



**NATIONAL DROUGHT MANAGEMENT AUTHORITY**

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## **National Drought Early Warning Bulletin**

**July 2021**

## Drought indicators

### Rainfall Performance

The month of June 2021 marked the beginning of the cold season with several parts of ASAL counties remaining dry. According to metrological department, most of ASAL counties received less than 50 percent of average rainfall with most parts of Marsabit, Wajir, Garissa, Isiolo, Kajiado, Tana River and Turkana receiving less than 25 percent of average amounts of rainfall during the month of June as shown in Figure 1a. The coastal strip received over 75 percent of average amounts. Spatio-temporal rainfall distribution was generally uneven and poor across the ASAL counties. Figure 1a indicates rainfall performance during the month of May as percentage of long term mean (LTM).

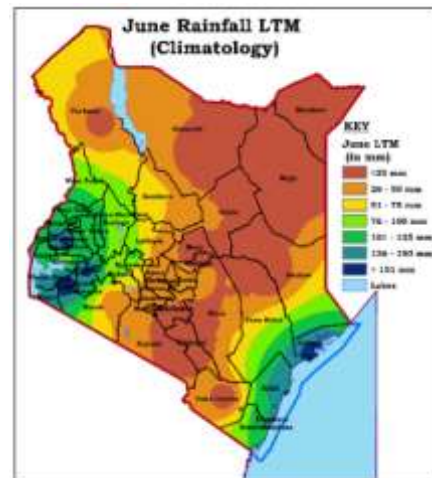


Figure 1 a. June Rainfall Performance

### Rainfall Forecast



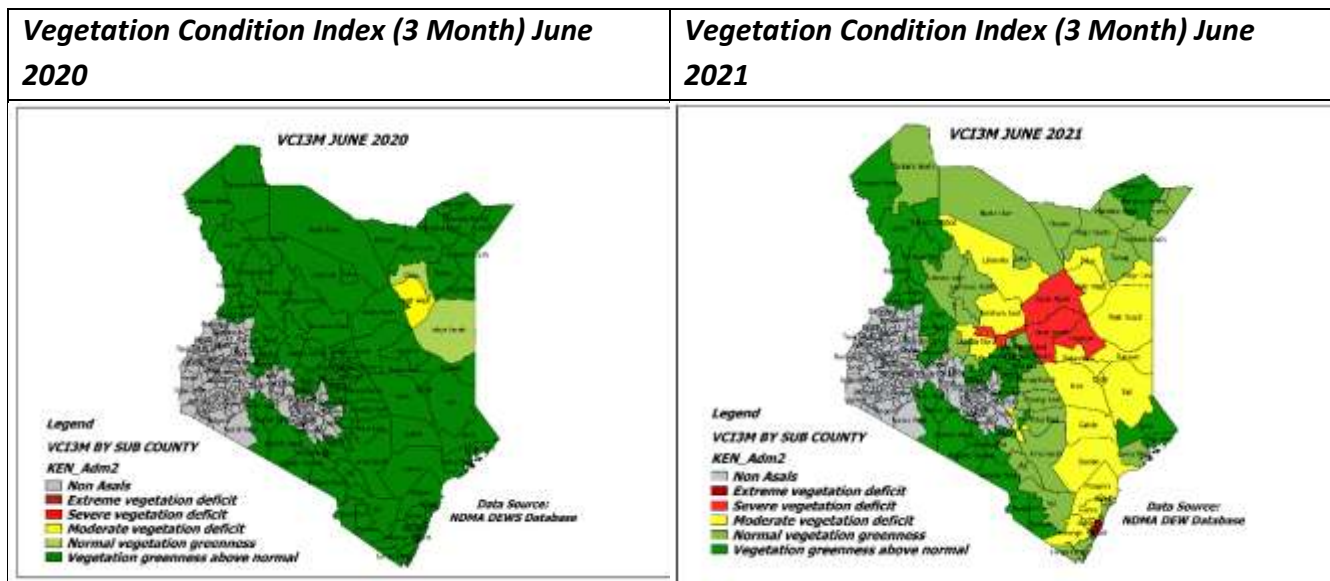
Figure 1b. Rainfall forecast

According to Kenya Meteorological Department (KMD), several parts of the country will be generally dry and sunny during the month of July 2021. Counties in Northwestern Region including Turkana, West Pokot and Samburu are likely to receive occasional rainfall during the beginning of the month and near average rainfall towards the end of the month. The expected total rainfall is likely to be near to above the long term average for July. Counties in the Coastal strip including Tana River, Kilifi, Lamu and Kwale will likely receive occasional rainfall. The expected total rainfall is likely to be near the long-term average amounts for July. The Highlands East of the Rift Valley counties including Nyeri, Meru, Embu and Tharaka Nithi are expected to experience occasional cool and cloudy (overcast skies) conditions with occasional rains/drizzles while the Northeastern Kenya