



**NATIONAL DROUGHT MANAGEMENT AUTHORITY**

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## **National Drought Early Warning Bulletin**

**April 2019**

## KEY HIGHLIGHTS

- The dry conditions and high temperatures experienced from January to March have pushed more counties into the **Alarm** drought stage, **from one (1) in February to five (5) in March**. 20 ASAL counties are reporting a worsening trend and only three (3) indicate a stable trend. Counties in the Alarm drought phase are **Wajir, Mandera, Garissa, Marsabit and Turkana**.
- Average distances to water for both households and livestock increased in March in more counties. In most ASAL areas, reduced availability of pasture and water in March compared to February resulted in rapid deterioration in livestock body condition and decreased milk production.
- Current milk production in **12 counties** including Garissa, Turkana, Kajiado, Marsabit, Samburu, Tana River, Mandera, Laikipia, Narok, Makueni, Lamu and Nyeri (Kieni) is below expected season ranges compared to the long-term average.
- Delay in the start of the long rains has affected timelines for farming activities, especially land preparation and planting. As a result, farmers have been advised to plant fast-maturing crops following the projected short rainfall season and drought-tolerant crops in areas expected to receive below-average rainfall.

**Drought phase classification as at March 2019**

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

## 1.0 Drought Status

### 1.1 Drought indicators

#### a) Rainfall

Generally sunny and dry weather conditions prevailed over most ASAL counties in March 2019. Dry conditions and high temperatures experienced from January to March resulted in shortage of both water and pasture, leading to rapid deterioration in livestock body condition, reduction in milk production and triggered earlier than normal migration of livestock. In addition, the pro-longed dry spells and delayed onset of the March - April - May (MAM) season rainfall has affected timelines for farming activities such as land preparation and planting.

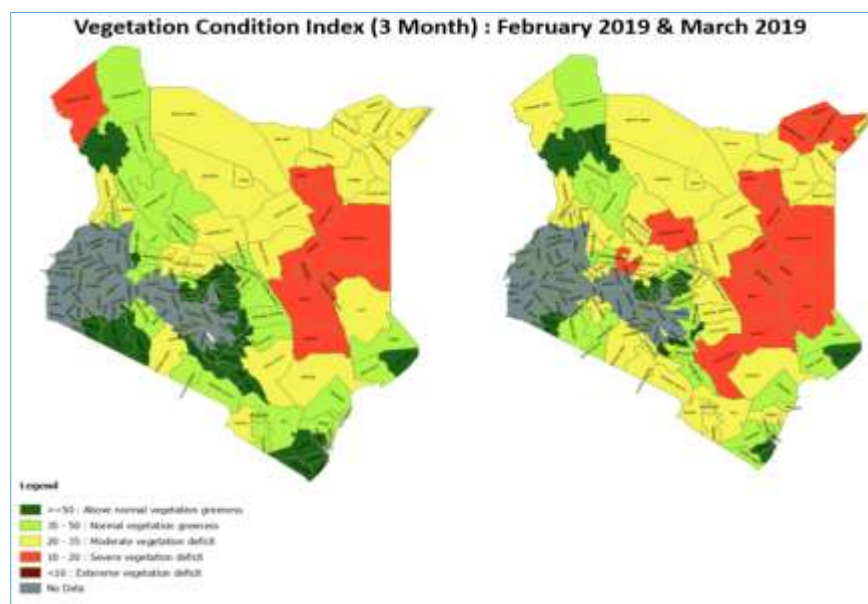
#### b) Vegetation condition

Figure 1 compares the vegetation condition index (VCI) in March 2019 with February 2019 and March 2018. The maps show that the vegetation condition in most ASAL counties is on a declining trend compared to February. Fast deterioration of the vegetation greenness occurred in March, pushing a number of counties to moderate and severe vegetation deficit categories.

