



**NATIONAL DROUGHT MANAGEMENT AUTHORITY**

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## **National Drought Early Warning Bulletin**

**May 2020**

## KEY HIGHLIGHTS

- The good rains received in April have enhanced pasture regeneration and boosted higher development and growth of crops. However, the heavy rainfall that was received from mid-April also resulted in widespread flooding and have created a conducive environment for the persistence of the desert locust infestation, which is posing significant threat to crops and livestock forage across the arid and semi-arid (ASAL) region.
- Abundant availability of water, pasture and browse in all ASAL counties has led to a general improvement in livestock body condition for all livestock species, which in turn has led to an increase in livestock productivity.
- In virtually all ASAL counties, return distances to water for households are currently below the five-year average while at the same time most counties registered an improving trend in April as most areas continued to receive reasonable rainfall during the month.
- In all ASAL areas, terms of trade (ToT) were favourable since the proceeds from the sale of a goat could purchase larger quantities of maize in April compared with the long term average (LTA) while the nutrition status of children in most counties improved this month with 15 out of 23 counties reporting incidences of children with mid-upper arm circumference (MUAC) less than 135 mm which was close to or below LTA, implying that in about 70 percent of the ASAL counties the current nutrition status of children below the age of five years was within the seasonal ranges.

**Drought phase classification, April 2020**

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

## 1.0. Drought status

### 1.1 Drought indicators

#### *Rainfall*

During the month of April, nearly all ASAL counties received enhanced rainfall that was characterized by heavy storms. In many areas, intense rains were received throughout the month and consequently, by the end of the month, several counties had attained and surpassed their long term mean rainfall for April. Counties which recorded substantial above average rains in April include: Narok, West Pokot, Garissa, Turkana, Marsabit, Makueni, Embu and Kajiado. The good rains received in April have enhanced pasture regeneration and growth of crops. However, the above average rains have also resulted in widespread flooding and have created a conducive environment for the persistence of the desert locust infestation, which is posing significant threat to crops and livestock forage.

#### *Vegetation condition*

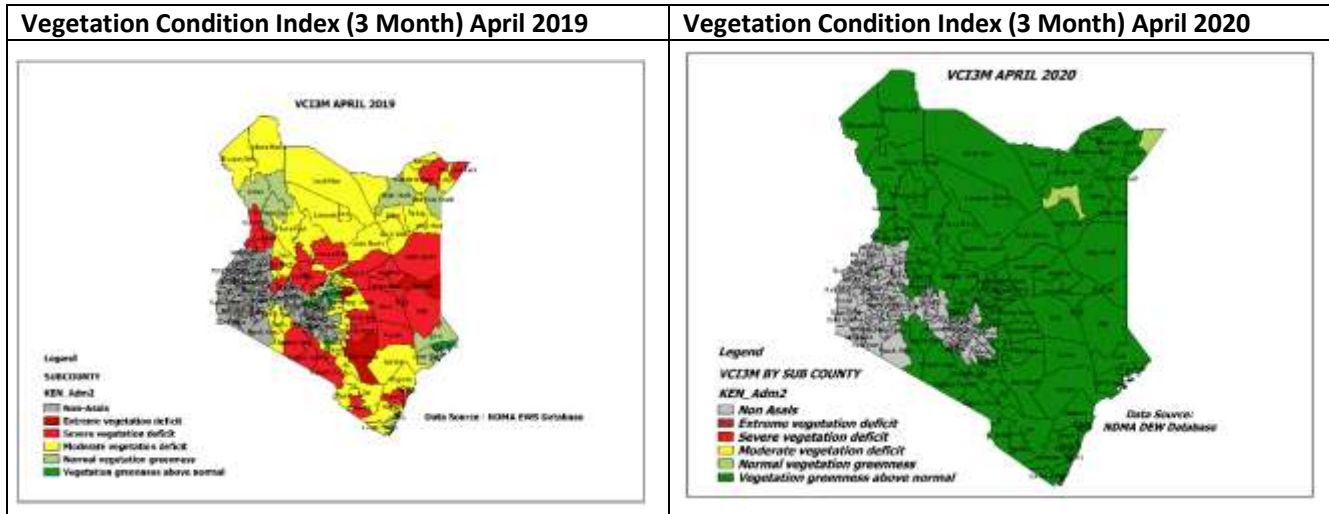
Vegetation Condition Index (VCI) values as at 27<sup>th</sup> April 2020 is summarized in Table 1. Most ASAL areas have received good rains since October 2019 and the vegetation indices at the end of April 2020 indicate above average condition.

