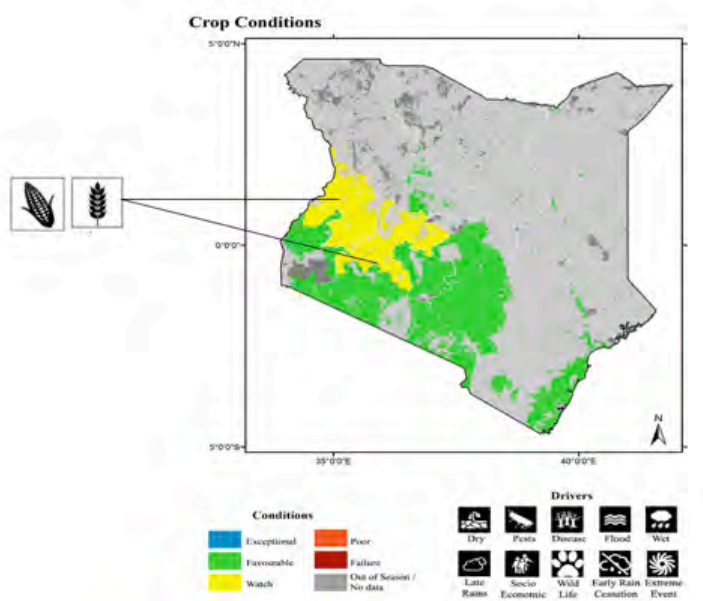# Kenya Crop Conditions Bulletin

www.kilimo.go.ke

National Synthesis (Maize, Beans and Wheat)

Overview

- Most of the crops were in favourable condition with an exception of beans in Migori, beans and wheat in Narok which are under watch due to poor distribution of rains, while maize in Kisii is due to pests Extreme wet conditions have put maize, wheat and irish poataoes in Narok and Kwale under watch situation

- Harvesting of long rains maize is still ongoing in the North rift, parts of Nakuru and Bungoma but post-harvest losses are likely to be higher than normal due to excess rainfall being received in those areas during the harvesting period. Most of the crop had been stooked awaiting dry period for harvesting

Map showing regional crop conditions information in Kenya as at 9th December 2019 for maize, wheat, beans, cow peas, green grams, rice and Irish potatoes. The crop map is based on a combination of remotely sensed data, ground observations, field reports, national, and regional experts assessment. Crops with conditions that are other than favorable are labeled on the map with their driver.

Inside the Bulletin

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

The expected enhanced rainfall in Western, Nyanza south Rift, Central and North Rift is expected to result to further improvement of crop performance. North eastern and coastal regions are expected to receive slightly enhanced) rainfall which is likely to result in flash floods and nutrient leaching.

Kenya Crop Conditions Bulletin

www.kilimo.go.ke

Assessment by Region

Coastal Region

In the **Coast Region**, all crops are in good condition with exception of maize in **Kwale** where heavy rains led to waterlogging and leaching in some parts of the county. Flooding has affected approximately 400 acres along river Umba in Lungalunga subcounty and an additional 415 acres in other parts of the county. FAW has affected about 200 acres, and water logging about 3000 acres in various parts of the county. In the **Tana River** flooding was reported in some parts for the maize crop. The situation is likely to deteriorate for the rest of region to watch if the current heavy rains continue.

Flooding in Tana river (Source :CDA s office)

A good crop in Maduguni in Kilifi County

Outlook: Below normal yields expected in **Mombasa**, **Kwale** and Parts of **Taita Taveta** counties which are experiencing flooding and waterlogging; except in Lamu, Taita, Kilifi and parts of Tana River, where good yields are expected.

Lower Eastern Region

In the Lower Eastern Region, Good crop conditions are prevailing for all crops due to good rains being experienced in the region. Greengrams doing well. Cowpea is too vegetative with minimal flowering due to the excessive rains.

Beans in Mwingi in Kitui County

Green grams in Kibwezi, Makueni County

Kenya Crop Conditions Bulletin

www.kilimo.go.ke

Maize - bean intercrop Machakos Central, Machakos County

Harvested maize in Elgeyo Marakwet

Maize - bean intercrop in Mbooni of Makueni County

Outlook: Production is likely to be above normal due to adequate rainfall being experienced for all crops.