For example, in Garissa the situation deteriorated across the county, putting five subcounties - Balambala, Fafi, Daadab, Lagdera and Dujis - in severe vegetation deficit. In Wajir County three (3) subcounties - Eldas, Wajir South and Wajir West - are currently in the severe vegetation deficit category as well as Bura and Galole subcounties in Tana River. The vegetation situation in Samburu declined significantly in March compared to the previous month, with the county moving from normal vegetation greenness to moderate vegetation deficit.

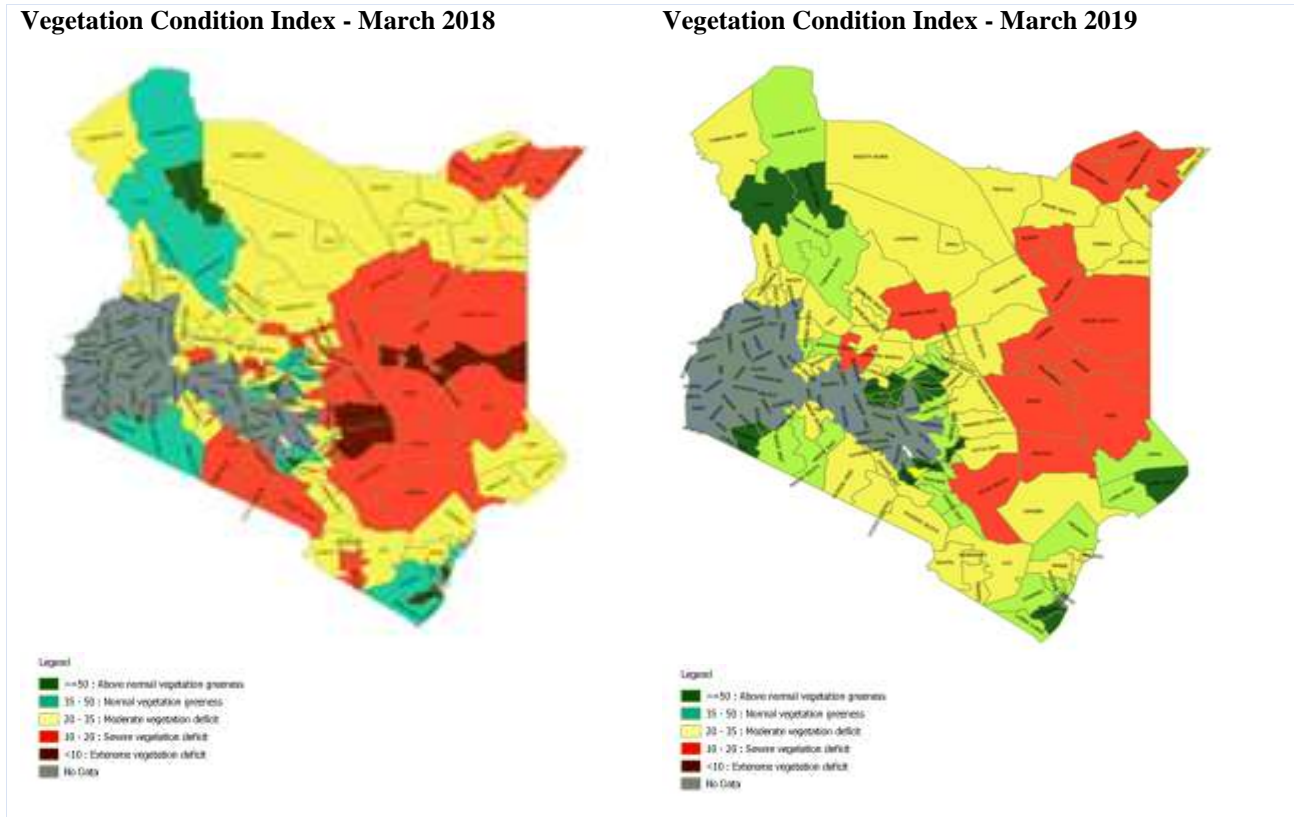
The downward trend in the state of vegetation across ASAL counties was attributed to the drier than average conditions experienced in March and delay in the start of the season rains.