**Table 1: Vegetation Condition Index (VCI), April 2020**

<i>Vegetation Condition Index (VCI 3 month) Summary Status as at 27<sup>th</sup> April 2020</i>								
<i>Above Normal</i>			<i>Normal</i>	<i>Moderate</i>	<i>Severe</i>			
• Mandera	• Tana River	• Garissa						
• Turkana	• Samburu	• Isiolo						
• Kitui	• West Pokot	• Wajir						
• Kajiado	• Embu	• Laikipia						
• Lamu	• Meru	• Marsabit						
• Makueni	• Narok	• Nyeri						
• Baringo	• Taita Taveta	(Kieni)						
• Kilifi	• Tharaka	• Kwale						
(23)						(0)	(0)	(0)

Figure 1 compares the vegetation condition index (VCI) in late April 2019 with that in late April 2020. The April 2020, VCI map illustrates that the vegetation condition in April 2020 was better compared to the situation in April 2019 and as the right hand VCI map for 2020 demonstrates, vegetation greenness in April 2020 in all arid and semi-arid counties was within normal to above normal ranges. The improved state of vegetation across ASAL areas is mainly attributed to the early onset of the March-April-May rainy season and the enhanced rainfall received in April.

**Figure 1: Comparison of Vegetation Condition Index (VCI), April 2019 and April 2020**



***Water sources***

The current sources of water for both domestic and livestock use are water pans, dams, shallow wells, rock catchments ponds, boreholes, rivers and piped water systems. Recharge to the open water sources is 70 to 100 percent of their capacities, which has greatly improved water availability. For instance, approximately half of the water pans and rock catchments in Turkana are currently at full capacity, while water levels in most surface water sources in Baringo, Kitui, Samburu and Kajiado are at about 70 percent of their maximum volume.

***Livestock production***

Abundant availability of water, pasture and browse in all ASAL counties has led to a general improvement in livestock body condition for all livestock species, which in turn has led to an increase in livestock productivity.

***Pasture and browse condition***

Overall, pasture and browse condition considerably improved in April when compared to the preceding month which was attributed to the cumulative effect of the above normal rains that promoted massive pasture and browse growth and regeneration. Nearly all counties reported the current state of pasture and browse as being above normal when compared to a similar month of the year as presented in Table 2.

**Table 2.0: Pasture and browse condition, April 2020**

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

### ***Livestock body condition***

Livestock body condition for cattle and goats was fair to good in all counties as illustrated in Table 3. The current livestock body condition has improved compared to last month due to availability of pasture and water in close proximity hence livestock are walking shorter distances between the grazing fields and water points. In general, the current body condition of most livestock is above normal in comparison to similar periods during a normal year.

**Table 3.0: Livestock body condition, April 2020**

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

### ***Milk production***

In comparison to the 2017 to 2019 production records, average milk production per household in April 2020 in seventeen counties was above or close to LTA which was attributed to increased availability of water, pasture and browse.

