



**NATIONAL DROUGHT MANAGEMENT AUTHORITY**

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## **National Drought Early Warning Bulletin**

**July 2019**

## 1.0 Drought status

### 1.1 Drought indicators

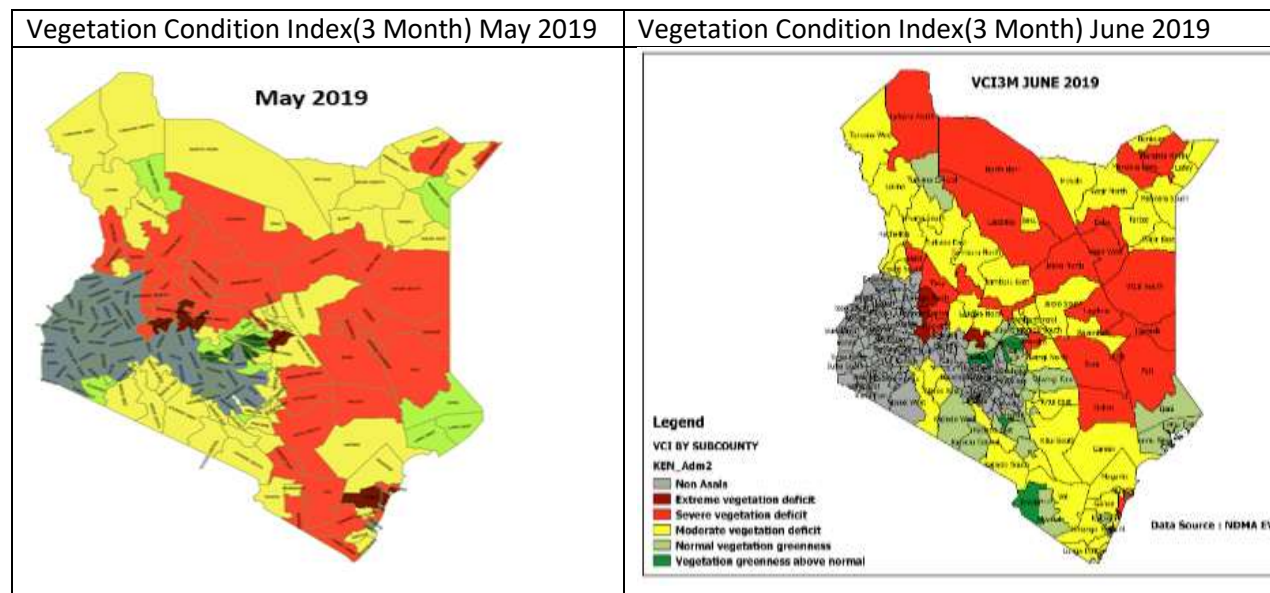
#### *Rainfall*

Nearly all ASAL counties experienced generally cold and dry conditions during the month of June with sporadic light rains experienced in some areas such as Baringo, Taita Taveta, Embu, Garissa (Ijara), Laikipia, Isiolo. Kwale and West Pokot. However, rainfall performance in most counties like Marsabit, Mandera, Wajir, Tana River, Garissa, Kilifi, Tharaka, Kitui, Makueni and Kajiado was erratic and below average. Poor rainfall performance in June has resulted to negative impacts on pasture, crop production and water availability for both livestock and domestic use.

#### *Vegetation condition*

Figure 1 compares the vegetation condition index (VCI) in June 2019 with that in May 2019. The map shows that as result of light to moderate rainfall received in late May and early June the condition of vegetation in most ASAL counties is on an upward trend compared to last month. However, six (6) counties: Baringo, Marsabit, Isiolo, Wajir, Laikipia, and Tana River recorded severe vegetation deficit while eleven (11) counties including: Mandera, Turkana, Garissa, Samburu Tharaka Nithi, West Pokot, Kitui, Meru, Kilifi, Kwale and Narok recorded moderate VCI values implying that the current state of vegetation greenness in these counties has not reached the expected seasonal ranges. Detailed VCI values for June 2019 disaggregated by sub-county are provided in Annex 1.

