



NATIONAL DROUGHT MANAGEMENT AUTHORITY

National Drought Early Warning Bulletin

June 2019

KEY HIGHLIGHTS

- Following the rains received in some ASAL areas in May, the number of counties in the alarm drought phase have reduced to seven from 10 in April. Counties currently classified in the alarm drought phase include: Wajir, Isiolo, Baringo, Garissa, Marsabit, West Pokot and Samburu.
- As at end of May, the vegetation condition index (VCI) values in eight (8) counties: Baringo, Garissa, Isiolo, Kitui, Laikipia, Samburu, Tana River and West Pokot 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.
- Although rains experienced in May has brought some positive impact on the condition of crops, it is unlikely that crops will reached physiological maturity and therefore the expected harvest for the 2019 MAM season is projected to be below average by as much as over 50 percent.
- In May 2019, approximately 1.6 million people in arid and semi-arid (ASAL) counties were assessed to be need of food assistance. According to the Kenya Food Security Steering Group (KFSSG) estimates, the population projected to require humanitarian assistance is likely to reach 2 million by July 2019.

Drought phase classification, May 2019

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

1.0. Drought status

1.1 Drought indicators

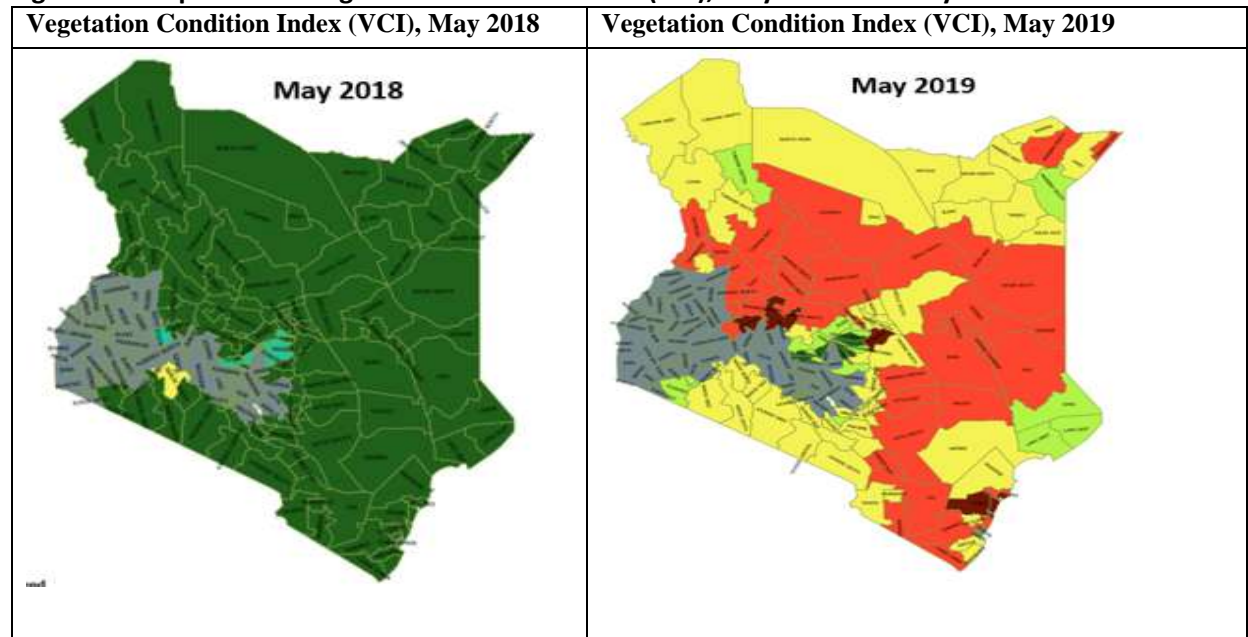
Rainfall

The March to May 2019 seasonal rainfall has continued to perform below average in ASAL counties. The seasonal rainfall onset was quite late with most areas remaining sunny and dry throughout the month of March 2019. Rainfall distribution, both in time and space, was generally poor and many areas received around 50 percent of normal rainfall with most of the seasonal rainfall recorded during the last dekad of April and in May. Some of the counties that recorded depressed rainfall in May include: Wajir, Garissa, Isiolo, Kitui, Marsabit, Samburu and Makueni. However, counties in the coast region such as Kwale, Kilifi and Lamu received enhanced above average rainfall during the month of May particularly in the last half of the month.