counties including Mandera, Marsabit, Wajir, Garissa and Isiolo and Southeastern lowlands counties including Machakos, Makueni, Kitui, Taita Taveta and parts of Kajiado are likely to remain generally sunny and dry. Occasional cool and cloudy conditions are however likely to occur over some counties in southeastern Kenya especially those bordering the highlands east of the rift valley.

**Vegetation condition**

Figure 2 matches the vegetation condition index (VCI) in June 2020 with that in June 2021. When compared to similar period last year and the long-term average, the current condition of vegetation is considerably below that of June 2020.

**Figure 2: Comparison of Vegetation Condition Index (VCI), June 2020 and June 2021**



As at the end of June 2021, counties experiencing vegetation deficit as per vegetation condition index (VCI) included Marsabit, Garissa, Isiolo, Tana River, Wajir and Kilifi. The six counties experienced moderate vegetation deficit except Isiolo that is in severe vegetation deficit band implying that the VCI values recorded in June 2021 were below normal indicating that the rains received so far were inadequate and had not brought about vegetation regeneration to the usual ranges for the period in the six counties.

Vegetation Condition Index (VCI) status as at the end of June 2021 is summarized in Table 1. At sub county level; Kilifi South, Rabai (Kilifi), Isiolo North and Isiolo South (Isiolo County) and Lagdera (Garissa) recorded the lowest VCI values with Kilifi two sub counties in extreme vegetation deficit band. Lagdera (Garissa) and Isiolo (Isiolo North and South) are in severe vegetation deficit band which is attributed to the poor rains received in June 2021 in those particular areas. Generally, the negative VCI trends point to poor regeneration of pasture and browse during the month of June 2021. The vegetation condition has deteriorated as compared to the previous month of May 2021.

