



NATIONAL DROUGHT MANAGEMENT AUTHORITY

National Drought Early Warning Bulletin

November 2019

KEY HIGHLIGHTS

- Onset of the October-November-December (OND) 2019 occurred around mid-October and currently nearly all the ASAL counties have received favourable rainfall. The early start to the current season and its performance so far suggests that most ASAL areas will probably experience near normal rainfall. Consequently, it is anticipated that the 2019 October to December short rains are likely to impact positively on both livestock and crop production.
- The condition of pasture and browse in many ASAL areas has improved to some extent following the onset of long rains. Pasture and browse regeneration is expected to continue as the rainy season progresses and is projected to reach the normal ranges in terms of quantity and quality by end of December.
- Water availability is steadily returning to normal with most of the existing open water sources such as dams, rock catchments and water pans now filled to approximately 70 percent capacity. Access to water for households and livestock has improved since distances to watering points has reduced significantly across all counties. As a result, livestock body condition and milk production are starting to improve.
- Although key drought indicators in a number of counties have not yet returned to normal, significant improvement has been observed in most of the counties with the trend improving and stable in 14 and 9 counties respectively. Currently there are 13 counties in normal, seven in alert, one in recovery and three in alarm, compared with eight in normal, seven in alert and eight in the alarm drought phase in September.

Drought phase classification, October 2019

<i>Drought status</i>	<i>Trend</i>		
	<i>Improving</i>	<i>Stable</i>	<i>Worsening</i>
<i>Normal</i>	Lamu Embu (Mbeere) Nyeri (Kieni)	Kajiado Laikipia Taita Taveta Turkana West Pokot	Baringo Kwale Meru Narok
<i>Alert</i>	Garissa Makueni Marsabit Samburu Tana River	Wajir Kilifi	
<i>Alarm</i>	Kitui Mandera Isiolo		
<i>Emergency</i>			
<i>Recovery</i>	Tharaka Nithi		

1.0. Drought status

1.1 Drought indicators

Rainfall

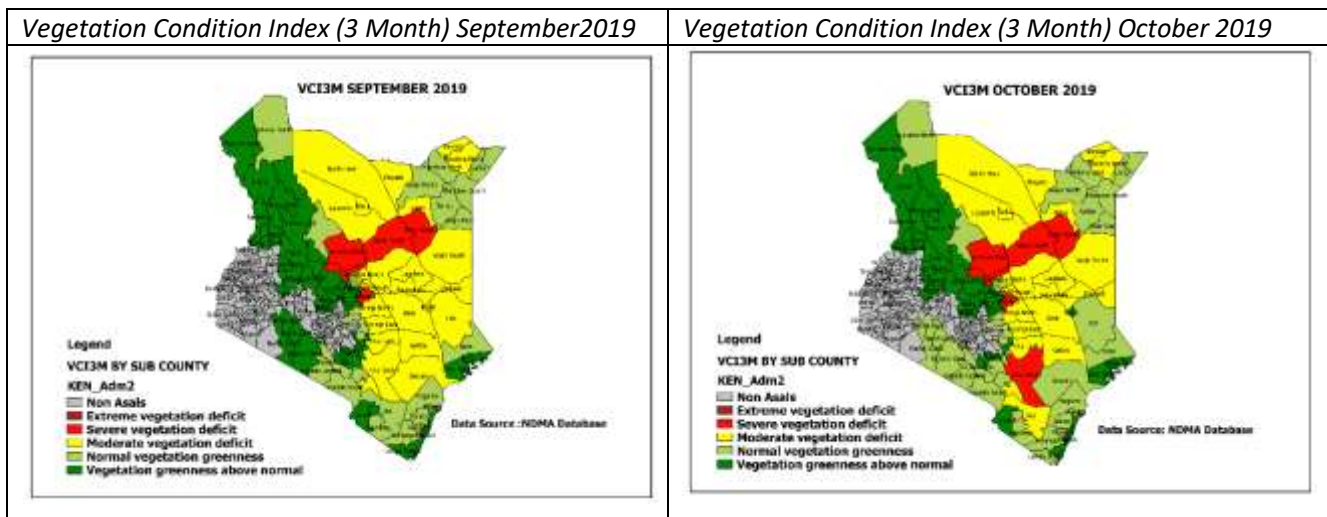
The start of the October-November-December (OND) 2019 seasonal rains was timely over several ASAL areas with some counties such as Marsabit, Mandera Wajir, Kitui, Taita Taveta and Makeni where onset was slightly earlier than expected. The rainfall was characterized by heavy storms and were also fairly well distributed, both in time and space. Most ASAL counties experienced one of the wettest October on record since 1981 with the cumulative rainfall amounts received in most counties exceeding 200 percent of their October long term average (LTA). In Samburu, for example, the county received rainfall totals that were above the long-term average (LTA) by 162 percent. In the first, second and third dekad, Makeni County received 29.3 mm, 23.4 mm and 57.2 mm compared with LTA of 6.7 mm, 8.6 mm and 13.5 mm respectively.