However, six counties which includes: Samburu, Kajiado, Lamu, Makueni, Tana River and Kitui recorded below normal milk production. The below average milk production was attributed to a drop in calving rates, general reduction in household livestock herd size and outbreak of livestock diseases like food and mouth disease (FMD) contagious bovine pleuro pneumonia (CBPP). In Tana River County the drop in milk production was also associated with increased incidences of pests mainly tsetse fly and flooding which had submerged most of the grazing fields. Milk production situation in the 23 ASAL counties is presented in Table 4.

**Table 4.0: Milk production, April 2020**

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

**Cattle prices**

Table 5 illustrates the trends in cattle prices. In all ASAL counties, the current average price for cattle are above or close to the 2015 - 2019 mean. For instance, in Mandera County the average price of a medium size four-year bull rose from Kshs 20,700 in March to Kshs 23,500 in April which was an increase of 14 percent. In West Pokot County the average cattle price recorded in April was Kshs 23,529 which was above the LTA price of Kshs 14,190 by 66 percent. Likewise in Kilifi County, average cattle prices stood at Kshs 25,000 which was above the 2015 - 2019 LTA of Kshs 16,914 by 48 percent. The above average cattle prices was attributed to the improved body condition of cattle across ASAL areas.

**Table 5.0: Cattle prices, April 2020**

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

**Goat prices**

All ASAL counties reported above normal or close to LTA prices for goats in April 2020 which was attributed to the good body condition of goats and reduced volumes of livestock presented for sale due to closure of markets in some areas as result of restrictions placed to curb the spread of COVID-19. In Samburu County, for instance, the price of a medium-sized two-year old buck increased by 16 percent to Kshs 3,560 from Kshs 3,070 recorded in March which was above the LTA price of Kshs 2,820 by 26 percent. Likewise, current average prices for goats in West Pokot,

Kilifi, Wajir, Turkana and Kajiado were above LTA by 45, 34, 33, 29 and 24 percent respectively. Table 6 demonstrates the trend in goat prices in April 2020 in the 23 ASAL counties.

**Table 6.0: Goat prices, April 2020**

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

### ***Crop production***

The impact of the heavy rains received during the month was mixed; while they have led to good performance in crops planted on gentle slopes, they have also led to poor performance in farms located on flat plains and low lying areas due to flooding and waterlogging. The main farm activities carried out during the month included weeding and control of pests and diseases. Early planted beans, green grams and cow peas are currently at flowering to pod formation stage while maize, millet and sorghum are at knee height stage.

During the month under review, cases of fall armyworm were reported in Makueni and Meru (Meru North) County. Desert locust infestation was also reported in Tharaka Nithi (Tharaka) and in Igembe Central in Meru County. Intervention measures carried out to control the desert locust invasion included community sensitization, surveillance and monitoring of hoppers and swarms, and conducting both ground and aerial spraying.

### ***Maize prices***

In most ASAL areas, prices of maize were below or close to the 2015 - 19 average and remained stable compared to last month as reflected in Table 7. However, there were reports of price spikes in a number of counties such as Embu, Narok, Kilifi, Wajir, Meru and Kwale which was attributed to increased demand occasioned by market closures, panic buying, high cost of transport, and supply shortages due to COVID-19 prevention related restrictions. In Embu (Mbeere) County, for instance, maize prices increased by 24 percent from Kshs 31 per kg in March to Kshs 41 in April which is 26 percent higher than the three-year mean of Kshs 33. Similarly, in Kilifi County retail price of maize increased by 19 percent from Kshs 42 in March to Kshs 49 per kg.

**Table 7.0: Maize prices, April 2020**

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

**Access to water**

Table 8 summarizes the trend in distances walked by households to access water. In virtually all ASAL counties, return distances to water for households are currently below the 2015-2019 average while at the same time most counties registered an improving trend in April as most areas continued to receive moderate to heavy rainfall throughout the month. For instance, there was a 48 percent reduction in the average trekking distance to water points for households in Kilifi, from 2.3 km in March to 1.2 km in April. In addition, when compared to similar periods, the current household water distance of 1.2 km was 79 percent shorter than the normal household water distance of 5.6 km. likewise, in Samburu County, average distance to watering points for households reduced by 30 percent from 4.6 km in March to 3.2 km in April. At the same time, return distances to water sources for households in Mandera County dropped from 8.2 km in March to 5.8 km in April a reduction of 29 percent.