**Table 1: Vegetation Condition Index (VCI), June 2021**

Category	County	Sub Counties (No)
Extreme		(2) Rabai and Kilifi South (Kilifi)
Severe vegetation deficit	(1) Isiolo	(3) Lagdera (Garissa), Isiolo (Isiolo North, Isiolo South)
Moderate vegetation deficit	(5) Marsabit Wajir Garissa Tana river Kilifi	(21) Garissa (Balambala, Fafi, Dadaab, Township) Kilifi (Ganze, Kaloleni, Magarini, Malindi) Kitui (Kitui Rural) Kwale (Kinango) Laikipia (Laikipia North) Marsabit (Laisaimis) Samburu (Samburu east) Tana River (Bura, Galole, Garsen) Wajir (Wajir East, Eldas, Wajir south)
Normal vegetation greenness	(6) Kitui, Taita Taveta, Samburu, Lamu, Kwale, Laikipia	(35) Wajir (Tarbaj Wajir-West Wajir-North Turkana (Turkana North, Turkana East) Meru (Tigania East, Igembe North) Taita taveta (Taveta, Voi) Marsabit (Moyale North Horr Saku) Mandera (Mandera South Mandera West, Lafey Mandera East) Makueni (Makueni, Kibwezi East, Kibwezi West) Lamu (Lamu West) Laikipia (Laikipia East, Laikipia-West) Kwale (Lungalunga Matuga, Msambweni) Kitui (Kitui South, Kitui West, Kitui East, Mwingi Central, Mwingi North, Mwingi West) Kilifi (Kilifi-North) Embu (Manyatta) Baringo (Mogotio)
Vegetation greenness above normal	(11) Baringo, Embu, Turkana, Kajiado, Makueni, Meru, Narok, Nyeri, Tharaka Nithi, West Pokot, Mandera	(54) Baringo (Baringo Central, Eldama Ravine, Baringo North, Baringo South, Tiaty) Embu (Mbeere North, Mbeere South, Runyenjes) Garissa (Ijara) Kajiado (Kajiado-Central, Kajiado-East, Kajiado-North, Kajiado-South), Kajiado-West Kitui (Kitui-Central) Lamu (Lamu East, Lamu West,) Makueni (Kilome, Mbooni) Mandera (Banissa, Mandera North) Meru (Buuri, Central Imenti, Igembe Central, Igembe South, North Imenti, South Imenti, South Imenti South Imenti, Tigania West) Narok (Narok-East, Emurua Dikirr, Kilgoris, Narok-North, Narok-South, Narok-West) Nyeri (Kieni, Mathira, Mukurweini, Othaya, Tetu, Township) Taita Taveta (Mwatate, Wundanyi) Tharaka Nithi (Chuka, Maara, Tharaka) Turkana (Turkana Central, Loima, Turkana South, Turkana West) Makueni (Kaiti) West Pokot (Kacheliba, Kapenguria, West-Pokot South, Sigor)

### ***Livestock production***

In nearly all the counties, livestock production related indicators are currently fair and on declining trend as compared to normal period. The condition is as result of decline in pasture availability, both in terms of quantity and quality and increase in distances covered by livestock in search of pasture and water due to drying open water sources.

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

The state of pasture and browse in most of the arid and semi-arid counties was generally fair to poor condition with Isiolo, Garissa, Wajir, Tana river, Laikipia and Kitui reporting poor pasture condition as shown in Table 2. The current pasture and browse condition is on worsening trend as compared to the previous month due to the poor performance of the 2021 long rains season.

**Table 2.0: Pasture and browse condition, June 2021**

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

**Livestock body condition**

The current livestock body condition is on worsening trend as compared to previous month due to deterioration in pasture and browse quantity and quality. Overall, the current body condition of most livestock is below normal in comparison to similar periods during a normal year. Consequently, most counties except Lamu and Wajir reported livestock body condition as fair to good as shown in Table 3.

**Table 3.0: Livestock body condition, June 2021**

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

**Milk production**

Milk production is on worsening trend as compared to the previous month as 11 counties including Embu, Garissa, Kajiado, Kilifi, Kitui, Marsabit, Meru, Nyeri, Samburu, Taita Taveta, and Tana river are on worsening trend while twelve (12) counties namely; Baringo, Garissa, Isiolo Kajiado, Kilifi, Kitui, Laikipia, Marsabit, Meru, Tharaka Nithi, Turkana and Kwale have milk production below LTA. The following seven (7) counties including Embu, Makueni, Narok, Nyeri Taita Taveta, Tana River and West Pokot recorded milk production above LTA. The below normal

milk production is attributed to poor rainfall performance for the 2021 long rains season. The current milk production status is below average as compared to normal year. Milk production trends in the 23 ASAL counties is presented in table 4.0.

**Table 4.0: Milk production, June 2021**

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

### **Cattle prices**

In majority of the county's cattle prices are stable as compared to the previous month and above LTA owing mainly to the fact that the state of cattle body condition is still fair as illustrated in Table 5. The cattle prices in Mandera, Nyeri, Turkana and Marsabit are below due to deteriorating body condition in those particular counties. The prevailing price is higher than the three-year average price of cattle for the month of June in about 65 percent of the ASAL counties as shown in Table 4.