Vegetation condition

The condition of vegetation has improved in almost all ASAL counties which is attributed to the good rains received in October. The positive trends observed in many areas point to a good regeneration of pasture during the month of October. However, in Wajir (Wajir West), Isiolo (Isiolo North), Tharaka Nithi (Tharaka) and Kitui (Kitui South) the VCI values are still indicating severe vegetation deficit since the rains received so far have not increased the vegetation greenness to the expected normal ranges for the period.

Figure 1 illustrates the vegetation condition index (VCI) in October 2019 with that in September 2019. However, significant improvement in the vegetation greenness is expected to be seen in November as a result of the good rains received in the last half of October. Detailed VCI values for October are presented in Annex 1.

Figure 1: Comparison of Vegetation Condition Index (VCI), September 2019 and October 2019



Water sources

The water situation has significantly improved across the ASAL counties as a result of the rains received in the last half of October. The main water sources during the month, both for domestic and livestock use were pans and dams, shallow wells, boreholes and rivers. Households also reported using piped water and roof catchment system as water sources during the reporting period. Water levels have improved since most surface water sources were recharged to over 70 percent of their normal capacity. For instance, In Marsabit County, 100 percent of open water sources in Moyale and Saku sub-counties are recharged while only 45 percent of open water sources in North Horr and Laisamis sub-counties have been recharged. In Turkana the open water sources including pans and rock catchments are recharged to over 75 percent capacity across the three livelihood zones with the normal flow characterized by moderate volume resuming in all the seasonal rivers. In Samburu, most water pans and dams were recharged to over 80 percent of their normal levels.

Livestock production

In nearly all the counties, livestock production related indicators are currently better compared to last month due to increase in pasture availability, both in terms of quantity and quality coupled with reduction in trekking distances in search of pasture and water.

Pasture and browse condition

The state of pasture and browse in most of the arid and semi-arid counties was generally in fair and good condition as shown in Table 1. The improvement in pasture and browse condition was attributed to the substantial amount of rainfall received from the second week of October.

Table 1.0: Pasture and browse condition, October 2019

Pasture			Browse		
Poor	Fair	Good	Poor	Fair	Good
Embu	Garissa	Lamu	Embu	Garissa	Lamu
Isiolo	Laikipia	Kilifi	Isiolo	Kajiado	Kilifi
Kajiado	Mandera	Marsabit	Makueni	Nyeri	Laikipia
Kitui	Nyeri	Meru	Kitui	Samburu	Mandera
Makueni	Samburu	Narok		Tana River	Marsabit
Tharaka Nithi	Tana River	Baringo		Tharaka Nithi	Meru
	Turkana	Taita Taveta		Wajir	Narok
	Wajir	West Pokot		Kwale	Baringo
		Kwale			Taita Taveta
					Turkana
					West Pokot

Livestock body condition

As a result of improvement in forage and water availability body condition for livestock has started improving after a prolonged dry spell as illustrated in Table 2. In Baringo, for instance, the proportion of respondents who reported good body condition increased from 30 percent in September to 81 percent in October while in Taita Taveta more than 90 percent of cattle observed in October were in good body condition. In Kitui, the percentage of cattle with poor body condition (thin fore ribs visible) reduced from 43 percent in September to 31.8 percent in October.