**Figure 1: Comparison of Vegetation Condition Index (VCI), February and March 2019**



However, the vegetation condition in March 2019 was better compared to the situation in March 2018 as shown in Figure 2.

**Figure 2: Comparison of Vegetation Condition Index (VCI), March 2018 and March 2019**



**c) Livestock production**

Pasture and browse condition was fair to poor across ASAL counties compared to good to fair normally. Livestock body condition for cattle and sheep was poor to fair while that of goats and camels was fair across counties. The current livestock body condition has slightly declined compared to February due to the increase in trekking distances in search of pasture and water, coupled with reduction in pasture and browse quantity and quality.

Overall, the current body condition of most livestock is below normal compared to similar periods during a normal year. Counties where livestock body condition shows signs of worsening include Wajir, Kajiado, Marsabit, Baringo, Garissa, Laikipia, Mandera, Samburu, Turkana and West Pokot.

Current milk production in 11 counties is above long-term average (LTA), while in 12 ( Garissa, Turkana, Kajiado, Marsabit, Samburu, Tana River, Mandera, Laikipia, Narok, Makueni, Lamu and Nyeri (Kieni)) the current amount is below LTA. The below normal milk production is attributed to water scarcity and inadequate forage. However, no unusual cases of livestock deaths were observed during the month of March.

**Table 1: Milk production in March 2019**

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

**d) Crop production**

In March most farmers in the marginal agricultural areas were clearing their farms in preparation for the long rains planting season. In some counties such as Kitui, Embu (Mbeere) Nyeri (Kieni) and Tharaka, farmers had started dry planting in anticipation of onset of the rains. In Narok, however, crops that were planted in early March, particularly maize, were registering poor germination due to delayed onset of the rains.

The late onset of the March to May (MAM) long rains season is likely to impact negatively on agricultural activities in most semi-arid counties. Consequently, farmers have been advised to plant fast-maturing crops following the projected short rainfall season and drought tolerant crops in areas expected to receive below-average rainfall.

**e) Access to water**

More counties registered increased average distances to water for both households and livestock in March. For instance, household distances reduced in only five counties and distances for livestock in only two. Distances in all other counties were the same as the previous month or longer. Average household distances are above the long-term mean in approximately 60% of counties, while livestock distances are above the long-term mean in approximately 70% of counties.

Table 2 summarises the trend in distances covered by households to access water.

**Table 2: Distance to water sources for households in March 2019**

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

The trend in the distance trekked by livestock in search of water is illustrated Table 3. Compared with the previous month, the current trekking distance to water sources from grazing areas increased in 15 ASAL counties. The increase in distances was mainly attributed to drying up of most open water sources and shortage of both pasture and browse.

**Table 3: Distance to water sources for livestock in March 2019**

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

**f) Terms of trade**

Table 4 shows the trend in terms of trade (ToT) between the relative price of goats and maize. The current value in all but four counties is above the long term average. The largest downward movements on the previous month were in Marsabit and West Pokot by 16% and 10% respectively, while the largest upward movements were in Kajiado, Tana River and Kilifi by 19%, 17% and 16% respectively. The worsening trend in terms of trade were largely due to decrease in the goat prices as a result of a downward swing in the body condition and a general increase in maize prices.

**Table 4: Terms of trade in March 2019**

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

**g) Health and nutrition**

Regular monitoring of sampled children below 5 years showed that the malnutrition status of children in most ASAL counties worsened in March compared to February. For example, in Samburu the proportion of children at risk of malnutrition increased from 20.9% in February to 22.2% in March. The increase was attributed to unavailability of milk at household level as well as inadequate dietary intake.

In Baringo, prevalence of malnutrition increased by 6% compared to the previous month while in Wajir the proportion of children under 5 at risk of malnutrition increased from 13.5% in February to 15% in March. This was attributed to decreased milk production and reduction in the number of food groups consumed at household level.