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



#### *Livestock production*

Livestock production indicators recorded a slight improvement during the month of June. Body condition and milk production in some ASAL counties improved when compared with the previous month. The improvement in livestock body condition was attributed to a slight increase

in pasture and browse availability and reduction in the trekking distances from grazing fields to water points.

### ***Pasture and browse condition***

The current condition of pasture in most of the arid counties was categorized as poor and generally, availability of both pasture and browse was described to be lesser compared to the average situation in a similar time of the year. The poor state of pasture and browse in the pastoral counties was linked to the cumulative effect of the poor performance of the previous short rains and the just ended long rains season.

**Table 1.0: Pasture and browse condition, June 2019**

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

### ***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 some of the ASAL areas, livestock recovery has been slow and the condition of most livestock is poorer than the average situation normally observed during the month of June.

**Table 2.0: Livestock body condition, June 2019**

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

### ***Milk production***

Milk production increased in a few counties during the month under review. Counties that recorded an improvement in milk production include: -

- In Turkana, milk production in the month of June recorded an increase of 100 percent compared to May 2019 average production. Most households obtained milk from goats and the amount of milk produced during the reporting period was at par with the quantities produced normally during the month of June. Availability of pasture and browse, the calving taking place coupled with improved access to water within reduced trekking distances were the major drivers of the increased production level during the month of June.
- In West Pokot: The county recorded an average production of 1.4 litres of milk per household per day which represents an increase by 17 percent on the previous month. The increase in milk production was attributed to significant improvement in forage access.
- In Samburu, milk production per household increased by 35 percent from 0.9 litres in May to 1.4 litres in June which was attributed to improved livestock body condition. The current milk production level was 14 percent above LTA for similar period of the year.
- Baringo: Average household milk production increased by 17 percent compared to the preceding month.
- In Kajiado, milk production increased in June to reach 4.0 litres per day per household compared to May when households produced 3.1 litres a day. The increase in milk production in in June was as a result of improvement in pasture and water availability.

However, counties such as Mandera, Isiolo, Kitui, Makueni, Tharaka and Embu (Mbeere) recorded a decrease in milk production in June. The reduction in milk production in these ASAL counties was attributed to diminishing forage resources and increase in trekking distance from grazing areas to water sources.

**Table 3.0: Milk production, June 2019**

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

### ***Cattle prices***

In majority of the counties cattle prices remained stable owing mainly to the fact that cattle are still in moderate body condition. 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 June in about 40 percent of the ASAL counties. For instance, in Marsabit, Turkana, Wajir and Kitui the current prices are below LTA by 36, 32, 20 and 17 percent respectively.

**Table 4.0: Cattle prices, June 2019**

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

### **Goat prices**

During the month of June goat prices in most ASAL areas were mostly above average or close to LTA except in pastoral counties such as Turkana, Samburu, Wajir, Narok and West Pokot where they were 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, June 2019**

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

### **Livestock migration**

Livestock migration was reported in several ASAL counties in June which is not normal at this time of the year. For example, herders moved from Isiolo, Samburu, Garissa and Wajir towards dry grazing areas in Isiolo South (Hawaye in Sericho ward and Garbatulla and Kinna wards). In Turkana, livestock migrated towards the borders. In Wajir, livestock concentrated in Wara, Tulo Roba, Lakole, Harede, Qorof Harer and Burmayo areas. In Tana River, about 60 percent of livestock moved to Tana Delta, while high influx of livestock from North eastern moved toward

Tana North. Out migration to Kitui was also reported. In Baringo, livestock herds moved from pastoral livelihood to Arabal, Paka Hills, Rugus, Kosechei and Mochongoi. In Laikipia, livestock moved from Chumvi area (Pastoral zone) to Ilgvesi (Pastoral zone) in Mukogodo East Ward in search of pasture. Out migration of cattle was witnessed at Ilgvesi (Pastoral zone) in Mukogodo East towards Mount Kenya Forest in search of pasture.