Table 2.0: Livestock body condition, October 2019

Cattle			Goats		
Poor	Fair	Good	Poor	Fair	Good
Isiolo Kajiado Mandera Tharaka Nithi	Lamu Garissa Kilifi Kitui Laikipia Makueni Marsabit Meru Tana River Turkana Wajir	Embu Narok Nyeri Baringo Samburu Taita Taveta West Pokot Kwale	Isiolo	Lamu Garissa Kajiado Laikipia Mandera Marsabit Meru Tana River Tharaka Nithi Wajir	Embu Kilifi Kitui Makueni Narok Nyeri Baringo Samburu Taita Taveta Turkana West Pokot Kwale

Milk production

Milk production increased considerably across counties during the month under review. For example, in Marsabit County, average milk production per household per day increased by 55 percent to 1.7 litres in October from 1.1 litre in September while household milk production per day in Turkana rose by 50 percent from one litre in September to 1.5 litres in October. In Garissa, average milk production per household per day increased by 43 percent from 1.4 litres in September to 2 litres in October. Increase in milk production was attributed to improved livestock body condition due to significant reduction in trekking distances in search of water and forage by livestock.

Table 3.0: Milk production, October 2019

Indicator	Current status			Trend		
	Above LTA	At LTA	Below LTA	Improving	Stable	Worsening
Milk Production	Baringo Garissa Laikipia Makueni Nyeri Samburu Taita Taveta Tana River Wajir	Kwale Meru Narok	Embu Isiolo Kajiado Kilifi Kitui Lamu Mandera Marsabit Tharaka nithi Turkana West pokot	Baringo Garissa Kwale Lamu Mandera Marsabit Nyeri Tana River Turkana Wajir West Pokot	Embu Laikipia Makueni Meru Narok Taita Taveta	Isiolo Kajiado Kilifi Kitui Samburu Tharaka Nithi

Cattle prices

In majority of the counties cattle prices are improving or have remained stable owing mainly to the fact that the state of cattle body condition is on a upward trend. However, in spite of the recorded stability in cattle price during the period under review, the prevailing price is lower than the three-year average price of cattle for the month of October in about 35 percent of the ASAL counties. For instance, in Kitui, Turkana, Tharaka and Mandera the current prices are below LTA by 27, 24, 19 and 14 percent respectively.

Table 4.0: Cattle prices, October 2019

Indicator	Current status			Trend		
	Above LTA	At LTA	Below LTA	Improving	Stable	Worsening
Cattle Prices	Baringo Garissa Isiolo Kajiado Kilifi Lamu Narok Nyeri Taita Taveta Tana River	Laikipia Meru West pokot Samburu	Embu Kitui Makueni Mandera Marsabit Tharaka Nithi Turkana Wajir	Baringo Garissa Isiolo Kajiado Kilifi Kitui Makueni Narok Nyeri Tana River Marsabit	Embu Laikipia Meru Samburu Taita Taveta Tharaka Nithi Turkana Wajir West Pokot	Lamu Mandera

Goat prices

Table 5 summarizes the trend in goat prices in ASAL counties. During the month of October goat prices in most ASAL areas were mostly above average or close to LTA except in counties such as Turkana, Mandera and Tharaka where they were below the three-year average price due to below average forage and poor body condition owing to the prolonged dry spell that persisted up to mid-October.

Table 5.0: Goat prices, October 2019

Indicator	Current status			Trend		
	Above LTA	At LTA	Below LTA	Improving	Stable	Worsening
Goat Prices	Baringo Embu Garissa Kajiado Kilifi Kwale Laikipia Makueni Narok Samburu Taita Taveta Tana River West Pokot	Isiolo Kitui Lamu Marsabit Meru Nyeri Wajir	Mandera Tharaka Nithi Turkana	Baringo Garissa Narok Nyeri Samburu Tana river Wajir	Embu Isiolo Kajiado Kilifi Kitui Laikipia Lamu Makueni Marsabit Meru Taita Taveta Tharaka Nithi Turkana West Pokot	Kwale Mandera

Crop production

The main agricultural activities undertaken during the month of October in the marginal agricultural counties such as Makueni, Kitui, Embu (Mbeere), Tharaka, Meru North and Nyeri (Kieni) include land preparation, planting and weeding. In most of these counties the area planted is above normal, which is mainly driven by county government support to farmers with tractors. The condition of the crops is generally good and overall the on-going rains are expected to impact crop production positively this season.

Maize prices

In most counties the price of maize remained stable in October. However, the current maize prices are largely above average with about 65 percent of the counties recording prices above LTA. For example, in Nyeri, Laikipia, Tharaka Nithi (Tharaka), Kitui and Embu (Mbeere) current prices are above LTA by 42, 38, 34, 31 and 29 percent respectively. The increase in maize prices was attributed to diminishing stocks of maize at household level and a slight decrease in maize supply in most markets.