**Table 5.0: Cattle prices, June 2021**

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

### **Goat prices**

Table 6 summarizes the trends in goat prices in ASAL counties. During the month of May , goat prices in majority of the ASAL counties were mostly above average or close to LTA except in

Marsabit, Makueni and Nyeri counties. The goat prices have remained stable as compared to the previous month due to fair state of livestock body condition however they remain low as compared to normal season.

**Table 6.0: Goat prices, June 2021**

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

### **Crop production**

- March to May (MAM) long rains season ended across the marginal agricultural areas and thus Kilifi, Makueni, Nyeri (Kieni), Taita Taveta and Kwale reported fair crop condition as compared to good in normal season however Kitui reported that most of the crops withered due to moisture stress as result of depressed rains. Crops in marginal agricultural counties were at grain filling and harvesting stage. Farmers are expecting below average crop production due to depressed rains received.

### **Maize prices**

In most counties, the price of maize remained stable in June as compared to the previous month. As demonstrated in Table 7, the current maize prices are largely favourable with 12 counties recording prices that are below LTA however the prices of maize are increasing and thus require close monitoring. Garissa, Mandera, Marsabit, Taita Taveta, Wajir have maize prices above LTA.

**Table 7.0: Maize prices, June 2021**

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

### Access to water for households

In comparison to the long term average, 20 counties distances to water for households is currently above the LTA. In comparison with the previous month, there is increase in distance to household water source as result of the drying water sources. The late onset of the MAM rains coupled with poor performance is the reason behind the above LTA trekking distances. The trend in distances walked by households to access water is provided in Table 8.

**Table 8.0: Distance from households to main water sources, June 2021.**

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

### Access to water for livestock

The trend in the distance walked by livestock in search of water is presented in Table 9. Compared with the previous month, the current trekking distance to water source from grazing areas is on worsening trend across the counties. In addition, access to water for livestock in 17 counties was above long- term average attributed to the poor performance of the March April May (MAM) long rains season as shown in Table 9.0.

**Table 9.0: Distance from livestock grazing area to main water sources, June 2021**

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

### Terms of trade

Table 10 shows the trends in terms of trade (ToT) between the relative price of goats and maize in ASAL counties. In all counties except Mandera and Nyeri(kieni),ToT values are above the long-term average (LTA). The TOT is however on worsening trend as compared to the previous month with ten(10) counties reporting worsening trend. The worsening trend is as result of increasing maize prices in relation to stable goat prices.

**Table 10.0: Terms of trade, June 2021**

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

### Health and nutrition

Table 11 shows the trend in the proportion of children at risk of malnutrition (MUAC) across the ASAL counties. As compared to the previous month,the MUAC is on worsening trend with eight(8) counties including kajiado,Laikipia,Lamu,Makueni,Nyeri,Samburu,Tana River and Wajir recording worsening trend.The negative trend in malnutrition of the eight(8)counties was attributed to reduced milk consumption owing to decrease in milk production and fewer number of integrated health outreaches delivering essential nutrition services.

**Table 11.0: Children at risk of malnutrition (MUAC), June 2021**

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

## Drought phase classification

Table 12 sums up the trends in drought phase classification as at end of June 2021. On the basis of the range of indicators monitored above, Twelve (12) counties namely Marsabit, Mandera, Garissa, Wajir, Kilifi, Tana River, Lamu, Samburu, Kitui, Lamu, Isiolo and Laikipia are in the alert drought phase while Eleven (11) counties reported Normal drought phase as at July. During the month under review, Fourteen (14) counties reported worsening trend, eight (8) counties recorded stable trend while one county reported an improvement. The worsening trend across most of ASAL counties is as result of the poor rains received during the March April May (MAM) 2021 long rains season.

**Table 12.0: Drought phase classification, June 2021**

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

## Recommendations

**Food and safety nets**

- Provision of food assistance and scaling up of cash transfers targeting households which are currently food insecure as a result of the prevailing drought stress.

**Livestock sector**

- Provision of livestock feeds and supplements.
- Treatment and vaccination against emerging livestock diseases.
- Activation of satellite livestock markets and commercial destocking to salvage pastoralists against imminent losses with expected progression of the long dry spell.