Vegetation condition

The condition of vegetation as at end of May 2019 remained poor in almost all ASAL counties which is attributed to the below average performance of the March-April-May (MAM) 2019 rainy season. Currently, the vegetation condition index (VCI) values in eight (8) counties: Baringo, Garissa, Isiolo, Kitui, Laikipia, Samburu, Tana River and West Pokot 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 current condition of vegetation in the ASAL counties and compares it with the situation in May 2018. Detailed VCI values for May 2019 are in Annex 1.

Figure 1: Comparison of Vegetation Condition Index (VCI), May 2018 and May 2019



Livestock production

Pasture and browse condition

In nearly all the counties, pasture and browse availability both in terms of quantity and quality was below the normal level for the month of May. However, compared to the situation reported in April, there was slight improvement in the state of pasture and browse in May as a result of the cumulative effect of the rainfall received during the second half of April and in May. In Samburu, for example, the proportion of key informants who reported fair browse condition increased from 60 percent in April to 77 percent in May while in West Pokot 75 percent of sampled community reported fair browse condition.

Table 1.0: Pasture and browse condition, May 2019

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

Livestock body condition

Most ASAL counties reported fair livestock body condition for all livestock species. In spite of the slight improvement in the pasture and browse situation in many ASAL areas, livestock recovery has been slow and the condition of most livestock is below normal when compared with a similar period of the year. Counties where livestock body condition deteriorated in May compared with April include: Garissa, Tana River, Marsabit, Wajir, Baringo, Mandera and Laikipia.

Table 2.0: Livestock body condition, May 2019

<i>Livestock body condition</i>					
<i>Cattle</i>			<i>Goats</i>		
<i>Poor</i>	<i>Fair</i>	<i>Good</i>	<i>Poor</i>	<i>Fair</i>	<i>Good</i>

Baringo Garissa Laikipia Mandera Marsabit Samburu Tana River Tharaka Nithi Wajir	Embu Kilifi Isiolo Kitui Kwale Lamu Makueni Meru Narok Nyeri Kieni Turkana West Pokot	Kajiado Taita Taveta	Garissa Baringo Tana River Wajir	Kilifi Isiolo Kitui Kwale Laikipia Lamu Mandera Marsabit Meru Nyeri Kieni Samburu Tharaka Nithi Turkana West Pokot	Embu Kajiado Makueni Narok Taita Taveta
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Milk production

Milk production increased in several counties during the month under review. For instance, in Taita Taveta average milk production per household per day increased by 39 percent to 4.6 litres in May from 3.3 litres posted in April. In Laikipia, average milk production per household per day rose by 18 percent from 3.4 litres in April to 4 litres in May while household milk production per day in West Pokot County increased by 20 percent to 1.2 litres in May from 1 litre in April.

However, milk production in nearly all ASAL counties is still below the long term average except in Makueni, Taita Taveta and Meru North which is attributed to the fact that livestock has not recovered from the effects of the January to April dry spell coupled with the slow recovery in rangeland conditions. In Marsabit, for example, the current household milk production recorded in May is lower than the level normally attained for the month by 57 percent while in Turkana milk production per household was 55 percent lower than LTA of 2.2 litres. Similarly, current milk production per household in Isiolo, Samburu and Kajiado was 55, 45 and 38 percent below LTA respectively.

Table 3.0: Milk production, May 2019

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

Cattle prices

Despite the prolonged dry spell, markets are still vibrant and functioning well as demonstrated by the stable trend in cattle prices which is largely attributed to good market demand and the fact that body condition of most cattle in counties such as: Kajiado, Kilifi, Laikipia, Samburu and Taita

Taveta is still fair. However, in other counties like Mandera, Kitui, Marsabit, and Makueni cattle prices were on a worsening trend as a result of the declining forage and water scarcity.