North Rift Region

In **North Rift**, conditions are under watch for long rains maize due wet conditions in **Elgeyo Marakwet**, **Nandi, Uasin Gishu**, **Transnzoia**, **West Pokot** and **Nandi** counties which are delaying field harvesting activities. The situation likely to lead to post harvest losses. Conditions for short rains beans are favourable in the whole region. In **Elgeyo Marakwet** and **Uasin Gishu** and **Trans nzoia** the area under wheat increased but yield could reduce due current heavy rains that are delaying harvest activities.

Harvested maize in Elgeyo Marakwet

Outlook: High percentage of field and storage losses expected yields   in the region for long rains maize. Beans yields look promising but the condition could deteriorate to watch if wet conditions are sustained the continual rainfall.

Kenya Crop Conditions Bulletin

www.kilimo.go.ke

South Rift Region

In the South Rift region, conditions are favorable for all short rains crops. Wheat crop is mostly at late vegetative, the crop is generally good. Most of the bean crop is at flowering and podding stage. Short rains maize in **Narok** and **Kajiado** is over 50% tasseling stage and is in good condition. The long rains maize and wheat crop is under watch in **Narok**, **Kericho** and **Nakuru** as harvesting has been hampered by the ongoing rains. In **Bomet** despite the adequate rainfall Maize is under watch due MLND (Maize Lethal Necrosis Disease) and FAW.

In **Kericho**, **Nakuru**, **Bomet** and **Kajiado** short rains beans are at early vegetative to reproductive stages and good yields are expected.

Outlook: In **Narok, Kajiado** normal maize yields are expected due to good rainfall performance. In **Bomet** poor to normal maize yields are expected due effects of MLND. Beans yields are likely to be affected by excessive rains.

Lower Nyanza Region

In **Migori**, **Homabay** and **Siaya** conditions for short rains maize are favourable as a result of improved rainfall performance. Conditions are favourable for maize in **Kisumu** although average yield is expected in Nyando and lower Nyakach where planting was staggered. Conditions for beans are favourable in all counties which are between flowering pod formation.

Outlook: Normal yields expected in **Migori, Homabay** and **Kisumu** except Nyando and Lower Nyakach of **Kisumu** County where recovery from severe moisture stress will lead average yield. Normal yields for beans is expected in the whole region if the current rainfall does not predispose waterlogging effects.

Upper Region

In Upper Nyanza region, the maize is at different stages due different planting dates. Conditions for maize are under watch   in both **Kisii** and **Nyamira** due to FAW infestation. Although the season started with favourable rains, the situation later deteriorated due to massive outbreak of fall army worm. Unless urgent measures are effected there is likely to be approximately 40% decline of expected production. Beans are at flowering to pod formation.

Outlook: Normal yields expected for beans but average maize production is expected due high FAW infestation in the region.

Western Region

In the Western region, short rains maize is at tasseling to grain filling. Conditions favourable in the region due to maize recovery trend from FAW infestation in **Bungoma**, **Kakamega** (FAW has been reported at 5%) and **Busia** (less than 10% of maize are infested by FAW). 70% of the targeted land was put under beans crop. Beans are at flowering to pod formation and on recovery trend in Vihiga where hailstones were reported in October.

Outlook: Normal yields are expected in the region for maize. In **Vihiga** and **Busia** counties, average yields for beans are expected whereas yields for beans in **Kakamega** and **Bungoma** are expected to be normal.