**Water sector**

- Support water trucking interventions.
- Rehabilitation and maintenance of water facilities.
- Provision of fuel subsidies to motorized boreholes
- Procurement and distribution of water storage tanks.

**Health and nutrition sector**

- Support on hygiene and sanitation promotions
- Provisions for severe acute malnutrition - Ready to Use Therapeutic Food (RUTF).
- Supplies for moderate acute malnutrition - Ready to Use Supplementary Food (RUSF).

**Education sector**

- Enhance hygiene promotion in learning institutions.
- Provision of food to subsidize school fees in boarding secondary schools.

**Peace and security sector**

- Facilitating intra/inter communities peace dialogues and resource use agreements.
- Coordination of peace and security activities in conflict prone counties.






**Coordination**

- Support County Steering Groups (CSGs) to effectively coordinate drought response activities.

**Table 13: Vegetation Condition Index (VCI-3 month) as at 27<sup>th</sup> June 2021**

ADMINISTRATIVE UNIT				DROUGHT CATEGORIES/REMARKS		
COUNTY	Sub County	VCI-3 month as at 30 <sup>th</sup> May 2021	VCI-3 month as at 27 <sup>th</sup> June 2021	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>	45.9	55.49	The entire county and its sub counties recorded above normal vegetation greenness in the month of June except Mogotio which was at normal greenness. This is attributed the late cessation of MAM rainfall.		
	Central	43.91	54.89			
	Eldama	49.44	58.38			
	Mogotio	38.31	47.3			
	North	49.57	60.67			
	South	46.43	54.27			
	Tiaty	46.0	55.8			
<b>MANDERA</b>	<b>County</b>	49.57	50.26	The county and its sub counties are in Normal to above normal vegetation greenness in the month of June which is stable trend.		
	Banissa	49.93	55.43			
	M East	35.55	43.98			
	Lafey	42.47	46.69			
	M North	52.16	58.28			
	M South	53.05	45.21			
	M West	52.96	48.94			
<b>TURKANA</b>	<b>County</b>	51.82	59.31	The county is in improvement in VCI for the county and four of its sub counties having recorded Above Normal vegetation greenness in the month of June. Turkana North and East recorded Normal vegetation greenness.		
	T Central	57.36	63.5			
	T. East	38.79	46.17			
	T. Loima	61.91	72.75			
	T. North	41.86	48.07			
	T. South	58.83	66.5			
	T. West	62.52	69.97			
<b>MARSABIT</b>	<b>County</b>	32.57	32.97	The county and one of its sub counties remained at moderate vegetation deficit band. Moyale was stable at normal vegetation greenness. This is due to MAM seasonal onset in Moyale. North Horr and Saku wards improved from moderate deficit to normal vegetation greenness.		
	Laisaimis	25.01	24.94			
	Moyale	48.59	41.93			
	N. Horr	32.79	35.09			
	Saku	32.01	35.25			
<b>WAJIR</b>	<b>County</b>	36.66	31.75	The situation worsens in the county from normal vegetation greenness to moderate vegetation deficit. Wajir North and Tarbaj maintained normal vegetation greenness.		
	W East	40.39	34.75			
	W.Eldas	32.13	26.48			
	W. North	49.81	42.5			
	W. South	30.5	26.8			