On the other hand, the proportion of children rated as being at risk of malnutrition in Turkana, Marsabit and Tana River counties did not change much from that reported in February. The observed stability was ascribed to ongoing health and nutrition interventions. Table 5 summarises the trend in the proportion of children aged 6 to 59 months at risk of malnutrition.

**Table 5: Children at risk of malnutrition (MUAC) - March 2019**

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

**1.2 Drought phase classification**

Table 6 sums up the trend in drought phase classification as at end of March 2019. More counties have moved into the alarm drought stage, from one (1) in February to five (5) in March, with 20 counties reporting a worsening trend and 3 counties currently recording a stable trend.

Wajir, Mandera, Garissa, Marsabit and Turkana are at the **Alarm** drought phase, while the rest of the ASAL counties are at **Alert**, except Meru North, Narok and Kwale which are at the **Normal** stage.

**Table 6: Drought phase classification in March 2019**

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

## 2.0 Ongoing interventions – (February-April 2019)

The National Government has so far provided funds towards drought mitigation intervention measures to several ministries:

<b>Agency</b>	<b>Intervention</b>	<b>Allocation (Kshs)</b>
Ministry of Devolution and ASALs	Relief food distribution	602million
Ministry of Water	Household irrigation	600million
	Rehabilitation of strategic water facilities and water trucking	563million
NDMA	Cash transfers through HSNP – Regular beneficiaries	1.07billion
	Cash transfer under the drought response scale-up	176.5million
	Water trucking and other interventions through EU funding	62.5million
Ministry of Education	School feeding programme	1.6billion
Ministry of Health	Disease surveillance, nutrition, water safety, sanitation and responding to disease outbreaks	143million
County Governments	General food distribution and water trucking in Turkana, Garissa, Tana River, Wajir among others	



## Annex 1: Vegetation Condition Index (VCI-3 month) as at 25<sup>th</sup> March 2019

ADMINISTRATIVE UNIT				DROUGHT CATEGORIES/REMARKS		
COUNTY	Sub County	VCI-3 month as at 25 <sup>th</sup> Feb 2019	VCI-3 month as at 25 <sup>th</sup> March 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>	<b>42.83</b>	<b>29.47</b>	The county has moderate vegetation deficit, with Baringo Central and South just above the moderate band.		
	Central	54.54	37.48			
	Eldama	49.03	28.42			
	Mogotio	37.46	26.31			
	North	39.95	24.39			
	South	47.84	35.22			
	Tiaty	40.36	29.03			
<b>MANDERA</b>	<b>County</b>	<b>27.89</b>	<b>20</b>	The county has moderate vegetation deficit, with four subcounties having severe vegetation deficit. There is need to scale up drought response.		
	Banissa	27.06	14.86			
	M East	27.71	21.1			
	Lafey	28.1	19.67			
	M North	24.87	14.7			
	M South	31.52	28.39			
	M West	27.49	19.71			
<b>TURKANA</b>	<b>County</b>	<b>36.71</b>	<b>37.31</b>	The entire county is just marginally out of moderate vegetation deficit. However, Turkana West subcounty has moderate vegetation deficit.		
	T Central	49.56	53			
	T. East	42.61	35.54			
	T. Loima	52.19	51.36			
	T. North	35.73	36			
	T. South	40.86	40.32			
	T. West	15.64	23.01			
<b>MARSABIT</b>	<b>County</b>	<b>23.78</b>	<b>23.79</b>	The county and all subcounties are experiencing moderate vegetation deficit and should scale up drought response.		
	Laisaimis	23.75	23.38			
	Moyale	23.34	20.34			
	N. Horr	23.38	24.61			
	Saku	33.58	29.09			
<b>WAJIR</b>	<b>County</b>	<b>18.95</b>	<b>17.91</b>	Wajir County has severe vegetation deficit, with 3 sub-counties registering severe vegetation deficit and the three others recording worsening conditions. The county should upscale drought response initiatives.		
	W East	25.07	21.14			
	W.Eldas	12.28	16.13			
	W. North	30.31	28.89			
	W. South	14.26	11.48			
	W.Tarbaj	24.45	22.26			
	W West	14.06	17.33			
<b>SAMBURU</b>	<b>County</b>	<b>35.35</b>	<b>24.37</b>	There is moderate vegetation deficit across the entire county, with severe vegetation deficit recorded for Samburu East.		
	S East	28.59	17.85			
	S. North	42.82	31.41			

