



# Kenya Crop Conditions Bulletin

## March 2023

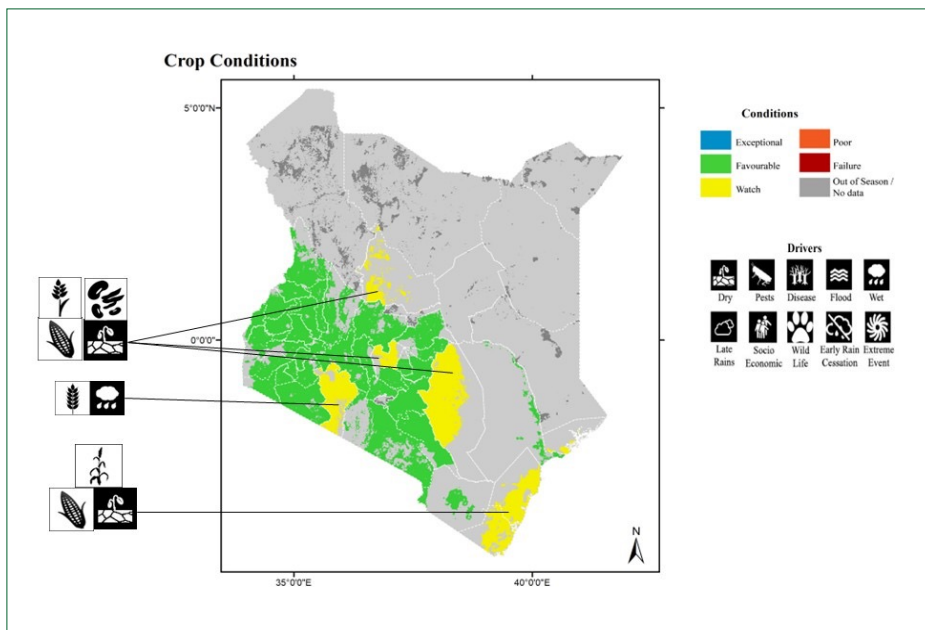
### National Synthesis

#### Overview

- Crop conditions are favourable in the country for maize and beans due to rains received in March in most of the counties with exception of a few counties where the onset has been delayed especially in the Coast region, Narok and Samburu counties where the rainfall has been erratic
- Land preparation, planting were the main activities in most counties with a few counties in the Western region and Nyanza reporting weeding of early planted crops
- Land preparation and planting of wheat is starting in wheat growing areas while in North Rift it is expected to begin in May/ June
- General crop performance is good due to the adequate rains received in most areas, no major pest infestation reported with exception of *Quelea quelea* birds on rice in Kisumu which affected 500 acres due to lack of control though surveillance was done

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Map showing regional crop conditions information in Kenya for March 2023 for maize, beans, wheat, green grams, cowpeas, rice and sorghum. The crop monitor map is based on a combination of several variables including remotely sensed data, ground observations, field reports, national and regional experts.

Crops with conditions that are other than favourable are labelled on the map with the driver for the resultant condition. The situation in some areas in the country are under watch due to lack of rains as a result of delayed onset or dry spell in the season.