Table 6.0: Maize prices, October 2019

Indicator	Current status			Trend		
	Above LTA	At/close to LTA	Below LTA	Improving	Stable	Worsening
Maize Prices	Embu Garissa Isiolo Kilifi Kitui Kwale Laikipia Lamu Makueni Mandera Marsabit Meru Nyeri Taita Taveta Tharak Nithi	Baringo Narok Samburu Turkana Wajir West Pokot	Kajiado Tana River	Baringo Embu Kajiado Tana River West Pokot	Garissa Isiolo Kilifi Kitui Kwale Laikipia Makueni Mandera Meru Narok Nyeri Taita Taveta Tharaka Nithi Turkana Wajir	Lamu Marsabit Samburu

Access to water

The trend in distances walked by households to access water is provided in Table 7. Return distances to water for households have generally reduced in nearly all ASAL counties. The reduction in the average distances to water points for households was occasioned by the increase in water availability as most open water sources were recharged by the rains received in October.

Table 7.0: Distance from households to main water sources, October 2019

Indicator	Current status			Trend		
	Above LTA	At LTA	Below LTA	Improving	Stable	Worsening
Distance from households to main water sources	Baringo Embu Kajiado Garissa Mandera Tana river Nyeri	Wajir	Isiolo Kilifi Kitui Kwale Laikipia Lamu Makueni Marsabit Samburu Tharaka Nithi Turkana West pokot Meru	Embu Garissa Isiolo Kajiado Kilifi Kitui Kwale Laikipia Mandera Marsabit Samburu Tana River Tharaka Nithi Turkana	Lamu Makueni West pokot Wajir Narok	Baringo

			Narok Taita Taveta	Meru Nyeri Taita Taveta		
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The trend in the distance trekked by livestock in search of water is illustrated Table 8. Average return distances to water for livestock reduced in October following the onset of the short rains. In most ASAL counties access to water for livestock was equally within seasonal norms.

Table 8.0: Distance from livestock grazing area to main water sources, October 2019

Indicator	Current status			Trend		
	Above LTA	At LTA	Below LTA	Improving	Stable	Worsening
Distance from livestock grazing area to main water sources	Baringo Embu Garissa Kwale Laikipia Makueni Tana River	Lamu	Isiolo Kajiado Kilifi Kitui Mandera Marsabit Meru Narok Nyeri Samburu Taita Taveta Turkana Wajir West Pokot	Embu Garissa Isiolo Kajiado Kilifi Kitui Kwale Laikipia Lamu Makueni Mandera Marsabit Meru Narok Nyeri Samburu Taita Taveta Tana River Turkana Wajir West Pokot	Baringo	

Terms of trade

Each month, the drought early warning system monitors the relative price of goats and maize, showing the number of kilogrammes of cereal that can be exchanged for one goat. Table 9 summarizes the movements on the previous month and the trend. In almost 70 percent of the counties the terms of trade (ToT) are below the long term average for the month while in 4 counties; Kilifi, Kwale, Lamu and Mandera the ToT are showing a downward trend. The unfavourable terms of trade are attributed to the fact that the price of goats had declined while the price of maize had increased.

Table 9.0: Terms of trade, October 2019

Indicator	Current status			Trend		
	Above LTA	At LTA	Below LTA	Improving	Stable	Worsening
Terms of trade (ToT)	Kajiado Narok Samburu Taita Taveta	Baringo Kilifi Tana River	Embu Lamu Makueni Mandera Marsabit Meru Nyeri Garissa Isiolo Kitui Kwale Laikipia Tharaka Nithi Turkana Wajir West Pokot	Baringo Embu Garissa Kajiado Narok Nyeri Samburu Taita Taveta Tana River Tharaka Nithi Wajir West Pokot	Isiolo Kitui Laikipia Makueni Marsabit Meru Turkana	Kilifi Kwale Lamu Mandera

Health and nutrition

Table 10 shows the trend in the proportion of children at risk of malnutrition across the ASAL counties. The situation in most counties is improving with close to 90 percent of the counties currently on either an improving or stabilizing trend.