Table 4.0: Cattle prices, May 2019

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

Goat prices

During the month of May goat prices in most ASAL areas were mostly above average or close to LTA except in Tana River, Turkana and West Pokot where they were 7 - 14 percent below the three-year average price due to below average forage and poor body condition owing to below average rains.

Table 5.0: Goat prices, May 2019

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

Crop production

Delayed onset, poor distribution and erratic patterns of the March - May 2019 rainfall season has resulted in poor germination, wilting and drying of crops due to insufficient moisture. By end of May the established crop in the marginal agricultural areas was at different stages of development from germination to knee high for maize, while the leguminous crops such as beans, green grams and cow peas are between the emergence and four leaves stage. Currently, the acreages cultivated in some of the marginal agricultural counties such as Kitui, Makueni, Tharaka Nithi (Tharaka), Kwale, Kilifi, Embu (Mbeere) and Taita Taveta is estimated to have dropped by about 40 percent.

In areas such as Makueni, Kitui, Taita Taveta, Kilifi and Kwale, rains experienced in late May has brought some positive impact on the condition of crops, but farmers are apprehensive whether they will realize some harvest since the season is about to come to an end yet crops have not reached physiological maturity. Overall, it is projected that the expected yields for the 2019 MAM season will be below average by as much as over 50 percent.

Maize prices

Current maize prices are within average in Kwale, Makueni, Tana River, Wajir and Kajiado but 6 – 19 percent above average in Marsabit, Embu, Isiolo, Garissa and Mandera since supplies have continued to dwindle in the source markets of Ethiopia and Nairobi while demand has increased with the ongoing drought. However, prices were 9 – 20 percent below average in Laikipia, Samburu and Turkana due to presence of supplies from high and medium producing source markets.

Table 6.0: Maize prices, May 2019

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

Access to water

During the month of May, average return distances to water for households decreased in almost all ASAL counties except in Marsabit, Wajir and Garissa. Household access to water was therefore slightly better this month as households had to walk shorter distance to water points compared with last month. The improvement in water access was attributed to the rains received during the month while the increase in distances in Garissa, Wajir and Marsabit was as result of insufficient rains received in these areas hence poor recharge of open water sources. However, access to water

still remains a challenge in most ASAL areas considering that except in Nyeri and Tharaka return distances in all other counties are above LTA.

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

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

Livestock return distances from grazing areas to water sources decreased across ASAL counties except in Garissa, Isiolo, Tana River and Marsabit. The increase in trekking distances in Garissa, Isiolo, Tana River and Marsabit was attributed to insignificant recharge of water in open water sources owing to the poor performance of the MAM rainfall season and poor availability of forage. For instance, the average distance to water sources from grazing areas, in Garissa County increased by 27 percent from 22 km in April to 28 km in May while in Marsabit current livestock trekking distance of 14.8 km is above normal by 36 percent when compared to the LTA of 10.9 km.

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

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

Terms of trade

Terms of trade (ToT) determine the purchasing power of the households by providing an estimate of the number of kilograms of maize that can be purchased from the sale of one goat. Table 9 summarizes the trend in the ToT in ASAL counties. The trend in 11 counties is worsening while ToT in 8 counties are showing a stable trend. The deterioration in ToT across the counties is mainly driven by increase in maize price coupled with relatively low goat prices. The largest shift in terms of trade were:

- Kitui: Households could purchase 91 kg of maize from the sale of one goat in May compared with 108 kg in April a decrease of 17 percent.