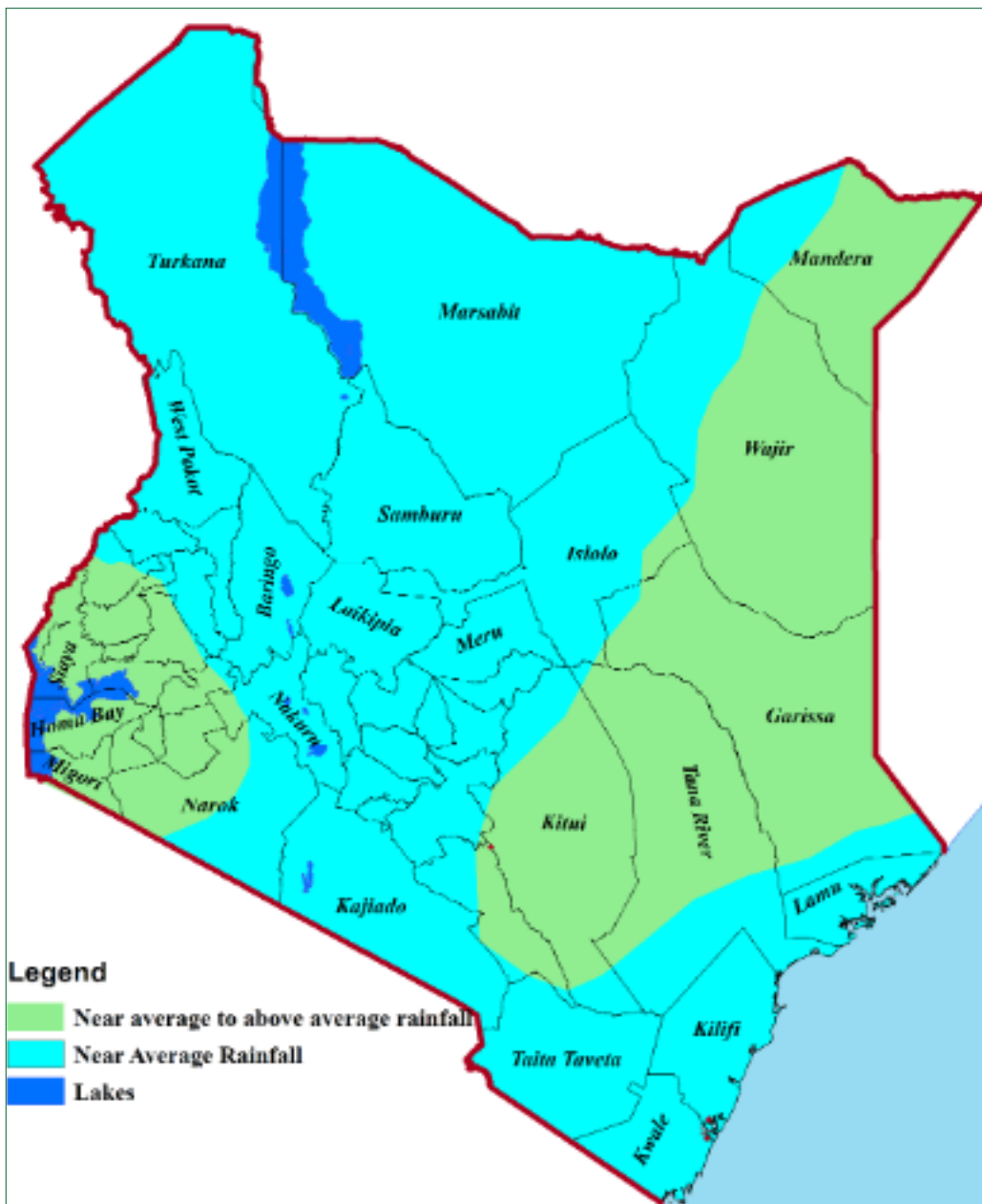
Regional crop conditions March 2023



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## OUTLOOK (Kenya Meteorological Department (KMD)/State Department for Crops Development (SDCD)

April is the peak month of the “Long Rains” season, the outlook for April 2023 suggests that various regions will receive near-average rainfall. These regions comprise the Highlands West of the Rift Valley, Central, Northern and Southern Rift Valley, Highlands East of the Rift Valley (encompassing Nairobi County), Coast, Northwest, and some areas of the Northeast and South-eastern lowlands. Moreover, the Lake Victoria Basin and specific parts of the South-eastern lowlands and north-eastern regions are projected to receive rainfall ranging from near-average to above-average during this month. Nonetheless, it is expected that there will be heavy storms on certain days, particularly in the South-eastern lowlands, the Highlands East of the Rift Valley (including Nairobi County), the Northwest, Lake Victoria Basin and the Highlands West of the Rift Valley.





## Assessment by Region

### North Rift Region

The month of March marked the onset of the rains from the second dekad to the fourth in some counties in the region. Generally, there was no crop in the farms with the main activities being land preparation and early planting in some counties. Inputs acquisition was also a major activity in the region.

The conditions were favourable for the activities. In this region there is minimal production of short rains maize crop. Baringo county received the government 18,000 bags of subsidized fertilizer to farmers in the area to enhance crop yields. Land preparation is being done for all crops. About 30% of farmers have already planted in Trans Nzoia. Acreage expected to increase due to high maize prices last year.

**Table 1: North Rift Region Maize Production**

County	Target Area (Ha) LR	Target Production (90 Kg Bag) LR	LTA Achieved Area (Ha)	LTA Achieved Production	Achieved LR (Ha)	% Achieved Area
Baringo	46,660	1,166,500	37,614	712,350	750	2
Elgeyo Marakwet	32,000	1,433,600	30,970	3,153,013		
Laikipia	29,000	1,087,500	22,031	382,938		
Nandi	67,500	2,040,625	63,103	2,008,469	7,395	10.9
Samburu	28,000	280,000	7,185	70,918		
Trans Nzoia	107,000	5,600,000	102,896	4,794,879	31,800	30
Turkana	3500		40,000	3,948	38,022	
Uasin Gishu	106,606	5,010,482	103,588	4,235,958		
West Pokot	50,950	1,273,750	30,532	728,511		
<b>Total</b>			<b>401,868</b>	<b>16,125,059</b>		

### South Rift Region

The onset of the rains in the region was in mid-march and the conditions were favourable for planting of all crops. Kajiado reported 30% of area has been planted. In Bomet planting is at 40%, with most farmers in lower part of the county i.e the whole of Chepalungu Sub-County, 50 % of Sotik, 35% of Bomet East and 10% of Bomet Central plant during the OND season to avoid waterlogging during the MAM Season. In Narok the maize and beans crop is at planting to early vegetative under watch conditions due to the dry spell but resumption of rains is expected to improve the crops condition. Wheat and potatoes are at planting in Narok county where conditions are favourable. In Kericho, land preparation and planting are ongoing and the conditions are favourable. Maize is at planning stage in Nakuru County with increased acreage due to readily availed GOK subside fertilizers and the affordable fertilizer coupled with the heavy rainfall witnessed in different parts of the county and therefore predict if it continues it is likely to result in good harvests. Beans in the county are at planting to germination. With favourable weather and affordable inputs farmers will be able to achieve a good harvest. For wheat in the county, land preparation and planting is ongoing and the favourable weather may result in good harvest.

**Table 2: South Rift Region Maize Production**

County	Target Area(Ha) LR	Target Production (90 Kg Bag) LR	LTA Achieved Area (Ha)	LTA Achieved Production	Achieved LR (Ha)	% Achieved LR (Ha)
Bomet	30,000	1,125,000	25,951	495,001	12,000	40
Kajiado	6,913	138,260	6,780	71,895	2,073	30
Kericho	42,000	1,470,000	35,397	1,138,504	41,860	100
Nakuru	90,450	3,920,250	80,374	2,242,768	78,405	87
Narok	90,000	2,700,000	83,159	1,839,387	66,360	73.7
<b>Total</b>	<b>259,363</b>	<b>9,353,510</b>	<b>231,661</b>	<b>5,787,555</b>	<b>200,698</b>	<b>66.14</b>

## Central Region

The onset of the rains in the region was in mid-March and the conditions are favourable for planting of all crops. In Kiambu sunny and dry conditions prevailed over most areas of the County in the first half of the month. Rain showers accompanied by thunderstorms were experienced in the County during the second half of the month. The crops in Kiambu and Muranga were from planting to early vegetative stages with conditions being favourable. In Muranga, there is minimal infestation of FAW. Farmers in Murang'a have no access to subsidized fertilizer for maize. The only fertilizer available at NCPB Sagana and Maragua where Murang'a farmers get subsidized fertilizer is for coffee in Nyandarua land preparation and planting had started for maize and beans while harvesting of potatoes and peas was ongoing. In Nyeri rains started during the month though poorly distributed and most crops are from planting to germination stage. Irish potatoes in the county of Nyeri, 25% early planted crop has germinated, most of the crop planted early has sprouted and if rains continue into the season outlook will be good.