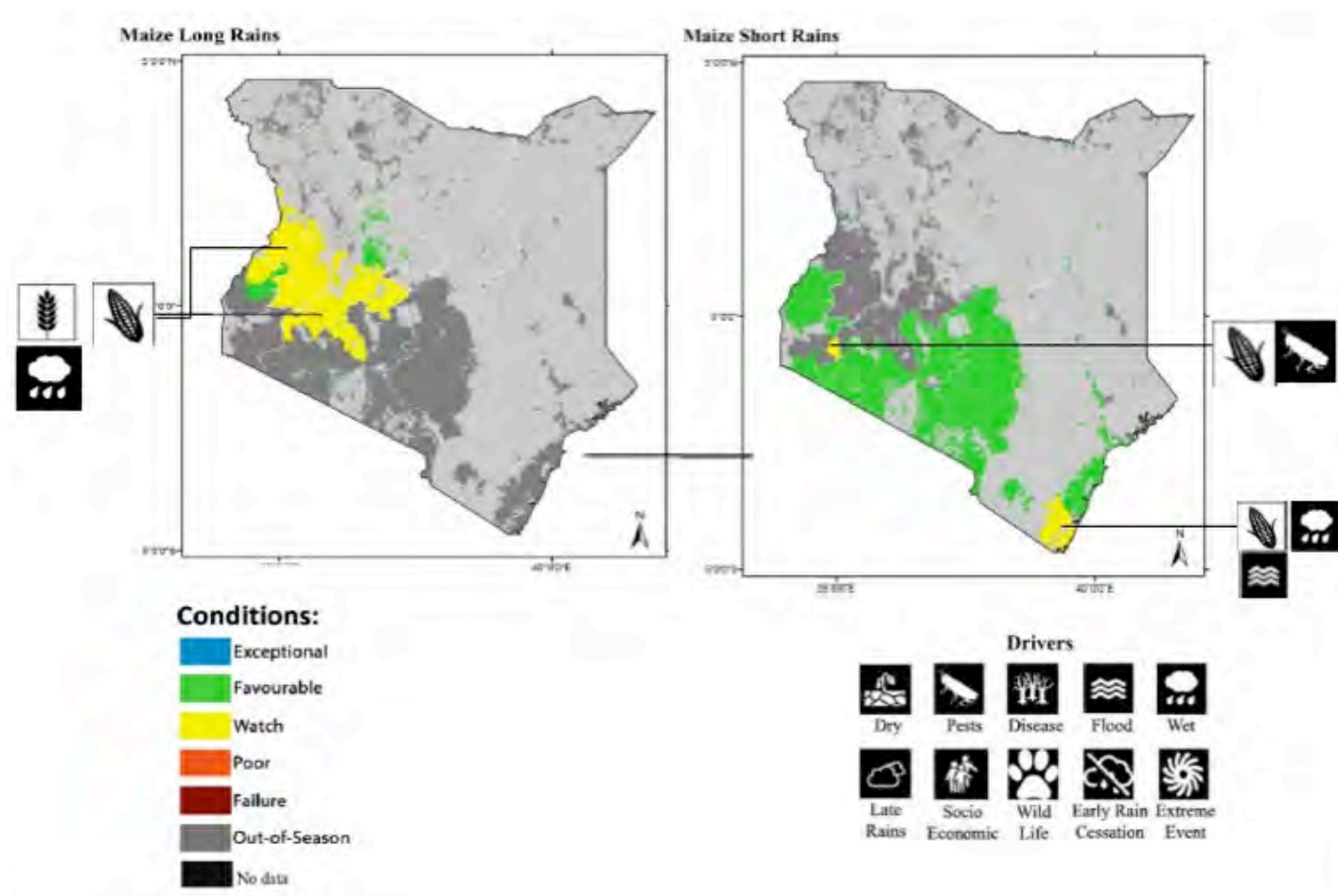## Central and Upper Eastern Regions

In Central and upper Eastern regions short rains all crops are in good condition. Maize is at tasseling to grain filling, while beans are at flowering to podding stage and is in good condition. However the current heavy rains may affect the crop performance in isolated areas where drainage is poor and water logging is likely in the valley bottoms, flood plains, flat plains and poorly drained soils of **Meru**, **Embu** and **Tharaka Nithi**. In **Nyandarua** long rains maize is at physiological maturity to harvesting.

Outlook: Above Normal to average   yields are expected in the region unless effects of excessive rains increase.