However, in Tana River County, household trekking distances increased by a margin of 21 percent from 4.2 km in March to 5.1 km in April which is also above the LTA distance of 4.5 km by 13 percent. The increase in distances was attributed to flooding which contaminated most of the open water sources hence forcing households to walk long distances to access clean water from boreholes.

**Table 8.0: Distance from households to main water sources, April 2020**

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



As a result of adequate pasture availability within sites in close proximity to water sources, all ASAL counties reported lower than the five-year average trekking distances from grazing fields to water sources, implying improved access in comparison with a similar period in the past. For example, in Turkana County return distance for livestock from grazing areas to watering points decreased considerably by a proportion of 31 percent to 4 km in April from 5.8 km in March which is also below the long term mean of 7.5 km by 47 percent. Similarly, in Kitui, distance covered by livestock to water sources decreased by 12 percent from 4.1 km in March to 3.6 km in April, while in Kwale the distance trekked by livestock to access water decreased by 31 percent from 3.9 km in March to 2.7 km in April. In the same way, current return distances for livestock in Kilifi, Isiolo, Marsabit, Narok, Mandera and West Pokot are below the 2015 - 19 LTA by 75, 72, 71, 65, 61 and 45 percent respectively. The trend in the distance trekked by livestock in search of water is shown in Table 9.

**Table 9.0: Distance from livestock grazing areas to main water sources, April 2020**

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

### Terms of trade

Table 10 shows the trend in the terms of trade (ToT) in ASAL counties. In all ASAL areas, terms of trade (ToT) were favourable since the proceeds from the sale of a goat could purchase larger quantities of maize in April compared with the long term mean, for example, in Tana River County, ToT were better since the proceeds from the sale of a goat could purchase 83 kg of maize in April compared with the LTA of 44 kg which is 89 percent above the long term mean. In Samburu, ToT improved by 19 percent in April as households could purchase 74 kg of maize compared with 62 kg in March which is 54 percent higher than the normal ToT of 48 kg, while in Taita Taveta County, ToT increased significantly from 126 kg in March to 147 kg of maize in April, a 17 percent rise. In most counties, a general rise in the price of goats was the major driver of the improved terms of trade.

However, in Embu (Mbeere) County, the terms of trade decreased considerably by 34 percent from 146 kg of maize in March to 96 kg in April signifying that a lesser amount of maize could be purchased from the proceeds of an average sized goat in April compared with previous month. Similarly, in Kajiado, Narok, Kitui, Baringo and Marsabit terms of trade decreased by 25, 19, 17, 16 and 15 percent respectively. The worsening trend in ToT recorded in these counties was largely

attributed to a marginal increase in maize prices and decrease in goat prices which was associated with disruption or closure of markets in some areas due to the COVID-19 pandemic restrictions.

**Table 10.0: Terms of trade, April 2020**

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

### 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. The nutrition status of children in most counties improved this month with 15 counties reporting prevalence of children with MUAC less than 135 mm which was close to or below LTA. In addition, 12 counties are now on a stable or improving trend, compared to 15 in March. For instance, in Tana River County the proportion of children at risk of being malnourished reduced from 14.5 percent in March to 13 percent in April. Similarly, in Meru (Meru North), the percentage of children at risk of malnutrition decreased by 6 percent from 10.6 percent in March to 10 percent in April, while in Lamu the proportion of children under five at risk of malnutrition dropped by 5 percent from 6.3 percent in March to 6 percent in April. This improvement was attributed to increase in milk consumption and enhanced dietary intake.