**Figure 1: Maize and bean crop germination in Ngoliba ward, Thika Subcounty, Kiambu**



**Table 3: Central Region Maize Production**

County	Achieved Area(Ha)LR	Forecast Production (90 Kg Bag)LR	LTA Achieved Area(Ha)	LTA Achieved Production	Achieved LR(Ha)	% Achieved LR(Ha)
Kiambu	13,900	278,000	20,075	309,740	11,120	80
Kirinyaga	20,371	17,005	17,809	245,692		
Murang'a	35,715	892,875	34,709	379,016		
Nyandarua	19,000	551,000	17,212	288,128		
Nyeri	16,000	256,000	16,720	232,266	12,870	86
<b>Total</b>	<b>104,986</b>	<b>1,994,880</b>	<b>106,524</b>	<b>1,454,842</b>		

## Lower Eastern Region

Makueni and Machakos received rains in mid-march. Kitui reported dry conditions but rains were received towards the end of the month. Crop conditions are favourable with crops being from planting to germination and doing well under the conditions. Farmers were able to plant early due to the failed short rains as farms were mainly bare. Pigeon peas in Makueni and parts of Kitui and Machakos had been experiencing moisture stress but after resumption of the rains, the crop has rejuvenated and in some areas, there is harvesting (green) for short duration crop variety is taking place.

**Table 4: Lower Eastern Region Maize Production**

County	Target Area (Ha) 2022 LR	Target Production (90 Kg Bag) LR	LTA Achieved Area (Ha)LR	LTA Achieved Production LR	Achieved LR (Ha)	% Achieved LR (Ha)
Kitui	44,352	169,864	31,095	140,873	39,345	63
Machakos	80,000	800,000	78,064	537,106	60,000	80
Makueni	60,000	600,000	68,864	294,211	42,000	70
<b>Total</b>	<b>184,352</b>	<b>1,569,864</b>	<b>178,023</b>	<b>972,191</b>	<b>141,345</b>	<b>71</b>

## Lower Eastern Region

In Tharaka Nithi and Meru Counties, the first 2 weeks of March were hot and dry, enabling farmers to harvest late planted maize in upper zones and dry the produce but mostly farmers were on land preparation with dry planting starting late in the second week for a small percentage of farmers. The rainfall commenced in the third week and were well distributed, planting intensified and is expected to be complete by the first week of April especially in the ASALs. In Embu, onset was within the expected time and uniform in the whole county. Planting is at 95% of the targeted area. High cost of fertilizer led farmers to avoid maize and plant legumes that do not require a lot of fertilizers. In Meru, the first half of March was very warm which facilitated drying and harvesting of short rains crop. The second half has however been wet with the long rains having started earlier than predicted i.e. 15<sup>th</sup> March 2023 in most parts of the County. As at the date of reporting, all areas have received rains and planting is almost complete. The early planted maize and beans have germinated. However due to seed scarcity, planting is still on-going. The crop conditions were favourable and equally the ongoing farm activities in the region. The North Eastern region acreages undercrop usually very low and easily achieved.



**Table 5: Upper Eastern Region Maize Production**

County	Target Area (Ha) LR	Target Production (90 Kg Bag) LR	LTA Achieved Area (Ha)	LTA Achieved Production	Achieved LR (Ha)	% Achieved LR (Ha)
Embu	16,950	92,932	17,595	231,734	13,376	79
Garissa	49	31	344	674	45	92
Mandera	1,429	958	10,644	7,473	1,400	98
Marsabit	239	1,165	233	1,485	235	98
Meru	45,800	771,233	26,335	332,609	36,640	80
Tharaka Nithi	17,720	354,400	11,259	142,047	14,200	80
Wajir	190	3,000	189	3,097	180	95
<b>Total</b>	<b>82,377</b>	<b>1,223,719</b>	<b>57,391</b>	<b>719,118</b>	<b>66,076</b>	<b>88.86</b>

## Coast Region

In the Coast region the rains are yet to start however the condition is expected to improve by end of first week of April. There is no crop in the field with exception of the perennials. A few showers were received but poorly distributed in the region. Most of the farmers are carrying out land preparation.

**Table 6: Coast Region Maize Production**

County	Target Area (Ha)LR	Target Production (90 Kg Bag) LR	LTA Achieved Area (Ha)	LTA Achieved Production	Achieved LR (Ha)	% Achieved LR (Ha)
Kilifi	67,689	8,539.8	60,647	578,820	0	0
Kwale	39,188	489,850	55,847	533,606	1,200	3
Lamu	39,500	395,000	19,097	314,417	0	0
Mombasa	650	6,500	584	4,835	0	0
Taita Taveta	6,500	78,000	8,061	87,553	0	0
Tana River	7,700	231,000	3,026	42,839	4,348	70
<b>Total</b>	<b>161,227</b>	<b>1,208,889.8</b>	<b>147,262</b>	<b>1,562,070</b>	<b>5,548</b>	<b>12.17</b>



## Nyanza Region

The region received good rains from the second week of March; however, in Homabay County, the onset of rainfall was delayed. In Kisumu, most households in the upper parts have planted 90% of their target, while in the lower parts, only 50% has been achieved. However, bean planting is still not fully underway in Homabay due to the delayed start in planting maize. In Kisumu, *Quelea quelea* birds invaded paddy fields, causing 500 acres of rice to be damaged. In Kisumu, 75% and 60% of the bean and sorghum targets have been achieved, respectively, while in Kisii, Nyamira and Migori, over 90% and 70%, respectively, of planting have been achieved, although commercial fertilizers were generally expensive and the subsidized fertilizers were received late. In Nyamira, beans are almost at the reproductive stage and in good condition, while maize is still at the vegetative stage. In Migori, all crops are at the planting to early vegetative stage and the weather is conducive for top dressing. Top-dressing fertilizer is available in NCPB stores in Migori. In Siaya, land preparation and planting annual crops were the main field activities during the reporting period. All crops in Siaya are at planting or early vegetative stages and in favourable condition.