### ***Livestock mortalities***

During the month of June 2019, no unusual cases of livestock deaths were observed in the ASAL counties.

### ***Crop production***

The condition of crops in ASAL counties such as Kitui, Makueni, Kwale, Embu (Mbeere), Kilifi, Tharaka, Meru North, Narok, and Nyeri (Kieni) is poor as a result of moisture stress, following the delayed onset, poor distribution and erratic pattern of the March - May 2019 rainfall season. The total area planted for all major crops is estimated at 40 percent below the five-year average. Rains received in late May and early June in some of the marginal agricultural areas like Makueni, Narok, Taita Taveta, Laikipia, Kilifi and Kwale has brought some positive impact on the condition of crops but most households still expect to realize a below average crop production owing to the shortened MAM season. Cases of Fall Armyworm infestation were reported in Embu (Mbeere) and Transmara East and Transmara West in Narok County.

### ***Maize prices***

In most counties the price of maize remained stable in June. However, the current maize prices are largely above average with about 60 percent of the counties recording prices above LTA.

**Table 6.0: Maize prices, June 2019**

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

### ***Access to water***

The trend in distances walked by households to access water is provided in Table 7. Generally, water availability across ASAL counties continued to worsen during the month under review. For instance, the average return distance for households in Marsabit increased from 6.3 km in May to

7.1 km in June which is an increase by 13 percent. In Kajiado, the average distance to water sources for households increased by 30 percent to 5.2 km in June from 4 km in May which was also above the long term mean of 3.9 km by 33 percent while in Wajir, average return distance from household to the main water points increased from 8 km in May to 9.0 km in June. In addition, compared with long term average distances covered by households at this time of the year the distance recorded in June 2019 in 15 out of the 23 ASAL counties were above the 2014 - 2018 LTA. The increase in distances to water points for households was mainly attributed to drying up of most surface water sources as a result of poor recharge of these water sources during the March – April – May rainy season.

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

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

In almost 70 percent of counties, the average distance to water for livestock is longer than normal for the time of year largely attributed to pasture scarcity which has made livestock to graze further from operational water points. For example, in Marsabit County return distance for livestock from grazing areas to watering points increased considerably by a proportion of 30 percent to 19.3 km in June from 14.8 km in May which is also above the long term mean of 12.6 km by 53 percent. Likewise, in Kajiado, distance covered by livestock to water sources increased by 29 percent from 4.2 km in May to 5.4 km in June while in Tana River return distance for livestock from grazing sites to water sources increased to 15.5 km from 13.1 km. The trend in the distance trekked by livestock in search of water is illustrated Table 8.

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

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



### 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 summarises the movements on the previous month and the trend. In almost 40 percent of the counties the terms of trade (ToT) are below the long term average for the month while in eight counties 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, April 2019**

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

### Health and nutrition

The bulletins monitor the proportion of children under five at risk of malnutrition, determined by a mid-upper arm circumference (MUAC) measurement (Table 10).

Overall, the trend in most ASAL counties is stable. In the pastoral counties such as Turkana, West Pokot and Kajiado improvement in the nutrition status of children is attributed partly to milk availability coupled with the impact of interventions implemented by various agencies including provision of relief food, nutrition commodities and cash transfers targeting affected households.

However, in a number of counties such as Samburu, Kitui, Makueni, Lamu, Narok and Tharaka, the percentage of children under 5 years at risk of malnutrition increased during the month of June compared to May. For example, in Samburu, prevalence of malnutrition increased by 17 percent from 24.8 percent in May to 28.9 percent in June which was attributed to diseases prevalence and poor child care practices such poor breastfeeding practices. In the marginal agricultural areas like Tharaka, Makueni and Kitui the upward trend in the percentage of children at risk of malnutrition was attributed reduced dietary diversity as well as diminishing food stock at household level.