- Meru North: ToT were unfavourable since the proceeds from the sale of a goat could purchase 106 kg of maize in May compared with the LTA of 121 kg which is 12 percent below the long term mean.
- Isiolo: Terms of trade reduced significantly by 11 percent as households could only purchase 55 kg of maize from the sale of one goat in May compared with 62 kg in April. Current ToT were also 11 percent below LTA.
- Embu (Mbeere): ToT decreased in May by a margin of 9 percent since the proceeds from the sale of a goat could purchase 98 kg of maize in May compared with 108 kg in April. In addition, current ToT were 17 percent lower than the long term mean.
- West Pokot: ToT diminished by 11 percent in May as households could purchase 48 kg of maize compared with 54 kg in April. ToT were 33 percent lower than the long term average.

Table 9.0: Terms of trade, May 2019

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

Health and nutrition

Each month the determination of the proportion of children aged below five years who were at risk of malnutrition is conducted using the mid-upper arm circumference (MUAC) technique. During the month of May, an increasing trend of children with MUAC less than 135 mm was reported in the following ASAL counties: Baringo, Embu (Mbeere), Kilifi, Narok, and Tharaka Nithi (Tharaka). In addition, other counties such as Kwale, Mandera, Garissa, Baringo, Lamu, Samburu and Tana River reported proportions of children with MUAC less than 135 mm which are higher than the May long term average. The increase in the percentage of under-fives at risk of malnutrition was attributed to decrease in milk consumption, increase in food prices and poor dietary intake which is associated with the cumulative effect of the below average performance of the 2019 long rains and the 2018 short rains. Table 10 shows the trend in MUAC rates across the ASAL counties.

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

Indicator	Current status			Trend		
	Above LTA	At LTA	Below LTA	Improving	Stable	Worsening
MUAC	Baringo Kwale Garissa	Narok Turkana Wajir	Embu (Mbeere) Isiolo Kilifi	Kwale Garissa Laikipia	Isiolo Kitui Mandera	Baringo Embu Kilifi

	Lamu Mandera Samburu Tana River		Meru (Meru North) Kitui Laikipia Marsabit Makueni Nyeri (Kieni) Taita Taveta Tharaka Kajiado West Pokot	Makueni Lamu Meru Samburu Taita Taveta Turkana	Marsabit Nyeri (Kieni) Tana River Wajir West Pokot Kajiado	Narok Tharaka
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1.2 Drought phase classification

Table 11 shows the trend in drought status in the 23 ASAL counties. Although key drought indicators in majority of the counties have not yet returned to normal, a slight improvement was observed in most counties in May with the trend improving and stable in 13 and 6 counties respectively. Currently there are two counties in normal, 13 in alert and seven in alarm, compared with two in normal, 11 in alert and 10 in the alarm drought phase in April.

Table 11.0: Drought phase classification, May 2019

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

Number of food insecure population

Table 12 provides a breakdown on the number of food insecure population per county. The table summarizes the number of people in need of food assistance in June 2019 and also the population likely to be affected from July onwards. On the basis of the number of food insecure population, the most affected counties include: Turkana, Kitui, Makueni, Kilifi, Garissa, Mandera, Baringo, West Pokot, Marsabit, Tana River and Kajiado

Table 12.0: Food Insecure Population, June - July 2019

County	County population (2016 projected)	Number of food insecure populations	
		June 2019	July 2019
Turkana	1,083,653	270,900	325,100
Wajir	458,900	82,600	82,600
Mandera	711,117	106,700	128,000
Garissa	431,950	108,000	129,600
Marsabit	315,936	79,000	94,800
Samburu	283,780	42,600	51,100
Laikipia	505,712	25,300	50,600
West Pokot	649,418	97,400	97,400
Tana River	303,047	75,800	90,900
Isiolo	155,465	26,400	28,000
Kajiado	870,721	43,500	87,100
Baringo	703,697	105,600	126,700
Narok	1,077,719	0	0
Sub-total, Pastoral	7,551,115	1,063,800	1,291,900
Makueni	959,022	95,900	143,900
Kwale	820,199	82,000	82,000
Kilifi	1,399,975	70,000	140,000
Kitui	1,097,687	109,800	164,700
Taita Taveta	358,173	17,900	17,900
Embu (Mbeere)	219,220	22,000	22,000
Tharaka-Nithi (Tharaka)	141,061	39,600	39,600
Meru (North)	775,982	77,600	116,400
Nyeri (Kieni)	175,812	0	0
Lamu	128,144	12,800	12,800
Sub-total, Marginal Agricultural	6,075,275	527,600	739,300
Total	13,626,390	1,591,400	2,031,200

2 Projected food security situation

Following the ongoing rains received in some of the ASAL counties, a small number of surface water sources are likely to recharge and forage is expected to regenerate in the next one month.