**Table 7: Nyanza Region Maize Production**

County	Target Area (Ha) LR	Target Production (90 Kg Bag) LR	LTA Achieved Area (Ha)	LTA Achieved Production	Achieved LR (Ha)	% Achieved LR (Ha)
Homa Bay	40,930	777,670	43,652	714,294	36,837	90
Kisumu	48,500	1,200,000	29,507	491,183	33,950	70
Migori	73,700	1,799,000	45,448	890,672	51,590	70
Siaya	50,120	1,002,400	46,817	748,062	35,084	70
Kisii	34,500	828,000	37,801	867,098	31,050	90
Nyamira	29,000	580,000	24,458	446,923	26,100	90
<b>Total</b>	<b>276,750</b>	<b>4,129,392</b>	<b>227,683</b>	<b>4,158,232</b>	<b>214,611</b>	<b>80</b>

## Western Region

Most areas in the Western region, planting is still ongoing, but crops have begun to sprout. Minor instances of African army worm have been recorded in Bungoma County's Sirisia, Sub County, but the pest is now under control and the crop condition is stable and good. The crops are in the early vegetative (germination) state. In Bungoma County, the weather was ideal for sowing Irish potatoes and weeding other crops. Irish potatoes are a crop that is planted all year long, but due to the recent dry spell, production is presently low. Vihiga county witnessed hailstones, but they are unlikely to have an impact on production. In Busia, over 97% of the land has been prepared and to date 70 percent of the targeted area in the county has been planted, germination of first crop was good.

**Table 8: Western Region Maize Production**

County	Target Area (Ha) LR	Target Production (90 Kg Bag) LR	LTA Achieved Area (Ha)	LTA Achieved Production	Achieved LR (Ha)	% Achieved LR (Ha)
Bungoma	85,200	3,569,820	89,723	3,383,202	85,200	68
Busia	32,000	544,000	29,441	459,267	31,000	70
Kakamega	79,000	2,536,690	76,042	2,353,049	75,000	70
Vihiga	14,730	296,228	18,249	290,420	14,700	90
<b>Total</b>	<b>238,820</b>	<b>5,593,998</b>	<b>445,116</b>	<b>12,273,494</b>	<b>162,329</b>	<b>74.5</b>



**Figure 2: Maize planting for 2023 long rains season in Bunyala North Ward; Bunyala Sub-County**



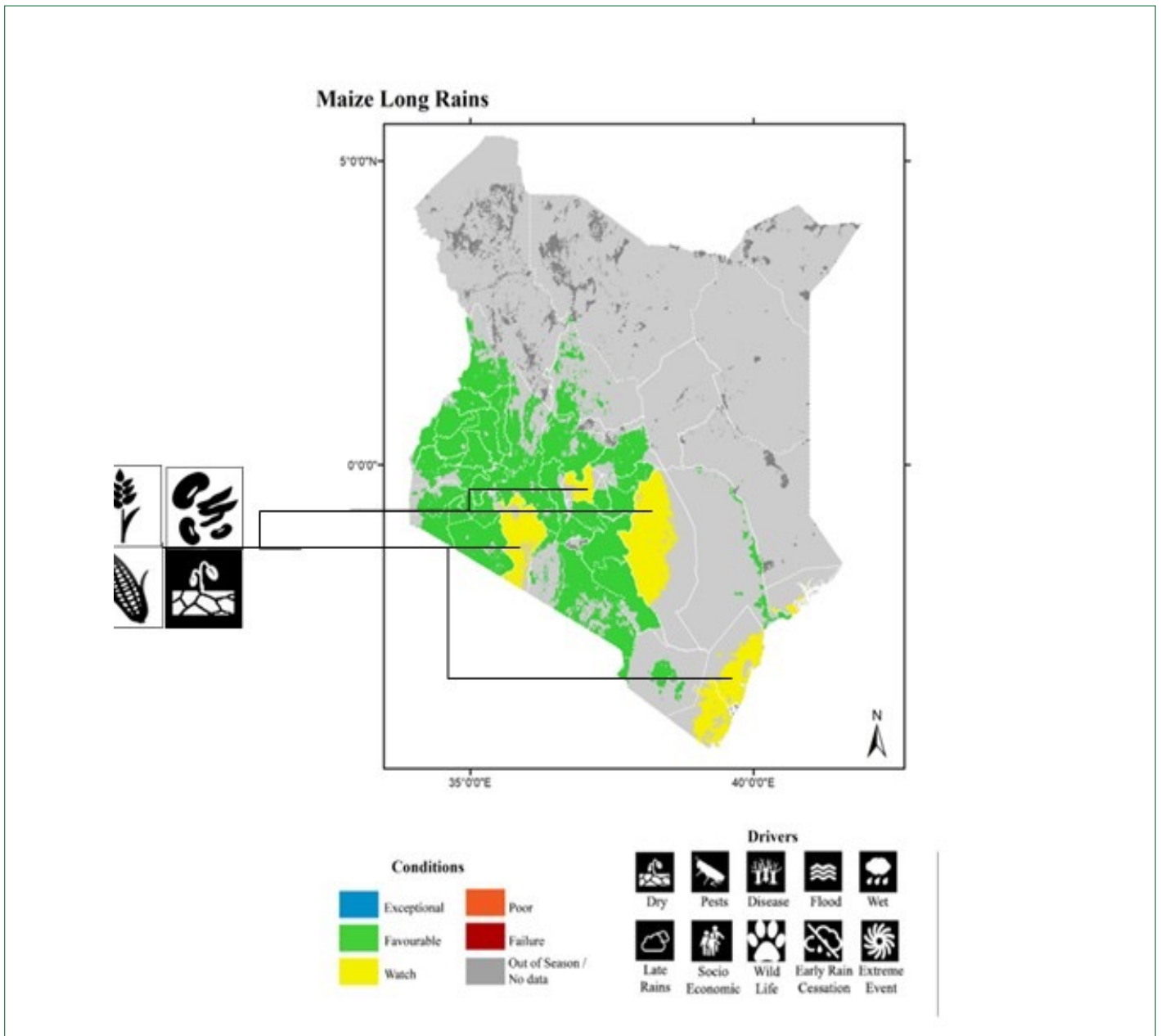


## Assessment by Crop

### Maize Conditions Long Rains Summary

Maize conditions are favourable in whole country where the crop from planting to early vegetative stage with a few counties reporting first weeding stage. Conditions are under watch in Narok, Samburu where the rains are erratic whereas in Coast and Kitui where the onset is not fully realised.

Based on the current conditions the outlook is good for the crop due to the good rains being received and the reported good germination.