For example, the ratio of the under-fives rated as being at risk of malnutrition fell in October compared with September by 30, 17, 8, 7 and 6 percent in Wajir, West Pokot, Lamu, Samburu and Tana River respectively. The improving trend was attributed to increase in milk consumption and the positive impact of ongoing health and nutrition interventions.

Table 10.0: Children at risk of malnutrition (MUAC), October 2019

Indicator	Current status			Trend		
	Above LTA	At LTA	Below LTA	Improving	Stable	Worsening
MUAC	Baringo Kwale Lamu Makueni Mandera Meru Samburu Tana River Wajir	Embu Kitui Marsabit Tharaka Nithi	Garissa Isiolo Kajiado Kilifi Laikipia Narok Nyeri Taita Taveta Turkana West pokot	Samburu Laikipia Lamu Nyeri Tana River Wajir West Pokot	Baringo Embu Garissa Isiolo Kajiado Kwale Mandera Marsabit Meru Narok Taita Taveta Tharaka Nithi Turkana	Kilifi Kitui Makueni

1.2 Drought phase classification

Table 11 shows the trend in drought status in the 23 ASAL counties. Although key drought indicators in a number of counties have not yet returned to normal, significant improvement has been observed in most of the counties with the trend improving and stable in 14 and 9 counties respectively. Currently there are 13 counties in normal, seven in alert, one in recovery and three in alarm, compared with eight in normal, seven in alert and eight in the alarm drought phase in September.

Table 11.0: Drought phase classification, October 2019

<i>Drought status</i>	<i>Trend</i>				
	<i>Improving</i>		<i>Stable</i>		<i>Worsening</i>
<i>Normal</i>	Lamu Embu (Mbeere) Nyeri (Kieni)		Kajiado Laikipia Taita Taveta Turkana West Pokot	Baringo Kwale Meru Narok	
<i>Alert</i>	Garissa Makueni Marsabit Tana River	Wajir Kilifi Samburu			
<i>Alarm</i>	Kitui Mandera Isiolo				
<i>Emergency</i>					
<i>Recovery</i>	Tharaka Nithi				

2 Projected food security situation

Based on the November weather forecast by Kenya Meteorological Department (KMD), episodes of heavy rains may occur during the month in most of the ASAL areas and the cumulative rainfall amounts are expected to be higher than the long-term average received during the same period. As a result of heavy rainfall, occasional flash floods are likely to be experienced in counties such as Tana River, Garissa, Lamu, Turkana, Garissa, Wajir and Mandera.

Overall, despite some negative impacts from flash floods, the enhanced rainfall is expected to support regeneration of both pasture and browse; and improve water availability and access which is likely to result in increased livestock productivity in the ASAL counties. Good crop performance is expected across the ASAL region which is likely to exhibit improved crop production in the marginal agricultural counties.

3 Recommendations

- Provision of food assistance and scale up of cash transfer targeting households currently food insecure as a result of the recent drought and those affected by floods.
- Awareness raising and support to households living in flood prone areas to move to safer grounds/area to avoid loss of lives and destruction of property.
- Promotion of rain water harvesting technologies.
- Treatment and vaccination against emerging livestock diseases.
- Promote pasture establishment and conservation including deferred grazing management and participatory rangeland management.
- Provision of seeds and farm tools to households in the marginal agricultural and agro-pastoral areas affected by floods.
- Continue sensitization on, scouting for and monitoring of fall armyworm infestation in order to avert crop losses.
- Promotion of appropriate post-harvest management practices.
- Enhance hygiene promotion and provision of water treatment chemicals to control waterborne diseases.
- Intensify peace building initiatives to advocate for peaceful coexistence and sharing of resources.