However, in three counties, Tana River, Lamu and Samburu the proportions of children with MUAC less than 135 mm was higher than the April long term average. The above normal malnutrition status in these counties was associated high disease prevalence and poor maternal care such as poor breastfeeding practices. Table 10 shows the trend in the proportion of children at risk of malnutrition across the ASAL counties.

**Table 11.0: Children at risk of malnutrition (MUAC), April 2020**

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

## 1.2 Drought phase classification

Table 11 shows the trend in drought status in the 23 ASAL counties. Following the good rains received in April 2020, environmental indicators in all counties have returned to normal with the trend improving in 7 counties while a stable trend was observed in 16 counties.

**Table 11.0: Drought phase classification, April 2020**

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

## **2.0 Other food security challenges**

Nearly all ASALs counties received average to above average in April that resulted to loss of lives, displacement, flooding and landslides which adversely affected ASAL communities' livelihoods, assets and infrastructure.

By end of April, floods had displaced more than 100,000 people and killed about 80 people since March when the long rains season started. The most affected ASAL counties include: Tana River, West Pokot, Garissa, Turkana, Wajir, Marsabit, Isiolo, Narok, Samburu, Kajiado and Baringo.

Furthermore, the heavy rains have increased the risk of health emergencies and provided conditions conducive to the further breeding of desert locusts. New swarms from current breeding will form from mid-June onwards, coinciding with the start of the long rains harvest. Currently, ground and aerial control operations against hopper bands is ongoing in Samburu, Marsabit and Turkana.

## **3.0 Projected food security situation**

The projected continuation of the March-April-May (MAM) long rains season in May 2020 is likely to be conducive for agricultural production while the ongoing wet conditions are expected to sustain and further improve the forage and water situation across ASAL counties.

In most ASAL areas, the prevailing good livestock body condition and stable maize prices are likely to maintain the current above average livestock-to-cereals terms of trade during the month of May. In addition, increased milk production is expected to result in improved nutritional status of children.

However, desert locust infestation which is projected to cause significant damage to forage and crops and the disruption of markets operations due to the COVID 19 pandemic are likely to negatively affect household incomes, prices of food and livestock which might lead to the deterioration of the food security situation in most ASAL counties.

## **4.0 Recommendations**

### **Food and Safety Net**

- Provision of food and cash transfers to food insecure population targeting vulnerable members of the community affected by recent drought and floods including households which have been severely affected by increasing food prices, reduction in income or loss of jobs. as a result of measures put in place to control the spread of the COVID-19 pandemic.

### **Health and Nutrition**

- Conduct awareness campaigns on COVID-19 and support hygiene education promotion including installation of hand washing facilities in public spaces.
- Provision of face masks, hand sanitizers and soap to vulnerable members of the community.

**Agriculture**

- Provision of certified seeds and other farm inputs.
- Upscale ground and aerial spraying to control desert locust infestation and spread.






**Livestock/Veterinary**

- Enhance disease control measures including livestock vaccination.
- Support pasture establishment and conservation as well as stockpiling of county strategic hay reserves.

**Water**

- Promote rain water harvesting.
- Community sensitization on treatment of drinking water as most households are accessing water from unprotected sources.