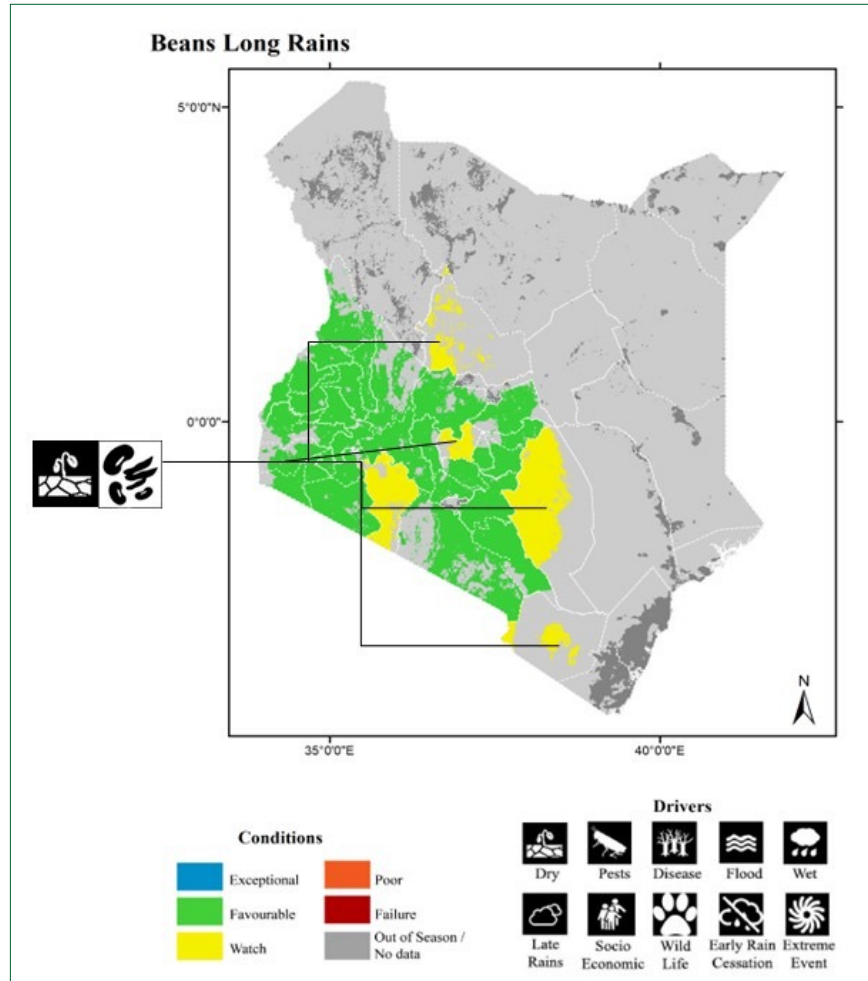




## Bean Conditions Long Rains

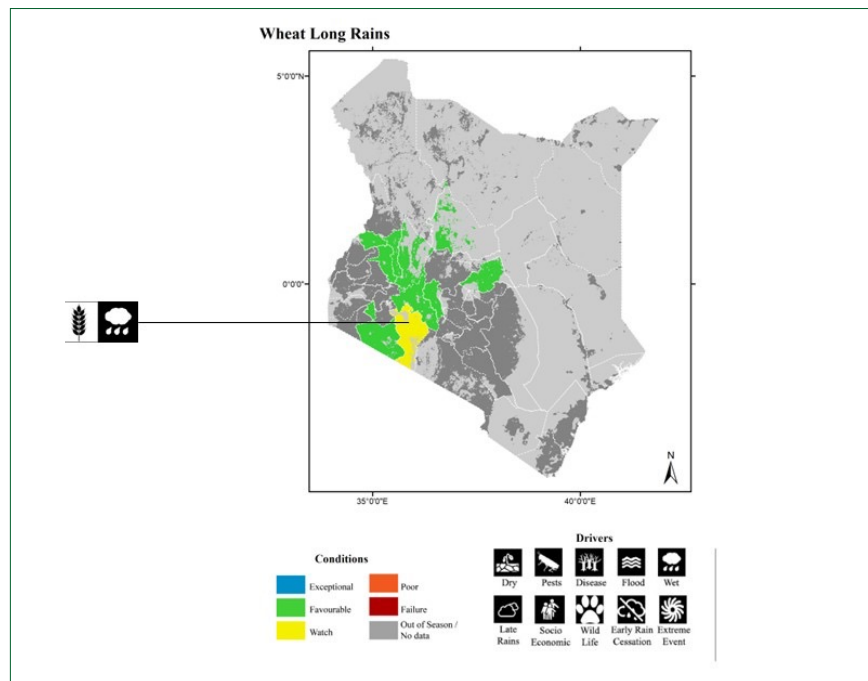
Beans conditions are favourable in the whole country where the crop is from planting to early vegetative stage with a few counties reporting first weeding stage just like for maize. Conditions are under watch in Narok, Samburu where the rains are erratic whereas in Coast and Kitui where the onset is not fully realised.

Based on the current conditions the outlook is good for the crop due to the good rains being received and the reported good germination especially if the dry planted crop where it was over 95%.



## Wheat Conditions Long Rains

Wheat is mainly grown in Narok, Meru, Uasin Gishu, Trans Nzoia, Laikipia, Elgeyo Marakwet and Nyandarua counties. Wheat is at planting stage in Narok and in the Northern Rift counties are at land preparation stages. Planting in North Rift is mainly may to June. In Narok the rains are making land preparation and planting a challenge.