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

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



## 1.2 Drought phase classification

Currently four counties are categorized in the normal drought phase, 14 are in alert and five in alarm, compared with two in normal, 14 in alert and seven in the alarm drought stage in May. As at the end of June, 10 counties were reporting a worsening trend, seven counties recorded a stable trend with the trend improving in six counties as shown in Table 11.

**Table 11.0: Drought phase classification, June 2019**

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

#### 4.0 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. Also support water trucking in drought hit areas.
- **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. Especially intensify disease surveillance and vaccination campaigns targeting migratory routes used by livestock.
- **Health and Nutrition:** Enhance screening and referral for malnutrition in all the hotspots with continued active case finding while prioritizing integrated health outreaches for the sites exhibiting significantly high rates of malnutrition and morbidity cases.
- **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 26<sup>th</sup> June 2019

ADMINISTRATIVE UNIT				DROUGHT CATEGORIES/REMARKS		
COUNTY	Sub County	VCI-3 month as at 28 <sup>th</sup> May 2019	VCI-3 month as at 26 <sup>th</sup> June 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
<b>BARINGO</b>	<b>County</b>	13.46	12.43	The county is in moderate vegetation deficit with all its sub counties in severe to extreme vegetation deficit.		
	Central	13.38	1.17			
	Eldama	11.44	4.53			
	Mogotio	5.4	16.83			
	North	12.43	6.33			
	South	14.53	15.31			
	Tiaty	16.12	15.79			
<b>MANDERA</b>	<b>County</b>	26.76	23.69	The county is in moderate vegetation deficit with two of its sub-counties (Mandera North and Mandera West) in severe vegetation deficit. Targeted response required		
	Banissa	21.59	25.1			
	M East	19.51	24.53			
	Lafey	29.3	32.39			
	M North	19.75	16.87			
	M South	36.25	26.23			
	M West	26.73	19.06			
<b>TURKANA</b>	<b>County</b>	25.66	27	Entire county in moderate vegetation deficit with Turkana North in severe vegetation deficit for the same period.		
	T Central	43.19	40.42			
	T. East	19.64	20.56			
	T. Loima	31.98	34.03			
	T. North	20.39	19.36			
	T. South	31.72	31.01			
	T. West	22.84	29.92			
<b>MARSABIT</b>	<b>County</b>	22.57	19.95	The county and two of its sub counties (Laisamis and North Horr) is in severe vegetation deficit while Moyale and Saku in moderate vegetation deficit. Targeted response required within the county.		
	Laisamis	18.6	16.78			
	Moyale	31.35	27.95			
	N. Horr	22.55	19.54			
	Saku	23.03	22.85			
<b>WAJIR</b>	<b>County</b>	21.13	17.59	County in severe vegetation deficit with 3 sub-counties (Eldas, Wajir South and Wajir West) in severe vegetation deficit. The remaining counties in moderate vegetation deficit band. Targeted response required.		
	W East	29.87	24.47			
	W.Eldas	20.73	14.34			
	W. North	32.46	27.14			