Kenya Crop Conditions Bulletin

www.kilimo.go.ke

Assessment by Crop

Maize Long Rain Conditions

Maize for long rains has been harvested in most counties across the country except in Nyandarua, parts of Bungoma and Kakamega Nakuru and Kericho and in the North Rift regions where it is still ongoing where conditions are under watch due to current heavy rains which are likely to increase the % of post-harvest losses.
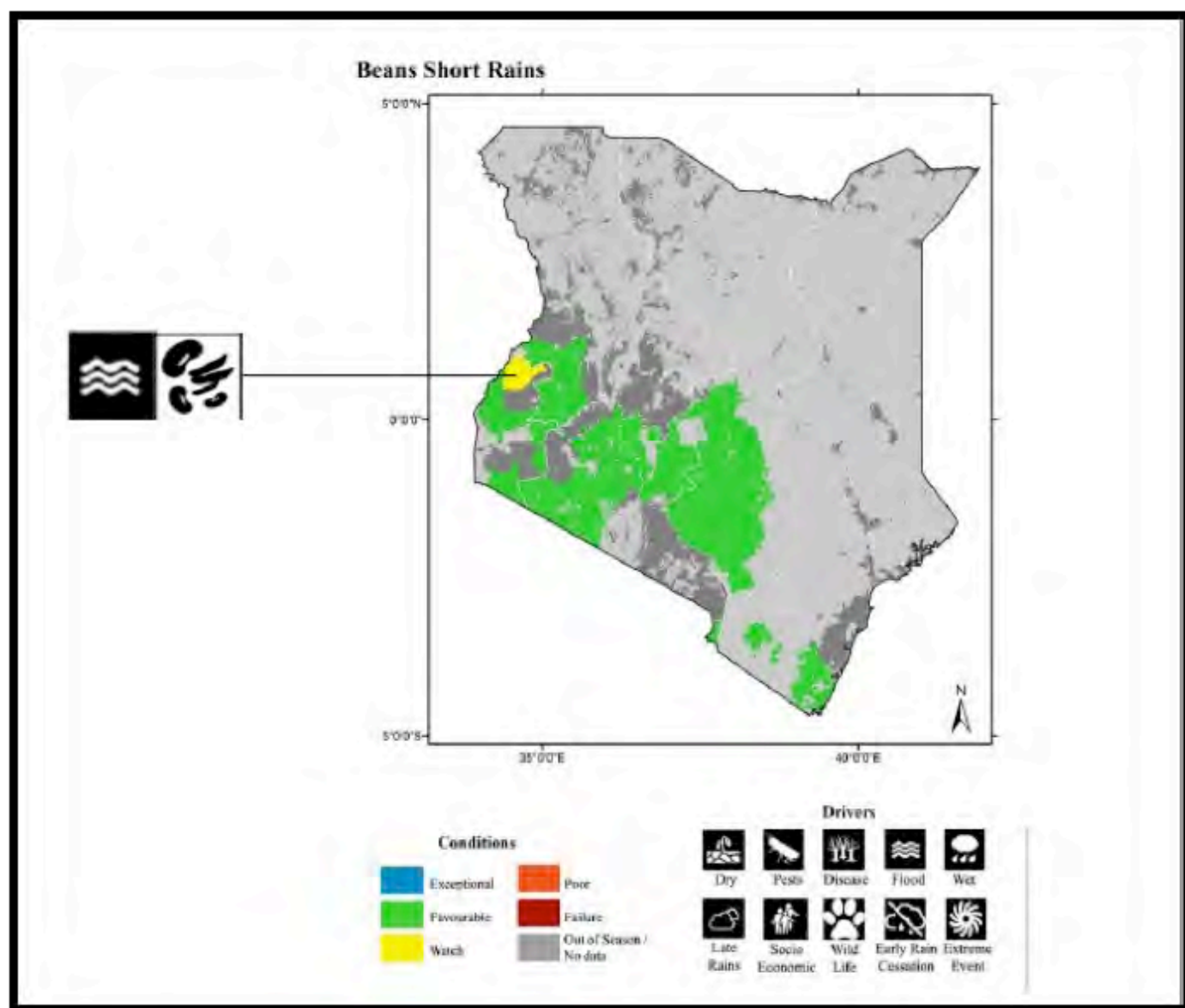