	W.Tarbaj	45.5	40																			
	W West	29.86	26.24																			
<b>SAMBURU</b>	<b>County</b>	33.83	38.72	The county improved from moderate vegetation deficit to Normal vegetation greenness in the month under review when compared to the previous month of May. Samburu East remained in Moderate vegetation deficit band.																		
	S East	27.57	28.66																			
	S. North	38.93	48.33																			
	S. West	41.81	46.59																			
<b>ADMINISTRATIVE UNIT</b>				<b>DROUGHT CATEGORIES/REMARKS</b>																		
<b>COUNTY</b>	<b>Sub County</b>	<b>VCI-3 month as at 30<sup>th</sup> May 2021</b>	<b>VCI-3 month as at 27<sup>th</sup> June 2021</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
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	>=10 - <20	Severe vegetation deficit																				
	<10	Extreme vegetation deficit																				
<b>GARISSA</b>	<b>County</b>	32.02	29.37	The county and its Sub counties remained in Moderate vegetation deficit band with Ijara sub county improving from Normal vegetation greenness to above normal greenness band. However, Lagdera subcounty also remained at severe vegetation deficit.																		
	Balambala	23.56	22.92																			
	Daadab	28.78	24.98																			
	Fafi	33.41	29.43																			
	Ijara	49.93	50.58																			
	Lagdera	15.89	12.17																			
	Dujjis	24.98	22.72																			
<b>ISIOLO</b>	<b>County</b>	22.67	18.72	The entire county condition deteriorated from moderate vegetation deficit to severe vegetation deficit following poor performance and early cessation of the MAM rains.																		
	I. North	24.45	19.77																			
	I. South	20.00	17.13																			
<b>TANA RIVER</b>	<b>County</b>	29.94	27.48	The county and its sub counties remained at Moderate vegetation condition in the month of June.																		
	Bura	28.89	27.71																			
	Galole	24.34	20.74																			
	Garsen	34.33	31.49																			
<b>KAJIADO</b>	<b>County</b>	63.43	58.69	Stability noted across the county with all sub counties remaining at above normal vegetation greenness conditions in the month of June.																		
	K. Central	62.17	53.39																			
	K. East	62.59	59.71																			
	K. North	61.66	55.75																			
	K. South	57.22	53.85																			
	K. West	69.58	65.22																			
<b>LAIKIPIA</b>	<b>County</b>	36.48	39.63	The county remained stable at normal vegetation greenness with Laikipia North at moderate vegetation deficit.																		
	L. East	45.03	48.35																			
	L. North	32.31	34.74																			

	L. West	40.16	44.57			
<b>THARAKA NITHI</b>	<b>County</b>	57.05	62.68	The county is in Above normal vegetation greenness in the month under review. The situation is stable when compared to the previous month of May. Tharaka sub-county improved from normal to above normal vegetation greenness.		
	Chulga	66.97	65.65			
	Maara	69.81	64			
	Tharaka	49.31	61.13			
<b>WEST POKOT</b>	<b>County</b>	50.93	56.87	The vegetation greenness was above normal for the county and all the sub-counties with Kacheliba and Sigor improving from normal to above normal vegetation greenness.		
	Kacheliba	44.2	53.22			
	Kapenguria	58.28	59.5			
	Pokot South	64.22	70.36			
	Sigor	49.11	53.32			
<b>EMBU</b>	<b>County</b>	64.33	57.06	The county and its sub-counties remained stable during the month of June across most of the sub-counties with vegetation greenness above normal. Manyatta sub-county deteriorated from above normal to normal vegetation greenness.		
	Manyatta	64.57	48.55			
	Mbeere North	65.56	64.02			
	Mbeere South	61.9	55.41			
	Runyenjes	70.42	57.16			
<b>ADMINISTRATIVE UNIT</b>						
<b>COUNTY</b>	<b>Sub County</b>	<b>VCI-3 month as at 30<sup>th</sup> May 2021</b>	<b>VCI-3 month as at 27<sup>th</sup> June 2021</b>	<b>Color</b>	<b>VCI values (3-month)</b>	<b>Drought Category</b>
					≥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>KITUI</b>	<b>County</b>	39.49	40.35	The county and all of its sub counties remained stable at Above normal, normal vegetation greenness and moderate vegetation deficit.		
	Kitui Central	51.04	52.66			
	Kitui East	42.87	41.84			
	Mwingi Central	38.22	35.16			
	Mwingi North	36.51	38.66			
	Mwingi West	44.04	43.11			
	Kitui Rural	30.43	27.87			
	Kitui South	38.6	40.77			
	Kitui West	42.68	46.83			
<b>MAKUENI</b>	<b>County</b>	51.44	53.03	The county and most of its sub counties recorded above normal vegetation greenness conditions. The situation is stable for most parts when compared to the previous month of May. Kibwezi East worsened from above normal to normal vegetation greenness.		
	Kaiti	71.55	63.88			
	Kibwezi East	51.4	48.3			
	Kibwezi West	42.32	48.83			
	Kilome	68.13	67.72			
	Makueni	43.85	48.33			
	Mbooni	60.63	63.73			