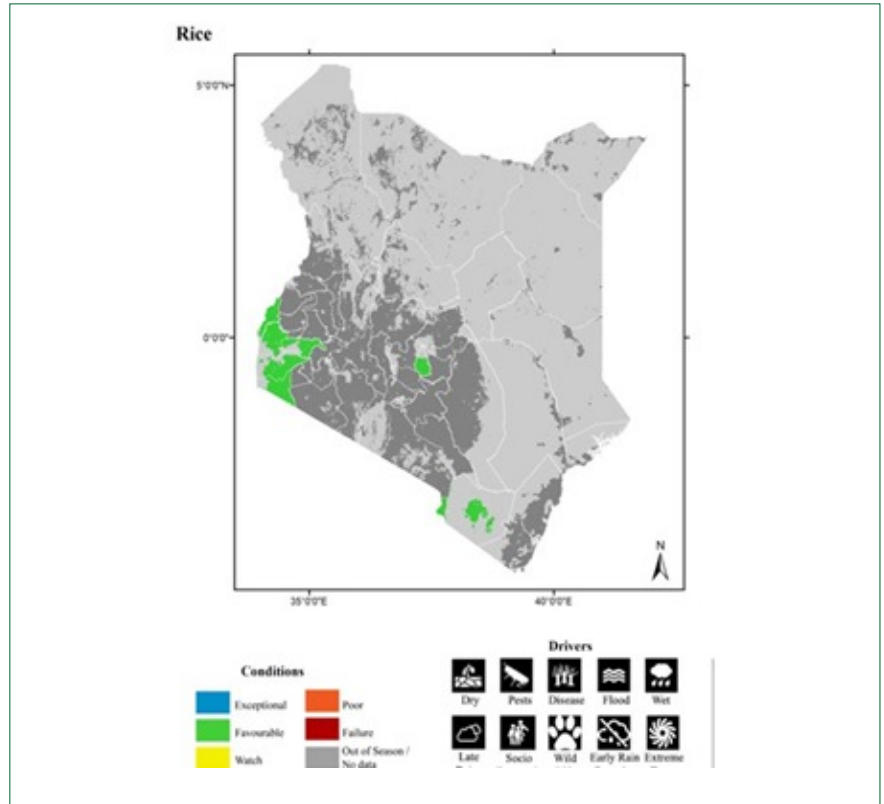




## Rice Conditions Long Rains

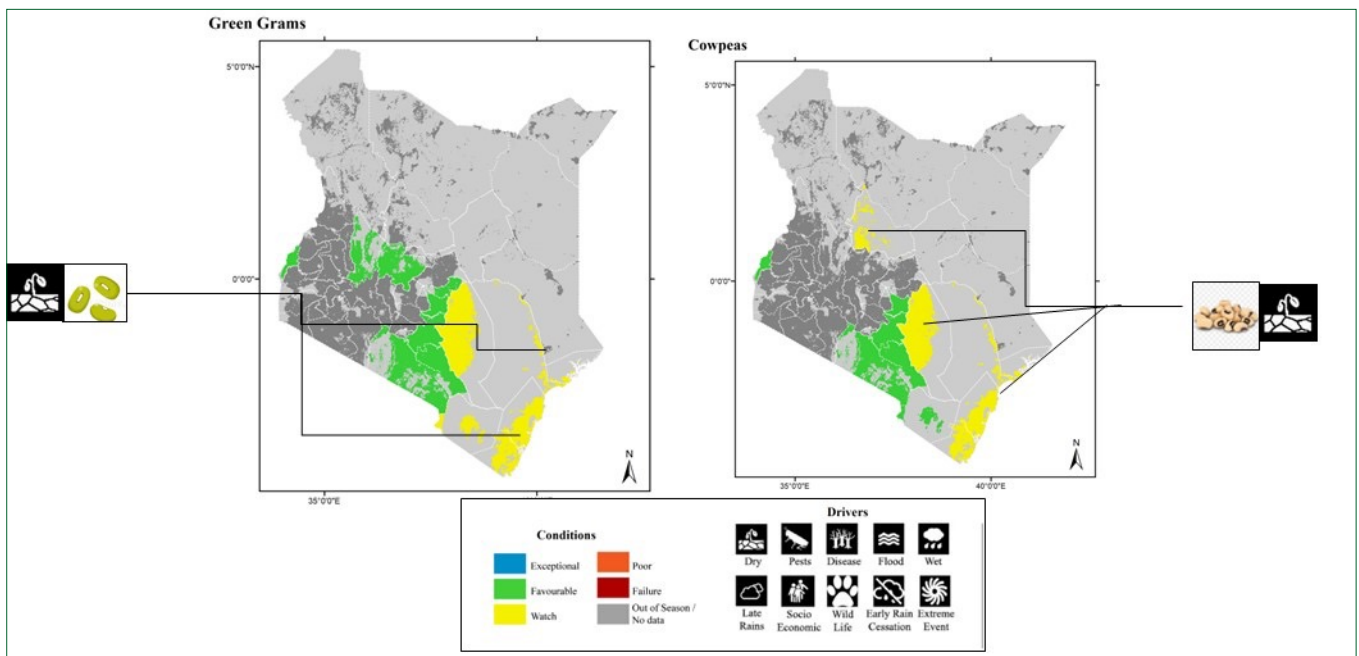
In rice growing areas the crop is in good condition as it is grown under irrigation. *Quelea quelea* birds menace was reported in Kisumu where 500 acres of the crop was destroyed as control was not affected through aerial sprays due to lack of funds.

Normal production expected. Rice in Taita Taveta is doing well and is in good condition and 95% of the targeted yield will be realized. Kirinyaga crop at this period is usually a ratoon crop as main crop is harvested in November/December.