	S. West	37.12	26.65			
ADMINISTRATIVE UNIT				DROUGHT CATEGORIES/REMARKS		
COUNTY	Sub County	VCI-3 month as at 25 <sup>th</sup> Feb 2019	VCI-3 month as at 25 <sup>th</sup> March 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
GARISSA	County	23.29	18.34	The county has recorded severe vegetation deficit, except Ijara subcounty which has barely normal conditions. There is need to upscale drought response initiatives.		
	Balambala	18.03	19.81			
	Daadab	12.94	10.22			
	Fafi	22.95	12.73			
	Ijara	43.31	36.28			
	Lagdera	14.59	17.74			
	Dujis	17.15	16.06			
ISIOLO	County	23.7	23.65	There is moderate vegetation deficit across all subcounties. It's crucial to initiate drought response interventions.		
	I. North	22.02	24.45			
	I. South	26.25	22.43			
TANA RIVER	County	24.6	21.01	The county recorded moderate vegetation deficit on average. However, Bura and Galole sub-counties have severe conditions. There is need for enhanced drought response.		
	Bura	17.15	17.95			
	Galole	19.45	16.77			
	Garsen	34.15	26.25			
KAJIADO	County	43.05	27.86	The county has moderate vegetation deficit and early drought response action is recommended.		
	K. Central	42.66	25.17			
	K. East	52.55	32.06			
	K. North	52.76	34.63			
	K. South	49.17	33.17			
	K. West	34	23.12			
LAIKIPIA	County	34.02	21.25	There is moderate vegetation deficit in the county and sub-counties except for Laikipia West which is in the severe vegetation deficit band. There is need to activate drought response.		
	L. East	47.57	31.46			
	L. North	34.97	21.88			
	L. West	25.71	15.13			
THARAKA NITHI	County	48.44	40.91	Normal to above normal vegetation conditions have been registered across the county and all sub-counties except for Tharaka subcounty which has moderate vegetation deficit. There is need for targeted drought response.		
	Chuka	65.46	61.68			
	Maara	70.38	67.85			
	Tharaka	35.01	24.47			
WEST POKOT	County	30.72	21.7	Moderate vegetation deficit was across the county but with a worsening trend. This requires activation of drought response.		
	Kacheliba	28.3	22.16			
	Kapenguria	30.07	20.5			
	Pokot South	36.87	21.42			
	Sigor	32.01	22.03			
EMBU	County	61.51	49.81	Vegetation greenness is above normal ranges for the period.		
	Manyatta	76.87	73.95			