### Annex 1.0 Vegetation Condition Index (VCI-3 month) as at 27<sup>th</sup> April 2020

ADMINISTRATIVE UNIT		VEGETATION GREENNESS		DROUGHT CATEGORIES/REMARKS		
COUNTY	Sub County	VCI-3 month as at 30 <sup>th</sup> March 2020	VCI-3 month as at 27 <sup>th</sup> April 2020	Colour	VCI values (3-month)	Drought Category
					≥50	Vegetation greenness above normal
					>=35 - <50	Normal vegetation greenness
					>=20 - <35	Moderate vegetation deficit
					>=10 - <20	Severe vegetation deficit
					<10	Extreme vegetation deficit
<b>BARINGO</b>	<b>County</b>	<b>92.16</b>	<b>85.07</b>	<b>The vegetation greenness is above normal across the county.</b>		
	Central	89.81	90.68			
	Eldama	74.20	79.69			
	Mogotio	91.68	80.90			
	North	93.10	89.25			
	South	94.89	85.83			
	Tiaty	95.07	84.68			
<b>MANDERA</b>	<b>County</b>	<b>79.33</b>	<b>66.83</b>	<b>Only Mandera East sub-county is in the normal vegetation greenness class while all other sub-counties recorded above normal vegetation greenness.</b>		
	Banissa	64.95	53.54			
	M. East	61.49	46.80			
	Lafey	71.76	55.12			
	M. North	83.76	68.57			
	M. South	97.71	82.52			
	M. West	75.58	72.39			
<b>TURKANA</b>	<b>County</b>	<b>117.71</b>	<b>117.33</b>	<b>The vegetation greenness is above normal across the county. This is due to good rains received during the ongoing MAM rainy season.</b>		
	T Central	122.39	119.13			
	T. East	79.49	70.38			
	T. Loima	141.64	136.92			
	T. North	117.9	120.08			
	T. South	118.26	118.85			
	T. West	128.36	134.84			
<b>MARSABIT</b>	<b>County</b>	<b>89.83</b>	<b>70.51</b>	<b>Vegetation greenness above normal for the period across all sub counties.</b>		
	Laisaimis	102.96	76.21			
	Moyale	70.83	57.89			
	N. Horr	86.28	69.82			
	Saku	107.67	82.90			
<b>WAJIR</b>	<b>County</b>	<b>75.85</b>	<b>58.83</b>	<b>The county is in the above normal vegetation greenness band. However, significant decline was noted in Wajir Eldas which currently has normal vegetation greenness</b>		
	W. East	88.23	66.44			
	W. Eldas	63.38	49.22			
	W. North	89.92	72.1			
	W. South	67.25	53.46			
	W. Tarbaj	80.34	64.03			
	W. West	81.1	55.31			

ADMINISTRATIVE UNIT		VEGETATION GREENNESS		DROUGHT CATEGORIES/REMARKS		
COUNTY	Sub County	VCI-3 month as at 30 <sup>th</sup> March 2020	VCI-3 month as at 27 <sup>th</sup> April 2020	Colour	VCI values (3-month)	Drought Category
					≥50	Vegetation greenness above normal
					>=35 - <50	Normal vegetation greenness
					>=20 - <35	Moderate vegetation deficit
					>=10 - <20	Severe vegetation deficit
					<10	Extreme vegetation deficit
SAMBURU	County	<b>91.7</b>	<b>77.19</b>	The vegetation greenness is in the above normal range for the period.		
	S. East	87.32	70.01			
	S. North	96.71	83.45			
	S. West	92.18	84.93			
GARISSA	County	<b>77.84</b>	<b>68.44</b>	The county and its sub counties is in above normal vegetation greenness.		
	Balambala	70.78	61.71			
	Daadab	61.14	52.48			
	Fafi	83.23	73.03			
	Ijara	93.71	85.62			
	Lagdera	70.24	59.29			
	Dujjis	59.29	56.3			
ISIOLO	County	<b>77.90</b>	<b>64.03</b>	The vegetation greenness is in the above normal range for the period.		
	I. North	80.56	64.46			
	I. South	73.84	63.37			
TANA RIVER	County	<b>98.96</b>	<b>87.85</b>	The vegetation greenness is above normal across the county.		
	Bura	81.98	68.03			
	Galole	115.81	96.83			
	Garsen	102.84	99.05			
KAJIADO	County	<b>105.80</b>	<b>96.98</b>	The vegetation greenness is in the above normal range for the period.		
	K. Central	98.06	91.35			
	K. East	101.96	94.60			
	K. North	94.03	88.73			
	K. South	102.05	94.11			
	K. West	115.12	103.7			
LAIKIPIA	County	<b>87.19</b>	<b>77.27</b>	The vegetation greenness is above normal across the county.		
	L. East	87.96	82.55			
	L. North	91.02	79.13			
	L. West	79.66	71.25			
THARAKA NITHI	County	<b>83.70</b>	<b>80.09</b>	The county and its sub counties is in above normal vegetation greenness.		
	Chuka	83.56	89.35			
	Maara	80.11	86.05			
	Tharaka	84.91	74.69			
WEST POKOT	County	<b>101.9</b>	<b>96.36</b>	The vegetation greenness is above normal across the county.		
	Kacheliba	104.44	94.58			
	Kapenguria	107.24	101.71			
	Pokot South	97.17	102.96			
	Sigor	95.55	91.17			