	W. South	12.89	12.54																			
	W.Torbaj	29.77	24.33																			
	W West	16.73	11.51																			
SAMBURU	County	9.52	23.2	Slight improvement noted in Samburu as the county has improved from severe vegetation deficit to moderate vegetation deficit however Samburu West remains in Severe vegetation deficit band.																		
	S East	19.54	23.22																			
	S. North	19.82	24.6																			
	S. West	18.4	18.24																			
<b>ADMINISTRATIVE UNIT</b>				<b>DROUGHT CATEGORIES/REMARKS</b>																		
<b>COUNTY</b>	<b>Sub County</b>	<b>VCI-3 month as at 29<sup>th</sup> April 2019</b>	<b>VCI-3 month as at 26<sup>th</sup> June 2019</b>	<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>&gt;=35 - &lt;50</td> <td>Normal vegetation greenness</td> </tr> <tr> <td style="background-color: #FFFF00;"></td> <td>&gt;=20 - &lt;35</td> <td>Moderate vegetation deficit</td> </tr> <tr> <td style="background-color: #FF0000;"></td> <td>&gt;=10 - &lt;20</td> <td>Severe vegetation deficit</td> </tr> <tr> <td style="background-color: #800000;"></td> <td>&lt;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																				
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	>=20 - <35	Moderate vegetation deficit																				
	>=10 - <20	Severe vegetation deficit																				
	<10	Extreme vegetation deficit																				
GARISSA	County	19.13	21.69	Improvement noted in Garissa from severe vegetation deficit to moderate vegetation deficit however four of its sub counties (Daadab, Fafi, Lagdera and Dujis) remains in severe vegetation deficit band and thus need for targeted response.																		
	Balambala	16.95	23.7																			
	Daadab	11.17	16.45																			
	Fafi	16.5	18.89																			
	Ijara	37.45	36.56																			
	Lagdera	13.4	15.09																			
	Dujis	12.85	11.89																			
ISIOLO	County	19.38	17.15	The county remains in severe vegetation deficit with one of its sub county (Isiolo North) in severe vegetation deficit.																		
	I. North	16.96	11.58																			
	I. South	23.09	25.68																			
TANA RIVER	County	16.18	19.22	The county and its sub counties remains in severe vegetation deficit except Garsen in Moderate vegetation deficit.																		
	Bura	14.04	16.72																			
	Galole	12.16	14.78																			
	Garsen	20.5	24.12																			
KAJIADO	County	23.73	36.23	Improvement noted within the county from moderate vegetation deficit to normal vegetation greenness except Kajiado East, North and South that is in moderate vegetation deficit.																		
	K. Central	24.51	44.56																			
	K. East	21.98	32.95																			
	K. North	21.32	24.56																			
	K. South	21.23	30.82																			
	K. West	26.12	37.6																			
LAIKIPIA	County	14.85	18.48	Severe vegetation deficit with Laikipia West sub county in extreme vegetation deficit.																		
	L. East	21.56	30.48																			
	L. North	15.91	21.15																			

	L. West	9.63	7.71																			
THARAKA NITHI	County	21.47	29.93	The county is in moderate vegetation deficit with Tharaka sub county in severe vegetation deficit. Targeted response required.																		
	Chulga	37.85	45.55																			
	Maara	50.08	50.13																			
	Tharaka	6.15	17.58																			
WEST POKOT	County	17.83	22.64	Improvement noted from severe vegetation deficit to moderate vegetation deficit with Sigor sub county remaining in severe vegetation deficit. Targeted response required.																		
	Kacheliba	19.28	26.24																			
	Kapenguria	16.71	22.87																			
	Pokot South	23.22	24.5																			
	Sigor	12.96	14.77																			
EMBU	County	38.39	45.82	The county and its sub counties is in normal vegetation greenness .Preparedness interventions recommended.																		
	Manyatta	61.78	58.19																			
	Mbeere North	26.66	38.21																			
	Mbeere South	35.08	46.06																			
	Runyenjes	50.82	48.12																			
<b>ADMINISTRATIVE UNIT</b>				<b>DROUGHT CATEGORIES/REMARKS</b>																		
<b>COUNTY</b>	<b>Sub County</b>	<b>VCI-3 month as at 29<sup>th</sup> April 2019</b>	<b>VCI-3 month as at 26<sup>th</sup> June 2019</b>	<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>&gt;=35 - &lt;50</td> <td>Normal vegetation greenness</td> </tr> <tr> <td style="background-color: #FFFF00;"></td> <td>&gt;=20 - &lt;35</td> <td>Moderate vegetation deficit</td> </tr> <tr> <td style="background-color: #FF0000;"></td> <td>&gt;=10 - &lt;20</td> <td>Severe vegetation deficit</td> </tr> <tr> <td style="background-color: #800000;"></td> <td>&lt;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																				
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	>=20 - <35	Moderate vegetation deficit																				
	>=10 - <20	Severe vegetation deficit																				
	<10	Extreme vegetation deficit																				
KITUI	County	18.84	28.15	Improvement noted from severe vegetation deficit to moderate vegetation deficit. Close monitoring of four of its sub counties in moderate vegetation deficit band.																		
	Kitui Central	24.42	36.88																			
	Kitui East	19	29.96																			
	Mwingi Central	19.27	27.11																			
	Mwingi North	28.65	33.95																			
	Mwingi West	33.29	42.25																			
	Kitui Rural	23.18	35.54																			
	Kitui South	12.2	22.72																			
	Kitui West	27.27	36.16																			
MAKUENI	County	26.9	37.18	Improvement noted within the county from moderate vegetation deficit to normal vegetation greenness except Kibwezi East in moderate vegetation deficit,																		
	Kaiti	46.82	50.74																			
	Kibwezi East	18.44	29.44																			
	Kibwezi West	27.41	35.83																			
	Kilome	29	46.27																			
	Makueni	27.98	35.69																			
	Mbooni	33.84	47.32																			