Annex 1.0 Vegetation Condition Index (VCI-3 month) as at 28th October 2019

ADMINISTRATIVE UNIT		VEGETATION GREENNESS		DROUGHT CATEGORIES/REMARKS		
COUNTY	Sub County	VCI-3 month as at 30 th Sept 2019	VCI-3 month as at 28 th Oct 2019	Colour	VCI values (3-month)	Drought Category
					≥50	Vegetation greenness above normal
					>=35 - <50	Normal vegetation greenness
					>=20 - <35	Moderate vegetation deficit
					>=10 - <20	Severe vegetation deficit
					<10	Extreme vegetation deficit
BARINGO	County	86.79	76.64	The county and its sub counties is in above normal drought condition. The situation has maintained compared to the previous month of August. The county experienced offseason showers from July that has brought the vegetation condition to above normal status		
	Central	85.87	84.66			
	Eldama	80.71	72.74			
	Mogotio	89.54	78.93			
	North	81.9	75.33			
	South	90.96	80.85			
	Tiaty	87.67	74.48			
MANDERA	County	36.62	38.14	The county recorded a stable vegetation greenness condition with Banissa and Mandera North remaining at the moderate vegetation deficit category		
	Banissa	32.38	27.35			
	M East	36.5	47.07			
	Lafey	40.36	44.44			
	M North	29.35	26.99			
	M South	43.97	47.84			
	M West	35.59	38.15			
TURKANA	County	58.02	53.53	Normal to above normal vegetation greenness condition across the county		
	T Central	87.04	70.19			
	T. East	67.77	55.66			
	T. Loima	56.65	53.59			
	T. North	46.48	44.07			
	T. South	62.98	54.13			
	T. West	52.67	57.53			
MARSABIT	County	28.83	27.72	Moderate vegetation deficit condition in the entire county. However, strong vegetation regeneration is expected as a result of the good rains received towards end of October		
	Laisaimis	26.61	26.49			
	Moyale	27.46	23.01			
	N. Horr	30.27	29.4			
	Saku	31.56	31.54			
WAJIR	County	29.37	30.88	The county is experiencing moderate vegetation deficit with Wajir West remaining in the severe vegetation deficit band. Wajir East, Wajir North and Tarbaj have normal vegetation condition		
	W East	39.4	48.61			
	W. Eldas	22.08	23.24			
	W. North	42.71	44.47			

	W. South	26.39	22.52	
	W. Tarbaj	38.91	46.61	
	W West	14.95	17.33	
SAMBURU	County	36.94	32.95	The county deteriorated to the moderate vegetation deficit class with Samburu East remaining in the severe vegetation deficit category
	S East	19.37	19.21	
	S. North	48.16	40.56	
	S. West	70.23	63.01	
GARISSA	County	30.13	37.3	The entire county has now moved from moderate vegetation deficit to normal vegetation greenness with three sub counties: Balambala, Daadab and Lagdera still in the moderate vegetation deficit band
	Balambala	33.29	33.92	
	Daadab	27.5	24.14	
	Fafi	27.34	41.97	
	Ijara	38.15	49.56	
	Lagdera	27.65	25.42	
	Dujis	28.47	54.88	
ISIOLO	County	23.22	23.05	The county is in moderate vegetation deficit with Isiolo North experiencing severe vegetation deficit.
	I. North	17.74	18.66	
	I. South	31.6	29.77	
TANA RIVER	County	28.42	36.49	The county slightly improved to normal vegetation deficit. However, Bura and Galole are still experiencing moderate vegetation deficit.
	Bura	27.01	33.82	
	Galole	23.12	33.75	
	Garsen	32.94	40.47	
KAJIADO	County	44.9	42.8	The entire county experiencing normal vegetation condition
	K. Central	37.74	35.34	
	K. East	43.52	41.05	
	K. North	52.25	43.19	
	K. South	44.59	46.04	
	K. West	53.59	45.14	
LAIKIPIA	County	77.74	70.31	The county and its sub counties maintained above normal vegetation condition
	L. East	72.52	63.2	
	L. North	73.49	63.82	
	L. West	88.19	85.87	
THARAKA NITHI	County	37.36	31.93	Slight deterioration in the county to moderate vegetation deficit with Tharaka remaining in the severe vegetation deficit band
	Chuka	62.56	52.73	
	Maara	67.58	57.32	
	Tharaka	18.21	15.98	
WEST POKOT	County	78.68	76.09	The county and all sub counties remained at above normal vegetation condition
	Kacheliba	79.57	76.36	
	Kapenguria	84.02	85.34	