	Mbeere North	52.74	37.41	
	Mbeere South	58.95	44.19	
	Runyenjes	73.62	71.7	
ADMINISTRATIVE UNIT				DROUGHT CATEGORIES/REMARKS
COUNTY	Sub County	VCI-3 month as at 25 <sup>th</sup> Feb 2019	VCI-3 month as at 25 <sup>th</sup> March 2019	Color
				VCI values (3-month)
				Drought Category
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				>=35 - <50
				>=20 - <35
				>=10 - <20
				<10
				Vegetation greenness above normal
				Normal vegetation greenness
				Moderate vegetation deficit
				Severe vegetation deficit
				Extreme vegetation deficit
KITUI	<b>County</b>	<b>40.08</b>	<b>26.61</b>	There is moderate vegetation deficit for entire county, with normal conditions recorded in Kitui Central, Mwingi West and Kitui Rural. There is need to activate drought response initiatives.
	Kitui Central	69.69	60.55	
	Kitui East	42.75	27.99	
	Mwingi Central	38.23	27.86	
	Mwingi North	37.3	27.11	
	Mwingi West	59.15	46.41	
	Kitui Rural	60.63	49.34	
	Kitui South	33.68	18.27	
	Kitui West	63.4	48.39	
MAKUENI	<b>County</b>	<b>61.81</b>	<b>47.47</b>	The vegetation greenness is normal for the entire county and normal to above normal for the subcounties.
	Kaiti	78.86	72.26	
	Kibwezi East	50.12	35.63	
	Kibwezi West	63.16	48.23	
	Kilome	68.11	50.11	
	Makueni	64.47	49.69	
	Mbooni	69.75	57.56	
MERU	<b>County</b>	<b>55.05</b>	<b>43.17</b>	The vegetation greenness is normal for the county but with moderate vegetation deficit recorded in Igembe Central, Igembe North and Igembe South.
	Buuri	59.61	45.71	
	Central Imenti	68.77	58.63	
	Igembe Central	44.4	31.66	
	Igembe North	45.1	30.76	
	Igembe South	45.99	34.68	
	North Imenti	67.5	55.44	
	South Imenti	73.45	70.6	
	Tigania East	49.34	38.02	
Tigania West	61.22	46.8		
NYERI	<b>County</b>	<b>62.83</b>	<b>61.01</b>	The vegetation greenness is above normal across the entire county.
	Kieni	54.64	50.7	
	Mathira	67.36	77.41	
	Mukurweini	75.68	71.61	
	Town	75.91	63.94	
	Othaya	76.1	77.11	

	Tetu	73.88	71.39																			
KILIFI	County	44.5	34.4	The vegetation greenness is normal to above normal across the county.																		
	Ganze	43.07	29.13																			
	Kaloleni	58.34	44.11																			
	Magarini	44.76	35.83																			
	Malindi	39.24	31.77																			
	Kilifi-North	35.56	28.85																			
	Rabai	56.24	48.38																			
	Kilifi-South	44.38	38.56																			
KWALE	County	55.97	43.91	The vegetation greenness is normal ranges for the county for the period and also normal/ above normal across all the sub-counties.																		
	Kinango	52.65	41.11																			
	Lungalunga	57.1	40.56																			
	Matuga	66.95	59.64																			
	Msambweni	61.86	52.96																			
LAMU	County	50.25	48.69	Normal vegetation conditions were recorded for the county but with above normal vegetation conditions for Lamu East.																		
	Lamu East	53.73	53.32																			
	Lamu West	48.24	46.02																			
<b>ADMINISTRATIVE UNIT</b>				<b>DROUGHT CATEGORIES/REMARKS</b>																		
<b>COUNTY</b>	<b>Sub County</b>	<b>VCI-3 month as at 25<sup>th</sup> Feb 2019</b>	<b>VCI-3 month as at 25<sup>th</sup> March 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: #90EE90;"></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
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	>=10 - <20	Severe vegetation deficit																				
	<10	Extreme vegetation deficit																				
TAITA TAVETA	County	40.42	26.04	Moderate vegetation deficit was recorded across the entire county.																		
	Mwatate	37.55	23.48																			
	Taveta	34.06	23.38																			
	Voi	43.16	27.36																			
	Wundanyi	49.41	32.36																			
NAROK	County	54.15	42.53	Normal to above normal vegetation conditions across the county except for Narok North that is experiencing moderate vegetation deficit conditions.																		
	Narok-East	47.41	35.73																			
	Emurua Dikirr	67.42	53.74																			
	Kilgoris	61.03	50.29																			
	Narok-North	47.04	31.32																			
	Narok-South	53.28	40.94																			
	Narok-West	57.18	47.97																			

## Annex 2: 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 7). The combined analysis from all four indicator groups then determines the particular drought phase: normal, alert, alarm, emergency or recovery (Figure 1). Identifying the correct drought phase helps to guide the most appropriate response for that stage in the drought cycle.

### 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**