Maize Short Rain Conditions

Conditions for short rains maize are favourable in all regions with the crop under watch in low lying areas in Kwale county due to waterlogging and flooding and in Kisii and Nyamira due to FAW infestation. The crop is mostly in vegetative to tasseling and flowering stages. In Kwale where heavy flooding has been observed in low lying areas. In Western and Nyanza maize is at different stages due varying planting dates and though previously under watch due to high prevalence of FAW, heavy rains appear to have reduced the deleterious effects of the pest.
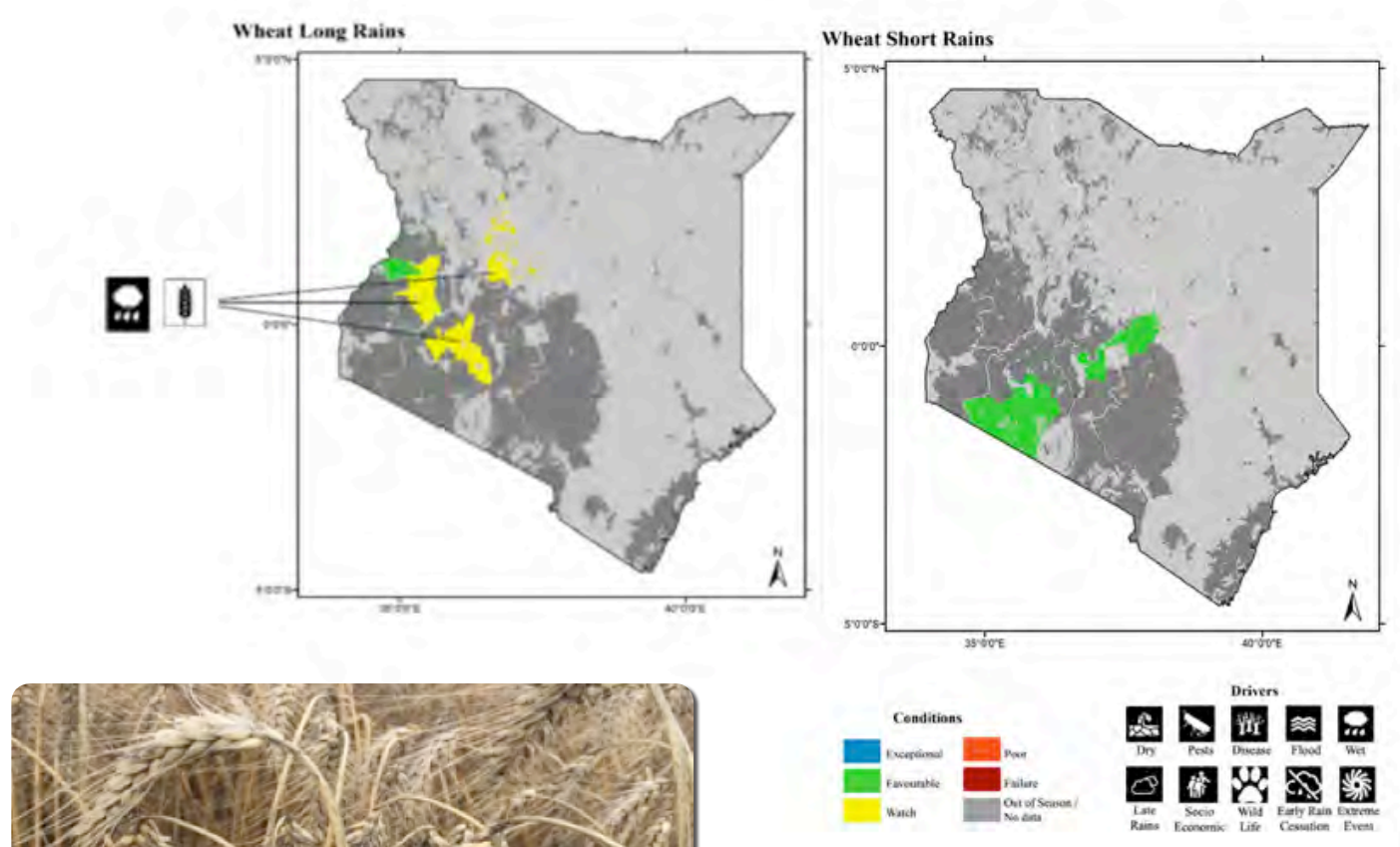
Kenya Crop Conditions Bulletin

www.kilimo.go.ke

Bean Conditions

Conditions for beans are favourable in all regions except Bungoma County which is under watch due extremely wet conditions. Good yields are expected in all regions.However there is a likelihood of reduction in yields the current heavy rains continue into December resulting in waterlogging and rotting of the grains.
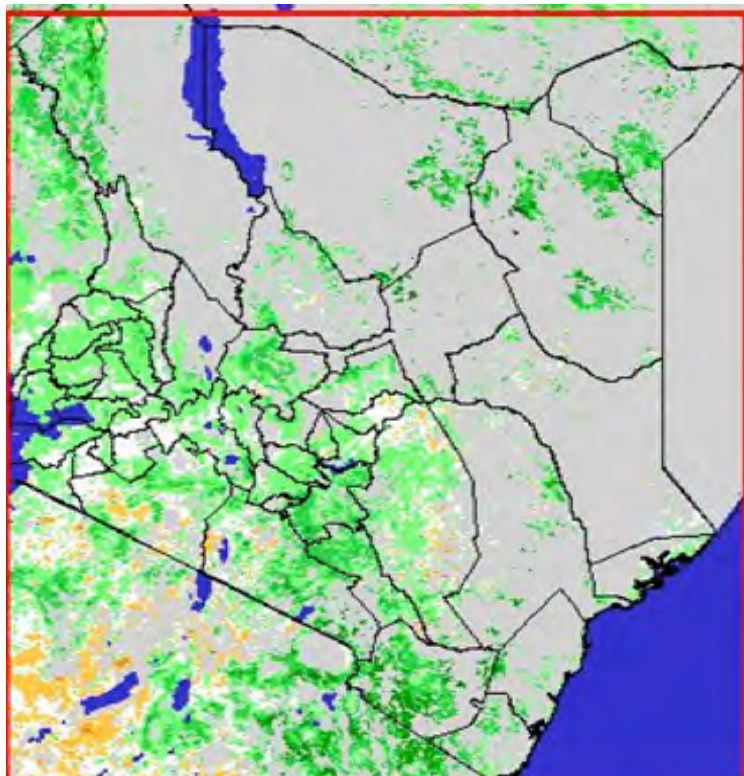
Kenya Crop Conditions Bulletin