	Pokot South	77.14	74.44	
	Sigor	73.46	68.78	
EMBU	County	52.72	46.8	The vegetation greenness is within normal ranges for the period
	Manyatta	64.44	56.94	
	Mbeere North	48.51	43.4	
	Mbeere South	47.72	42.64	
	Runyenjes	67.75	58.67	
KITUI	County	29.05	24.61	While the vegetation greenness is normal in Kitui Central, Mwingi West, Kitui Rural and Kitui West sub-counties, Kitui East, Mwingi Central and Mwangi North are still experiencing moderate vegetation deficit while the situation in Kitui South sub-county is much below normal with the VCI entering the severe deficit band.
	Kitui Central	53.31	52.55	
	Kitui East	30.6	23.94	
	Mwingi Central	25.54	23.01	
	Mwingi North	27.43	25.81	
	Mwingi West	43.8	40.22	
	Kitui Rural	50.14	43.41	
	Kitui South	24.98	18.63	
	Kitui West	44.49	45.7	
MAKUENI	County	48.22	43.76	The vegetation greenness is within normal ranges except in Kibwezi East which recorded moderate vegetation deficit
	Kaiti	70.81	60.24	
	Kibwezi East	33.11	28.97	
	Kibwezi West	45.42	42.34	
	Kilome	59.74	55.49	
	Makueni	52.16	47.99	
	Mbooni	64.4	58.14	
MERU	County	47.85	44.44	Three sub-counties Igembe Central, Igembe North and Igembe South still in the moderate vegetation deficit
	Buuri	60.96	53.47	
	Central Imenti	62.33	57.47	
	Igembe Central	34.61	34.39	
	Igembe North	29.16	32.74	
	Igembe South	34.89	30.6	
	North Imenti	63.04	59.96	
	South Imenti	73.68	66.12	
	Tigania East	42.72	38.5	
	Tigania West	41.15	40.26	
NYERI	County	72.12	60.33	Above normal vegetation condition in the entire county and all sub-counties
	Kieni	70.07	57.23	
	Mathira	76.19	67.31	
	Mukurweini	75.21	65.7	
	Town	75.67	57.32	

	Othaya	70.9	64.93	
	Tetu	75.55	66.52	
KILIFI	County	40.26	44.51	The county and all sub counties experiencing normal to above normal vegetation condition
	Ganze	37.6	41.92	
	Kaloleni	48.37	49.55	
	Magarini	37.52	41.61	
	Malindi	41.23	43.89	
	Kilifi-North	51.3	60.62	
	Rabai	50.72	54.89	
	Kilifi-South	64.13	69.26	
KWALE	County	47.77	47.63	The county maintained normal to above normal vegetation condition
	Kinango	42.62	41.65	
	Lungalunga	50.62	49.01	
	Matuga	60.97	64.42	
	Msambweni	61.78	69.45	
LAMU	County	53.73	61.68	The vegetation greenness in the entire county is in the above normal range
	Lamu East	55.94	58.78	
	Lamu West	52.45	63.37	
TAITA TAVETA	County	45.36	39.08	The county remained at normal vegetation greenness with Voi recording moderate vegetation deficit
	Mwatate	46	38.21	
	Taveta	63.31	55.13	
	Voi	36.99	31.93	
	Wundanyi	52.92	46.82	
NAROK	County	62.68	53.52	County experiencing normal to above normal vegetation condition
	Narok-East	57.49	44.18	
	Emurua Dikirr	82.11	80.3	
	Kilgoris	66.41	66.65	
	Narok-North	64.57	47.61	
	Narok-South	53.89	45.88	
	Narok-West	69.05	59.48	

Annex 2.0 Summary of the drought early warning system

Each month, Field Monitors collect data in a number of sentinel sites across 23 arid and semi-arid counties. This is then complemented by information from other sources, particularly satellite data. For all indicators, the current value is compared with the long-term average for the time of year in order to establish whether it falls within seasonal norms.

Four types of indicator are monitored, capturing different kinds of impact (Table 12). The combined analysis from all four indicator groups then determines the particular drought phase: normal, alert, alarm, emergency or recovery (Figure 2). Identifying the correct drought phase helps to guide the most appropriate response for that stage in the drought cycle.

Table 12.0: Indicators monitored by the drought early warning system

Type of indicator	Examples of indicators monitored	Types of impact
Biophysical	Rainfall data Vegetation condition State of water sources	Environmental
Production	Livestock body condition Milk production Livestock migration Livestock mortality Crop production	Livestock production Crop production
Access	Terms of trade (meat/maize) Milk consumption Distances to water	Markets Access to food and water
Utilisation	Mid-Upper Arm Circumference (MUAC) Coping strategies	Nutrition Coping strategies

Figure 2.0: Drought Phase Classification