Livestock productivity is likely to go up slightly over the next one month owing to improved rangeland conditions before it starts deteriorating again from July as the dry season sets in.

Depletion of food stocks at household level is likely to result to an increase in food commodities prices in the market and as a consequence impact negatively on household food access and consumption.

Considering the delayed season onset and below average performance of the MAM rainfall season crop production is expected to be at least 50 percent below average.

3 Recommendations

Food and Safety Net: Provision of relief food/cash to the vulnerable population currently classified as being in 'crisis' across all ASAL counties.

Water: Repair of strategic boreholes. Procurement and stock piling of fast moving spare parts for strategic boreholes and rehabilitation of grounded water bowsers. Water trucking in drought hit areas and institutions such as schools and health facilities.

Livestock: Commercial destocking to facilitate sale of livestock while animals are still in relatively fair condition. Stockpiling of vaccines, strategic vaccination and enhancement of disease surveillance.

Health and Nutrition: Strengthen the on-going integrated health outreaches through provision of all essential nutrition and medical care services, stock pile drugs in all health facilities and avail adequate number of health personnel to support outreaches in all hotspots in ASAL counties.

Peace and Security: Enhance efforts towards peace building and conflict mitigation targeting areas with high livestock concentration through conducting inter-county and cross-border dialogue meetings leveraging on the peace ambassadors network.

Annex 1.0 Vegetation Condition Index (VCI-3 Month) as at 29th May, 2019

ADMINISTRATIVE UNIT				DROUGHT CATEGORIES/REMARKS		
COUNTY	Sub County	VCI-3 month as at 29 th April 2019	VCI-3 month as at 29 th May 2019	Color	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	19.39	13.46	The county and its sub counties are in severe vegetation deficit with Mogotio worsening to extreme vegetation deficit. Targeted interventions required. The vegetation condition has deteriorated as compared to the previous month.		
	Central	22.65	13.38			
	Eldama	18.45	11.44			
	Mogotio	12.97	5.4			
	North	17.19	12.43			
	South	22.7	14.53			
	Tiaty	20.44	16.12			
MANDERA	County	25.33	26.76	The county is in moderate vegetation deficit with two sub-counties in severe vegetation deficit. Need to activate drought response		
	Banissa	20.47	21.59			
	M East	18.11	19.51			
	Lafey	21.54	29.3			
	M North	18.35	19.75			
	M South	37.96	36.25			
	M West	27.31	26.73			
TURKANA	County	30.28	25.66	Entire county in moderate vegetation deficit with only Turkana East with severe vegetation deficit.		
	T Central	48.86	43.19			
	T. East	25.75	19.64			
	T. Loima	38.27	31.98			
	T. North	26.64	20.39			
	T. South	35.85	31.72			
	T. West	22.83	22.84			
MARSABIT	County	24.19	22.57	The county and all sub-counties are experiencing moderate vegetation deficit except Laisamis that is experiencing severe vegetation deficit. Need to activate drought response.		
	Laisaimis	20.74	18.6			
	Moyale	30.31	31.35			
	N. Horr	24.49	22.55			
	Saku	25.76	23.03			
WAJIR	County	23.92	21.13	County in severe vegetation deficit with two sub-counties in severe vegetation deficit and the three others recording worsening conditions. Need to upscale response initiatives.		
	W East	29.79	29.87			
	W.Eldas	24.82	20.73			
	W. North	37.18	32.46			
	W. South	15.01	12.89			
	W.Torbaj	30.94	29.77			