www.kilimo.go.ke

Wheat Conditions

Conditions are favourable for short rains wheat in Narok showing some improvement from October due to stability in rainfall performance. Yields are promising if the current rain is maintained. However In Uasin Gishu, Trans Nzoia ,Elgeyo Marakwet, Samburu and Nakuru long rains wheat is at harvesting stage but excessive rainfall is likely to lead to post harvest losses due to delayed harvesting. Rotting is likely to occur.
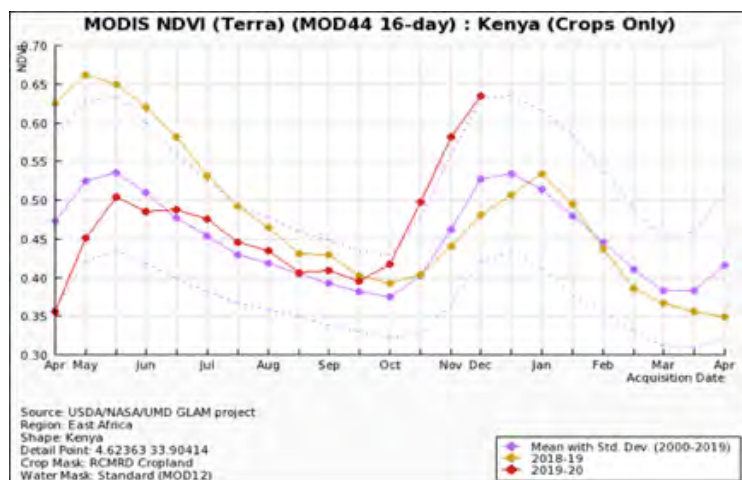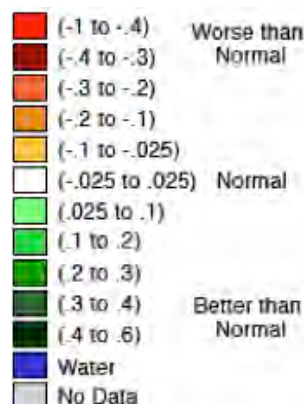

Status of long rains wheat in Samburu count affected by excessive moisture in the field

Kenya Crop Conditions Bulletin

www.kilimo.go.ke

Vegetation Conditions

The Vegetation map represents a 16-day anomaly image for 2019-October-16 to october-30. The brown areas represent areas where the vegetation conditions are worse than "normal" (long term average for the 2000 to 2018). The green color represents areas where conditions are better than "normal". The white color represents values where normal conditions are being experienced. Gray areas are areas where no data was collected due to cloud cover.

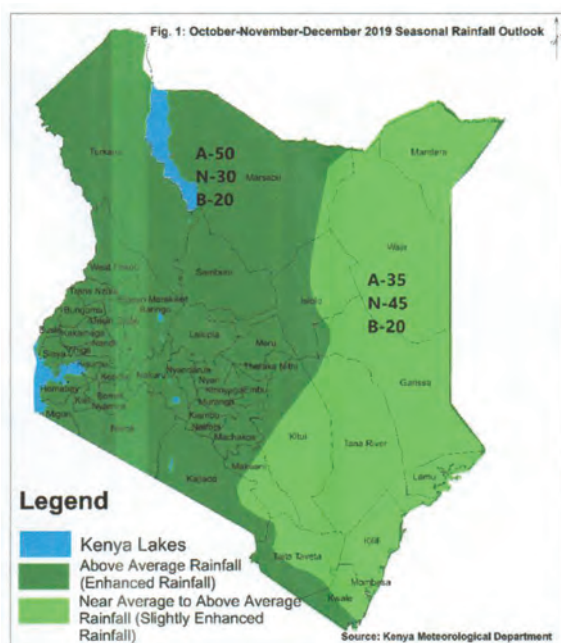|		
(-1 to -.4)	Worse than Normal	
(-.4 to -.3)		
(-.3 to -.2)		
(-.2 to -.1)		
(-.1 to -.025)		
(-.025 to .025)	Normal	
(.025 to .1)		
(.1 to .2)		
(.2 to .3)		
(.3 to .4)	Better than Normal	
(.4 to .6)		
Water		
No Data		

