul>	<ul style="list-style-type: none"> <li>• Disrupted transport of humans especially those using slippery roads( usafiri wa watu kwa kutumia magari kuwa mgumu hasa kwa wale wanaotumia barabara zinazoteleza)</li> <li>• Transport on slippery roads results in increase on transportation charges(gharama za usafiri kuongezeka hasa kwa wale wanaotumia barabara za kuteleza kwa mfano kinango-kwale road)</li> </ul>
<p>OPPORTUNITIES Fursa</p>	<ul style="list-style-type: none"> <li>• Public education and sensitization on safe use of roads during flooding( uhamasishaji kwa matumizi mazuri ya barabara hasa wakati wa mafuriko)</li> <li>• Repair and maintenance of drainage system(kutengenezwa na kurekebishwa kwa madaraja)</li> </ul>	<ul style="list-style-type: none"> <li>• Public education and sensitization on safe use of roads during floodings(uhamasishaji na uelimishaji wa matumizi mazuri ya barabara)</li> </ul>
<p>PLAN Mipangilio</p>	<ul style="list-style-type: none"> <li>• Construction of drainage channels(kujenga mitaro ya kupitisha maji taka)</li> <li>• Develop and dissemination of early warning systems( utayarishaji na usambazaji wa ishara na tahadhari)</li> <li>• Cleaning of drainage systems(usafishaji wa mitaro ya kupitisha maji taka)</li> <li>• Renovation of culverts( kurekebishwa kwa kalavati)</li> <li>• Coming up with warning road signs to guide road users( kubuni ishara za barabarani kuwaongoza watumiaji wa barabara)</li> </ul>	<ul style="list-style-type: none"> <li>• Construction of drainage channels(kutengenezwa kwa madaraja )</li> <li>• Cleaning of drainage systems(kusafishwa kwa madaraja)</li> <li>• Renovation of culverts(kurekebishwa kwa kalavati)</li> </ul>

## Education and Communication sector

### (Kitengo cha Elimu na mawasiliano)

	<b>NORMAL SCENARIO</b>	<b>ABOVE NORMAL SCENARIO</b>
<b>HAZARDS</b> Janga		Floods (Mafuriko)
<b>RISKS</b> Hatari	<ol style="list-style-type: none"> <li>1. Disruption of learning programs <ul style="list-style-type: none"> <li>- Usumbufu wa ratba za masomo</li> </ul> </li> <li>2. Absentism <ul style="list-style-type: none"> <li>- Utoro</li> </ul> </li> <li>3. Dropouts <ul style="list-style-type: none"> <li>- Kuacha masomo kwa wanafunzi</li> </ul> </li> <li>4. School feeding program could be disrupted. <ul style="list-style-type: none"> <li>- Usumbufu wa utoaji wa lishe bora</li> </ul> </li> <li>5. Wild animals will move out their ranges <ul style="list-style-type: none"> <li>- Wanyama pori kutoka kwa mahifadhi zao</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. Disruption of learning program <ul style="list-style-type: none"> <li>- Usumbufu wa ratba za masomo</li> </ul> </li> <li>2. Absenteeism <ul style="list-style-type: none"> <li>- Kutohudhuria</li> </ul> </li> <li>3. Disruption of School feeding programs. <ul style="list-style-type: none"> <li>- Usumbufu wa utoaji wa lishe bora</li> </ul> </li> <li>4. Disruption of communication network <ul style="list-style-type: none"> <li>- Usumbufu wa mitambo za mawasiliano</li> </ul> </li> <li>5. Migrating of wild animals from their reserves. <ul style="list-style-type: none"> <li>- Wanyama pori kutoka kwa mahifadhi yao</li> </ul> </li> </ol>
<b>IMPACT</b> Athari	<ol style="list-style-type: none"> <li>1. Early pregnancies <ul style="list-style-type: none"> <li>- Mimba za mapema</li> </ul> </li> <li>2. Truancy <ul style="list-style-type: none"> <li>- Kukosa shule bila sababu</li> </ul> </li> <li>3. Likelihood of disease outbreaks due to stagnating of water resulting from poor drainages and latrines. <ul style="list-style-type: none"> <li>- Mkurupuko wa magonjwa kutokana na maji ya vidimbwini na vyooni</li> </ul> </li> <li>5. Malnutrition. <ul style="list-style-type: none"> <li>- Ukosa lishe bora</li> </ul> </li> <li>6. Arriving at school late by learners <ul style="list-style-type: none"> <li>- Kuchelewa kuhudhuria shuleni</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. Early pregnancies <ul style="list-style-type: none"> <li>- Mimba za mapema</li> </ul> </li> <li>2. Increased cases of waterborne diseases and malaria <ul style="list-style-type: none"> <li>- Mkurupuko wa magonjwa</li> </ul> </li> <li>3. Closure of some schools <ul style="list-style-type: none"> <li>- Kufungwa kwa baadhi ya mashule</li> </ul> </li> <li>4. Marooning of school Infrastructure <ul style="list-style-type: none"> <li>- Kubomoka kwa majengo</li> </ul> </li> <li>5. Poor performance <ul style="list-style-type: none"> <li>- Matokeo duni</li> </ul> </li> <li>6. Malnutrition <ul style="list-style-type: none"> <li>- Upungufu wa lishe bora</li> </ul> </li> <li>7. Impaired emergency services <ul style="list-style-type: none"> <li>- Uzorotaji wa huduma za haraka</li> </ul> </li> <li>8. Increased vandalism and insecurity <ul style="list-style-type: none"> <li>- Ongezeko la wizi na kutokuwa usalama</li> </ul> </li> <li>7. Invasion and attacks from wild animals <ul style="list-style-type: none"> <li>- Uvamizi wa wanyama pori</li> </ul> </li> </ol>

<p>OPPORTUNITIES Fursa</p>	<p>1. Water harvesting -Uvunaji wa maji 2. Establishment/Enhance school feeding programs. - Oboreshaji wa lishe bora 3. Availability of Non-Governmental organizations. - Kupatikana kwa mashirika ya kijami</p>	<p>1. Creation of jobs - Ubunifu wa ajira 2. Availability of enough water - Kuwa na maji ya kutosha 3. Increased outreach programs by Government and Non-governmental organization - Kufikiwa na misaada na serikali na mashirika ya kibinafsi 4. Exploration of wild animals - Utalii wa wanyama pori</p>
<p>Plan Mpangilio</p>	<p>1. Ensure water harvesting infrastructure are in place - Kuhakikisha majengo ya uvunaji wa maji yawe sawa 2. Approach NGOs for assistance - Kufuatilia mashirika ya kijamii kwa msaada 3. Engage KWS always on the movement trends of animals. - Kushirikisha shirika la wanyama pori kuhusu mienendo ya wanyama pori</p>	<p>1. Ensure water harvesting infrastructure are always maintained. - Kuhakikisha majengo ya uvunaji wa maji yako sawa 2. Renovation and rehabilitation of sewerage system. - urekebishaji mitaro ya maji taka 3. Ensure continuous awareness of general hygiene - Kuhakikisha uwamasishaji wa usafi 4. Approach NGOs for assistance - Kuomba msaada kwa mashirika 5. KWS to continue awareness creation on animal behavior. - Uwamishaji kutoka shirika la wanyama juu ya mienendo ya wanyama pori 6. Back up communication devices i.e have alternative means of communication back up phones, power bank, - Kuboresha vifaa vya mawasiliano</p>