	W West	21.12	16.73																			
SAMBURU	County	17.8	19.52	County and its sub counties experiencing severe vegetation deficit. Targeted response urgently required to support livelihoods.																		
	S East	14.39	19.54																			
	S. North	21.46	19.82																			
	S. West	19.1	18.4																			
ADMINISTRATIVE UNIT				DROUGHT CATEGORIES/REMARKS																		
COUNTY	Sub County	VCI-3 month as at 29th April 2019	VCI-3 month as at 29th May 2019	<table border="1"> <thead> <tr> <th>Color</th> <th>VCI values (3-month)</th> <th>Drought Category</th> </tr> </thead> <tbody> <tr> <td style="background-color: #008000;"></td> <td>≥50</td> <td>Vegetation greenness above normal</td> </tr> <tr> <td style="background-color: #90EE90;"></td> <td>>=35 - <50</td> <td>Normal vegetation greenness</td> </tr> <tr> <td style="background-color: #FFFF00;"></td> <td>>=20 - <35</td> <td>Moderate vegetation deficit</td> </tr> <tr> <td style="background-color: #FF0000;"></td> <td>>=10 - <20</td> <td>Severe vegetation deficit</td> </tr> <tr> <td style="background-color: #800000;"></td> <td><10</td> <td>Extreme vegetation deficit</td> </tr> </tbody> </table>	Color	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
Color	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																				
GARISSA	County	59.69	19.13	Severe vegetation deficit for entire county but with barely normal conditions for Ijara sub-county. Need to upscale drought response initiatives.																		
	Balambala	19.07	16.95																			
	Daadab	15.86	11.17																			
	Fafi	9.95	16.5																			
	Ijara	15.22	37.45																			
	Lagdera	38.87	13.4																			
	Dujis	16.48	12.85																			
ISIOLO	County	21.47	19.38	Severe vegetation deficit for entire county but with barely normal conditions for Isiolo South sub-county. Need to upscale drought response initiatives.																		
	I. North	22.87	16.96																			
	I. South	19.33	23.09																			
TANA RIVER	County	18.46	16.18	Severe vegetation deficit for entire county but with barely normal conditions for Garsen sub-county. Need to upscale drought response initiatives.																		
	Bura	15.18	14.04																			
	Galole	14.66	12.16																			
	Garsen	23.63	20.5																			
KAJIADO	County	17.07	23.73	Entire county in moderate vegetation deficit. Early drought response action required. Slight improvement noted as compared to the previous month due to light showers received.																		
	K. Central	14.55	24.51																			
	K. East	16.07	21.98																			
	K. North	20.94	21.32																			
	K. South	19.95	21.23																			
	K. West	16.5	26.12																			
LAIKIPIA	County	13.62	14.85	Severe vegetation deficit for entire county and its sub counties except Laikipia East that is experiencing moderate vegetation deficit. Need to upscale drought response initiatives																		
	L. East	17.79	21.56																			
	L. North	14.2	15.91																			
	L. West	10.53	9.63																			
THARAKA NITHI	County	25.99	21.47	Moderate vegetation deficit across the entire county with Tharaka sub county in severe vegetation deficit that requires upscale of response activities.																		
	Chulga	45.79	37.85																			
	Maara	55.7	50.08																			
	Tharaka	9.04	6.15																			