The graph provides a comparison between current vegetation conditions (red) when compared to the average conditions (Purple) defined by the historical average. The dotted line displays the standard deviation showing how values tend to spread-out from the mean and can be used to gauge the severity of the current conditions.

Highlights

Improvements noted in the crop growing areas. Looking at the graph, conditions in November (Red) are now above normal which is represented by the long-term mean (purple). Despite the greenness in the vegetation in all the crop growing areas, the high frequency and intensity of rainfall has resulted in nutrient depletion and flooding especially in coastal region.

Kenya Crop Conditions Bulletin

www.kilimo.go.ke

Climate outlook

DECEMBER 2019 RAINFALL FORECAST

KEY

Above Average rainfall

Fig. 1: October-November-December 2019 Seasonal Rainfall Outlook

A-50
N-30
B-20

A-35
N-45
B-20

Legend

Kenya Lakes
Above Average Rainfall (Enhanced Rainfall)
Near Average to Above Average Rainfall (Slightly Enhanced Rainfall)

Source: Kenya Meteorological Department

December 2019 Forecast

According to the Kenya Meteorological Department (KMD), counties in Nyanza west of the Rift Valley and South rift will receive significant amounts of rainfall throughout the month of December which are likely to be higher than the long-term average received during the same period.

Counties in North-western region that include Turkana, West Pokot and Samburu will receive enhanced rainfall which will be higher than the long- term average and same period last year leading occasional flash floods even in areas which may not necessarily be raining due heavy rainfall elsewhere.

Counties in highlands east of the Rift Valley, Central Kenya and South-eastern Lowlands (Nairobi, Nyandarua, Nyeri, Kirinyaga, Murang'a, Kiambu, Meru, Embu, and Tharaka): are expected to have enhanced rainfall above the long-term average for December. Continuous rainfall may cause landslides and mudslides in hilly areas especially in Central Kenya.

The North-eastern region is expected to receive enhanced rainfall which is expected to be higher than the long-term and accompanied with floods.

The Coastal Strip that comprises Mombasa, Tana River, Kilifi, Lamu and Kwale will continue receiving significant rainfall throughout the month of November 2019 and is likely to be higher than the long-term average amounts with occasional breaks with high likelihood of flooding.

Seasonal Forecast (KMD) for September October November December (SOND) 2019 Outlook

The expected enhanced rainfall in Western Central Eastern and Coast of Kenya are expected to lead to good crop performance and agricultural production. However, the wet conditions are likely to lead to post harvest losses in Wheat and maize in yet to be harvested crop in North Rift and parts of Western region. And floods in North Eastern and parts of the coastal region. Generally the OND rainfall is expected to be well distributed up to the 3rd week of December.

Terms and Definitions
Crop Condition Classes

■ (blue)	**Exceptional**	Conditions are much better than average* at time of reporting. This label is used only during the grain-filling through harvest stages
■ (green)	**Favourable**	Conditions range from slightly below to slightly above average at reporting time
■ (yellow)	**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
■ (orange)	**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
■ (dark red)	**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.

Wet	Higher than average wetness that results in destruction ie due to water logging and leaching of nutrients	**Extreme Event**	This is a catch-all for all other climate risks (i.e. frost, hailstorms, mudslides etc.)
Late Rains	Late start of the season	**Flood**	Area is flooded
Early Rain Cessation	Rains end earlier than expected in the season	**Pests**	Destructive insects, birds or animals
Disease	Destructive plant diseases	**Dry**	Drier than average
Socio Economic	Social or economic factors that impact crop conditions (i.e. policy changes, agricultural subsidies, government intervention, etc.)	**Wild Life**	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