## Cowpeas and Greengrams Conditions Long rains

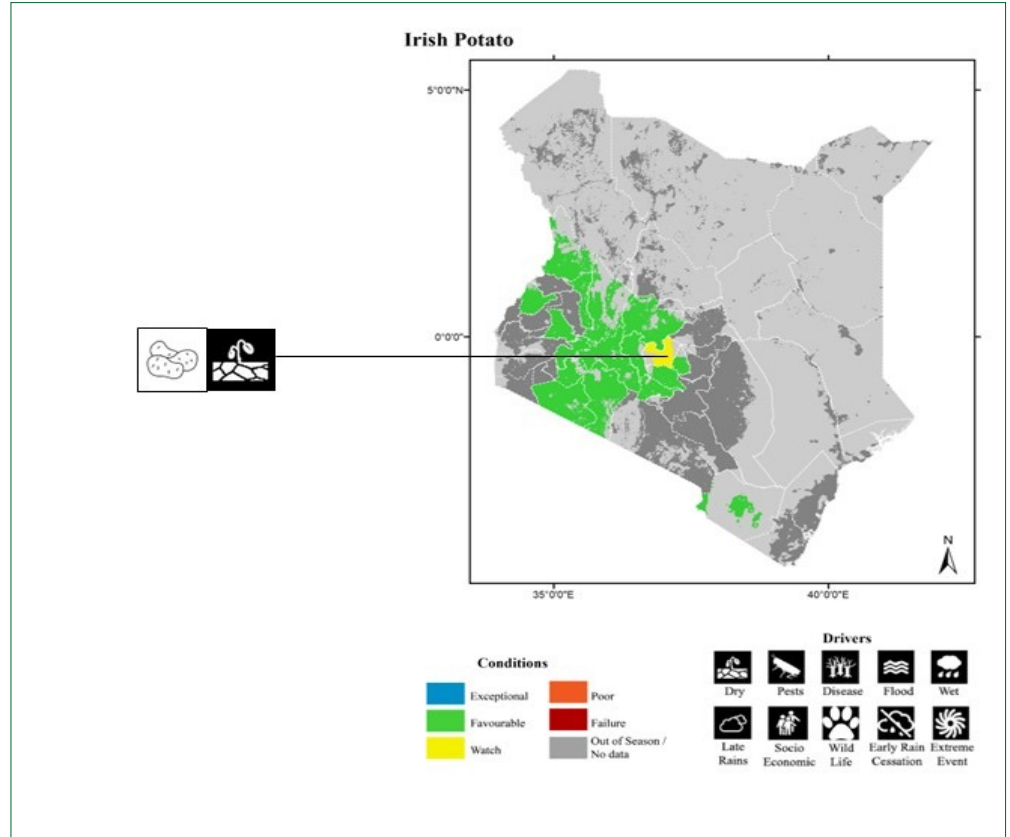
The main growing areas of these crops for grain are in Upper and Lower Eastern and to a lesser extent, the Coast. In other parts of the country, cowpeas are grown for leaves. In the main growing areas, the crop is from planting to germination and in some counties weeding. In the coast the rain onset has delayed hence the watch situation. In the other parts of the country the condition of the germinated crop is good.





## Irish Potatoes

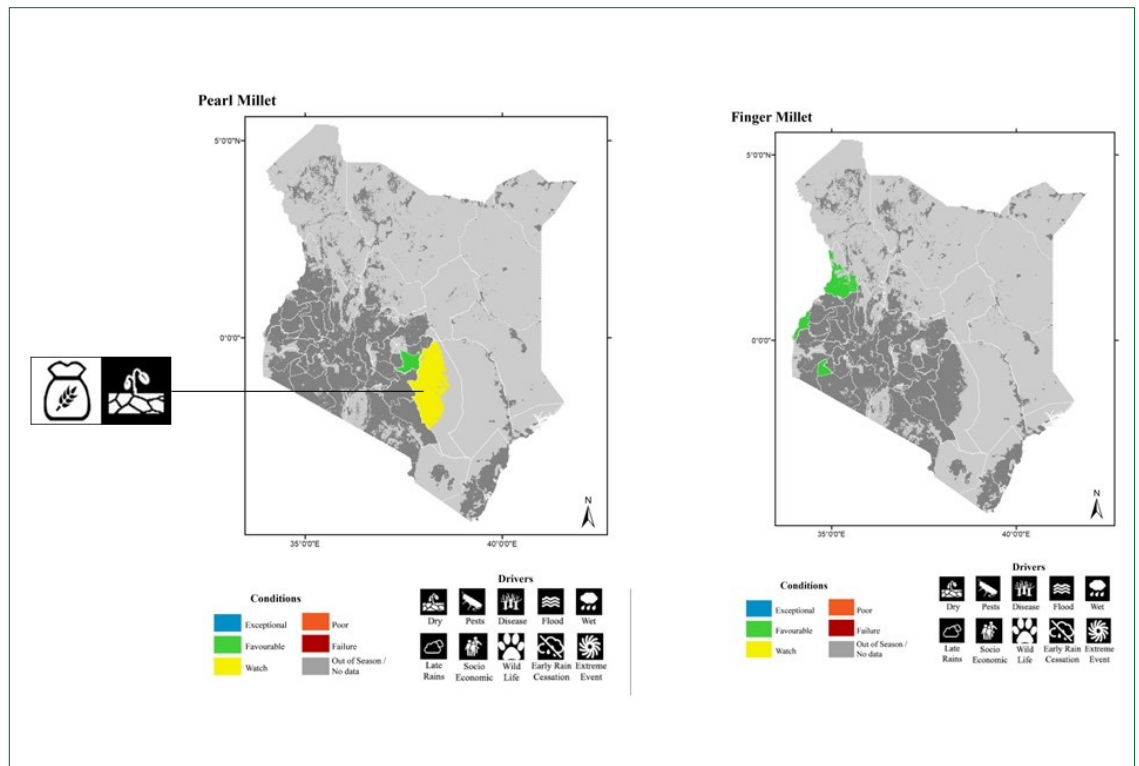
Irish potatoes are at planting to sprouting reported in central region. The germinated crop is in good condition with exception of Nyeri where rain was reported to be erratic. The current rains continuing will ensure a good yield.



## Pearl and finger millet

The millets are grown in a few places in the Country. Main growing areas of pearl millet is in Embu and Kisii.

In Embu the crop is at planting to germination whereas in Kitui planting hence under watch conditions. The situation is expected to improve soonest if the rain distribution improves.