<b>MERU</b>	<b>County</b>	56.62	55.81	The vegetation greenness is above normal across the county and its Sub-counties except for Igembe North and Tigania East which recorded normal vegetation greenness.		
	Buuri	57.08	56.9			
	Central Imenti	65.95	56.37			
	Igembe Central	57.91	66.04			
	Igembe North	37.73	40.98			
	Igembe South	66.37	70.47			
	North Imenti	70.22	57.12			
	South Imenti	72.3	68.27			
	Tigania East	46.76	39.28			
	Tigania West	57.84	53.22			
<b>NYERI</b>	<b>County</b>	68.99	65.65	The county and its sub counties remained stable recording above normal vegetation greenness just like the previous month of May.		
	Kieni	63.64	63.9			
	Mathira	68.72	59.21			
	Mukurweini	75.43	51.72			
	Town	78.56	77.51			
	Othaya	81.71	79.14			
	Tetu	74.77	63.77			
<b>KILIFI</b>	<b>County</b>	27.2	24.93	Constancy in vegetation condition noted across the county and most of its sub counties recording moderate vegetation deficit. Kilifi North remained stable at normal vegetation greenness. However, Rabai and Kilifi south sub-counties worsened from severe to extreme vegetation deficit.		
	Ganze	21.49	22.94			
	Kaloleni	21.55	21.6			
	Magarini	29.89	25.84			
	Malindi	28.85	24.94			
	Kilifi-North	40.11	42.32			
	Rabai	17.21	9.14			
	Kilifi-South	10.86	4.53			
<b>KWALE</b>	<b>County</b>	42.55	38.57	Normal vegetation greenness noted across the entire county which is stable when the month under review is compared to the previous month of May except Kinango which worsened from normal to moderate vegetation deficit.		
	Kinango	37.17	34.22			
	Lungalunga	53.4	48.88			
	Matuga	43.63	36.06			
	Msambweni	51.81	47.42			
<b>LAMU</b>	<b>County</b>	45.31	43.66	The entire county remained in normal vegetation greenness. Lamu east is in above normal vegetation greenness.		
	Lamu East	51.19	51.66			
	Lamu West	41.91	39.04			
<b>ADMINISTRATIVE UNIT</b>				<b>DROUGHT CATEGORIES/REMARKS</b>		
<b>COUNTY</b>	<b>Sub County</b>	<b>VCI-3 month as at 30<sup>th</sup> May 2021</b>	<b>VCI-3 month as at 27<sup>th</sup> June 2021</b>	<b>Color</b>	<b>VCI values (3-month)</b>	<b>Drought Category</b>
					≥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>	50.42	46.28	Decrease in the vegetation greenness condition from above normal to normal vegetation greenness. Voi sub-county remains in normal vegetation greenness while the county worsened from above normal to normal greenness.
	Mwatate	61.12	57.24	
	Taveta	58.76	52.83	
	Voi	42.31	38.93	
	Wundanyi	67.91	62.86	
<b>NAROK</b>	<b>County</b>	67.3	65.09	The county and its sub-counties remained stable in above normal vegetation greenness band. The attributing factor is good MAM seasonal rainfall performance in this region.
	Narok-East	64.52	65.23	
	Emurua Dikirr	70.98	66.12	
	Kilgoris	64.15	56.73	
	Narok-North	61.21	63.82	
	Narok-South	71.71	71	
	Narok-West	68.68	64.18	

## 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 5). Identifying the correct drought phase helps to guide the most appropriate response for that stage in the drought cycle.

**Table 11.0: 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
Utilization	MUAC (Mid-Upper Arm Circumference) Coping strategies	Nutrition Coping strategies



**Figure 3.0: Drought Phase Classification**