MERU	County	32.62	33.31	The county is in moderate vegetation deficit with some of its sub counties in normal vegetation greenness.		
	Buuri	41.86	35.63			
	Central Imenti	48.47	48.88			
	Igembe Central	20.86	25.48			
	Igembe North	21.2	25.19			
	Igembe South	25.03	32.46			
	North Imenti	38.3	44.13			
	South Imenti	63.81	54.95			
	Tigania East	20.78	23.76			
	Tigania West	17.52	22.22			
NYERI	County	50.21	50.87	The vegetation greenness is above normal across the entire county.		
	Kieni	43.77	45.1			
	Mathira	64.24	58.91			
	Mukurweini	48.63	57.91			
	Town	44.02	58.08			
	Othaya	62.65	57.69			
	Tetu	57.61	56.99			
KILIFI	County	20.53	25.86	The county is experiencing moderate vegetation deficit with one of its sub county (Kilifi North) with severe vegetation deficit.		
	Ganze	8.46	22.72			
	Kaloleni	23.31	40.86			
	Magarini	27.89	26.68			
	Malindi	15.92	30.58			
	Kilifi-North	6.8	16.09			
	Rabai	17.26	29.45			
	Kilifi-South	12.53	22.44			
KWALE	County	20.03	28.48	The county and its sub counties is experiencing moderate vegetation deficit with slight improvement noted in kinango and lungalunga.		
	Kinango	19.25	29.96			
	Lungalunga	16.92	27.77			
	Matuga	27	24.78			
	Msambweni	26.51	23.74			
LAMU	County	42.44	39.79	Normal conditions for the county and its subcounties.Preparedness activities recommended.		
	Lamu East	44.71	41.44			
	Lamu West	41.13	38.84			
ADMINISTRATIVE UNIT				DROUGHT CATEGORIES/REMARKS		
COUNTY	Sub County	VCI-3 month as at 29 <sup>th</sup> April 2019	VCI-3 month as at 26 <sup>th</sup> June 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
<b>TAITA TAVETA</b>	<b>County</b>	20.08	38.58	<b>Improvement noted from moderate vegetation deficit to normal vegetation greenness except Voi in moderate vegetation deficit.</b>		
	Mwatate	19.03	43.25			
	Taveta	27.7	57.66			
	Voi	17.04	28.4			
	Wundanyi	21.67	48.35			
<b>NAROK</b>	<b>County</b>	31.55	30.11	<b>The county and its sub counties in moderate vegetation deficit with Emurua Dikirr in Normal vegetation condition.</b>		
	Narok-East	23.26	32.97			
	Emurua Dikirr	40.8	39.14			
	Kilgoris	47.33	32.43			
	Narok-North	24.53	28.45			
	Narok-South	32.75	32.16			
	Narok-West	29.25	26.31			



## 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	MUAC (Mid-Upper Arm Circumference) Coping strategies	Nutrition Coping strategies

**Figure 2.0: Drought Phase Classification**