## Climate Outlook

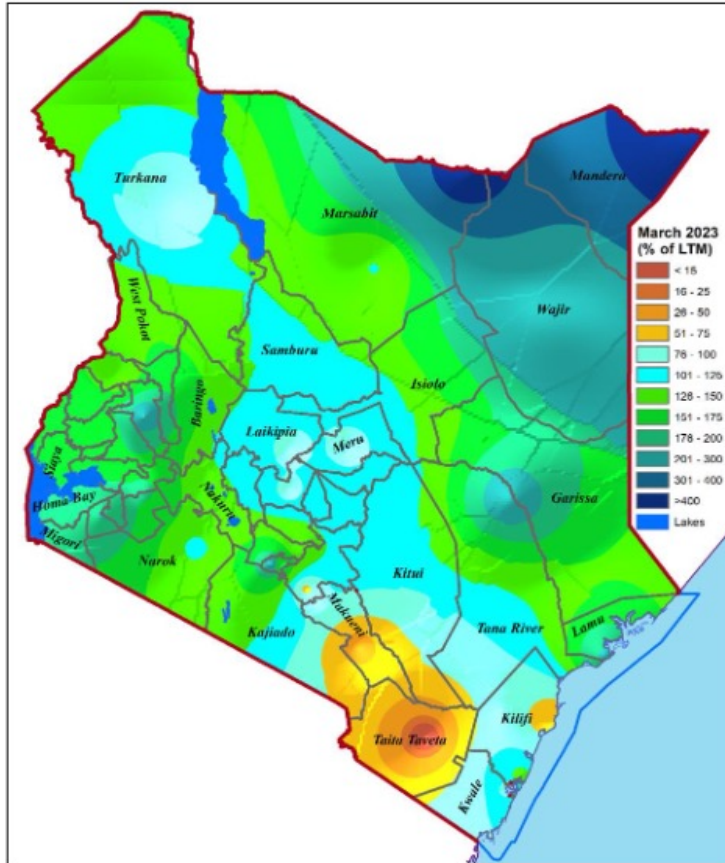


Figure 4: March 2023 Rainfall LTM

## Outlook for April 2023

The outlook for the next three months indicates that rainfall is expected over the Western sector and Coastal regions during the forecast period. The rest of the country is expected to receive rainfall in April and May but remain generally dry in June. However, the Highlands East of the Rift Valley including Nairobi County and parts of the South-eastern lowlands may experience light rainfall in June as the cold season sets in. The Highlands West of the Rift Valley, the Lake Victoria Basin, Central and South Rift Valley are expected to receive near to below average rainfall. The Coastal region is expected to receive near average rainfall. The Highlands East of the Rift Valley is expected to receive rainfall in April and May. In June, generally cool and cloudy conditions with occasional light rains is expected as the cold season sets in. The rainfall is expected to be near the April to June LTM. The South-eastern lowlands are expected to receive rainfall in April and May and remain generally dry in June. However, a few areas bordering Nairobi and Central Highlands may experience cool and cloudy conditions with occasional light rains in June. The rainfall is likely to be near the April to June LTM. The North-Eastern region is expected to receive rainfall in April and May and remain generally dry in June. The rainfall is likely to be near to slightly above the April to June LTM. The North-western region is expected to receive rainfall in April and May and remain generally dry in June. However, a few areas bordering Uganda and Southern Sudan may experience occasional rainfall in June. This rainfall is likely to be near to below the April to June LTM. Temperatures are expected to be warmer than average over the whole country during the forecast period.






## Review of the Rainfall Performance in March 2023

March marked the onset of the March-April-May (MAM) “Long Rains” season in the country. The start of the season was normal over several parts of the country (third to fourth week of March) except over a few areas in southwestern and Lake Victoria Basin (Kericho, Kisii and Kisumu counties) and a few areas over northeast (Moyale and Wajir) where the rainfall season onset was realized earlier than expected. The onset for Kericho, Kisii and Kisumu counties was during the first week of March while over Moyale and parts of Wajir, the onset was at the end of the second week of March. The first half of the month was characterized by long dry spells over most parts of the country except over a few areas in the southwestern and Lake Victoria Basin where rainfall was experienced. The second half of the month was characterized by heavy rainfall over most parts of the country except a few areas over south-eastern lowlands (Taita Taveta county) and several areas over the coastal region where rainfall was experienced towards the end of the month. The earlier than expected onset over some parts of the country was due to the indirect effect of tropical cyclone Freddie while the heavy rainfall experienced during the fourth week was occasioned by the Madden-Julian Oscillation (MJO), a system of deep convective clouds over the Indian Ocean that causes heavy precipitation over most parts of the country. Both phenomena are not predictable at seasonal timescales. Most of the stations across the country recorded rainfall that was near to above the March LTM except over some parts of the South-eastern lowlands and Malindi where below average rainfall was recorded.













## Terms and Definitions

### Crop Condition Classes

	Exceptional	Conditions are much better than average at time of reporting. This label is used only during the grain-filling through harvest stages
	Favourable	Conditions range from slightly below to slightly above average at reporting time
	Watch	Conditions are not far from average but there is a potential risk to final yields. There is still time and possibility for the crop to recover to average conditions if the ground situation improves. This label is only used during the planting-early vegetative and the vegetative-reproductive stages
	Poor	Crop conditions are well below average. Crop yields are likely to be 10-25% below average. This is used when crops are stunted and are not likely to recover, and impact on yields is likely
	Failure	Crop conditions are extremely poor. Crop yields are likely to be 25% or more below average

### Driver Definitions

These represent the key climatic drivers that are having an impact on crop condition status. They result in production impacts and can act as either positive or negative drivers of crop conditions.

	Higher than average wetness that results in destruction ie due to water logging and leaching of nutrients		This is a catch-all for all other climate risks (i.e. frost, hailstorms, mudslides etc.)
	Late start of the season		Area is flooded
	Rains end earlier than expected in the season		Destructive insects, birds or animals
	Destructive plant diseases		Drier than average
	Social or economic factors that impact crop conditions (i.e. policy changes, agricultural subsidies, government intervention, etc.)		Crop destruction by wildlife

**Conflict:** Armed conflict or civil unrest that is preventing the planting or harvesting of the fields by the farmers

### Acronyms

The normalized difference vegetation index (NDVI) is a measurement of plant health based on how a plant reflects light (usually sunlight) at specific frequencies.

RCMRD	Regional Centre for Mapping of Resources for Development	SDCD	State Department for Crops Development
SERVIR	Joint development initiative of NASA and USAID	MoALF	Ministry of Agriculture, Livestock and Fisheries
UCSB	University of California Santa Barbara	MLND	Maize Lethal Necrosis Disease
UMD	University of Maryland	GHACOF	Greater Horn of Africa Climate Outlook Forum
USAID	United States Agency for International Development	ICPAC IGAD	Climate Prediction and Application Centre
FAW	Fall Army Worm		

### Partnerships