WEST POKOT	County	18.7	17.83	Severe vegetation deficit for entire county and its sub counties except Pokot South that is in moderate vegetation condition band. Need to upscale drought response initiatives		
	Kacheliba	18.95	19.28			
	Kapenguria	17.25	16.71			
	Pokot South	19.4	23.22			
	Sigor	19.04	12.96			
EMBU	County	36.77	38.39	Vegetation greenness above normal ranges for the period except Mbeere North that is in moderate vegetation condition band.		
	Manyatta	65.39	61.78			
	Mbeere North	22.71	26.66			
	Mbeere South	30.5	35.08			
	Runyenjes	59.69	50.82			
ADMINISTRATIVE UNIT				DROUGHT CATEGORIES/REMARKS		
COUNTY	Sub County	VCI-3 month as at 29th April 2019	VCI-3 month as at 29th May 2019	Color	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
KITUI	County	16.27	18.84	Severe vegetation deficit for entire county with three of the sub counties with moderate vegetation condition deficit and three (Kitui East, Kitui South and Central) in severe vegetation deficit.		
	Kitui Central	37.41	24.42			
	Kitui East	15.72	19			
	Mwingi Central	17.31	19.27			
	Mwingi North	21.63	28.65			
	Mwingi West	30.18	33.29			
	Kitui Rural	28.2	23.18			
	Kitui South	9.82	12.2			
	Kitui West	28.06	27.27			
MAKUENI	County	28.65	26.9	The county is experiencing moderate vegetation condition deficit except Kibwezi East that is in severe vegetation deficit.		
	Kaiti	53.68	46.82			
	Kibwezi East	20.04	18.44			
	Kibwezi West	28.18	27.41			
	Kilome	28.27	29			
	Makueni	30.67	27.98			
	Mbooni	36.44	33.84			
MERU	County	32.75	32.62	The county is experiencing moderate vegetation condition deficit except Tigania West that is in severe vegetation deficit.		
	Buuri	38.15	41.86			
	Central Imenti	49.68	48.47			
	Igembe Central	20.73	20.86			
	Igembe North	19.76	21.2			
	Igembe South	24.04	25.03			

	North Imenti	43.33	38.3			
	South Imenti	61.49	63.81			
	Tigania East	25.96	20.78			
	Tigania West	28.92	17.52			
NYERI	County	51.84	50.21	The vegetation greenness is normal to above normal across the entire county.		
	Kieni	43.9	43.77			
	Mathira	71.56	64.24			
	Mukurweini	53.23	48.63			
	Town	46.66	44.02			
	Othaya	64.09	62.65			
	Tetu	58.13	57.61			
KILIFI	County	27.32	20.53	The county is experiencing moderate vegetation condition deficit however some sub counties like Ganze, Malindi, Kilifi North, Rabai and Kilifi South are in severe vegetation deficit.		
	Ganze	16.77	8.46			
	Kaloleni	31.01	23.31			
	Magarini	32.69	27.89			
	Malindi	22.28	15.92			
	Kilifi-North	18.65	6.8			
	Rabai	32.5	17.26			
	Kilifi-South	27.46	12.53			
KWALE	County	34	20.03	The county is experiencing moderate vegetation condition deficit with two of its sub counties (Kinango and Lungalunga) with severe vegetation deficit.		
	Kinango	32.49	19.25			
	Lungalunga	27.29	16.92			
	Matuga	49.07	27			
	Msambweni	45.56	26.51			
LAMU	County	49.61	42.44	Normal conditions for the entire county.		
	Lamu East	53.69	44.71			
	Lamu West	47.26	41.13			
ADMINISTRATIVE UNIT				DROUGHT CATEGORIES/REMARKS		
COUNTY	Sub County	VCI-3 month as at 29 th April 2019	VCI-3 month as at 29 th May 2019	Color	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
TAITA TAVETA	County	20.46	20.08	Moderate vegetation deficit across the entire county with severe vegetation deficit for Mwatate and Voi.		
	Mwatate	17.7	19.03			
	Taveta	22.14	27.7			
	Voi	20.5	17.04			
	Wundanyi	21.15	21.67			
NAROK	County	31.75	31.55	The county is experiencing moderate vegetation condition deficit with normal conditions in two sub counties (Emurua and Kiligoris).		
	Narok-East	20.46	23.26			

	Emurua Dikirr	45.25	40.8	
	Kilgoris	52.35	47.33	
	Narok-North	21.75	24.53	
	Narok-South	30.63	32.75	
	Narok-West	31.74	29.25	

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 13). 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 13.0: 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	MUAC (Mid-Upper Arm Circumference) Coping strategies	Nutrition Coping strategies

Figure 2.0: Drought Phase Classification