ADMINISTRATIVE UNIT		VEGETATION GREENNESS		DROUGHT CATEGORIES/REMARKS		
COUNTY	Sub County	VCI-3 month as at 30 <sup>th</sup> March 2020	VCI-3 month as at 27 <sup>th</sup> April 2020	Colour	VCI values (3-month)	Drought Category
					≥50	Vegetation greenness above normal
					>=35 - <50	Normal vegetation greenness
					>=20 - <35	Moderate vegetation deficit
					>=10 - <20	Severe vegetation deficit
					<10	Extreme vegetation deficit
EMBU	<b>County</b>	<b>94.75</b>	<b>94.92</b>	Enhanced vegetation condition across all the sub counties with vegetation greenness above normal in all parts of the county.		
	Manyatta	87.82	92.39			
	Mbeere North	94.69	93.57			
	Mbeere South	99.49	97.5			
	Runyenjes	84.92	91.15			
KITUI	<b>County</b>	<b>100.82</b>	<b>94.70</b>	The vegetation greenness is in the above normal range for the period.		
	Kitui Central	101.06	98.20			
	Kitui East	105.53	98.27			
	Mwingi Central	96.74	88.63			
	Mwingi North	87.05	76.87			
	Mwingi West	108.6	100.67			
	Kitui Rural	103.98	103.79			
	Kitui South	103.68	100.27			
	Kitui West	109.19	101.24			
MAKUENI	<b>County</b>	<b>102.65</b>	<b>99.46</b>	The county and its sub counties is in above normal vegetation greenness.		
	Kaiti	105.17	103.38			
	Kibwezi East	97.50	95.86			
	Kibwezi West	101.90	99.87			
	Kilome	108.19	105.12			
	Makueni	106.17	98.23			
	Mbooni	106.85	102.59			
MERU	<b>County</b>	<b>87.79</b>	<b>85.35</b>	The vegetation greenness is above normal across the county.		
	Buuri	93.11	92.30			
	Central Imenti	83.65	86.55			
	Igembe Central	90.24	82.13			
	Igembe North	89.97	80.13			
	Igembe South	78.97	75.26			
	North Imenti	89.00	90.26			
	South Imenti	76.05	85.82			
	Tigania East	86.72	82.68			
	Tigania West	99.63	99.46			



ADMINISTRATIVE UNIT		VEGETATION GREENNESS		DROUGHT CATEGORIES/REMARKS		
COUNTY	Sub County	VCI-3 month as at 30 <sup>th</sup> March 2020	VCI-3 month as at 27 <sup>th</sup> April 2020	Colour	VCI values (3-month)	Drought Category
					≥50	Vegetation greenness above normal
					>=35 - <50	Normal vegetation greenness
					>=20 - <35	Moderate vegetation deficit
					>=10 - <20	Severe vegetation deficit
					<10	Extreme vegetation deficit
NYERI	<b>County</b>	<b>86.96</b>	<b>86.66</b>	Vegetation greenness above normal in all parts of the county.		
	Kieni	85.36	83.79			
	Mathira	80.55	79.97			
	Mukurweini	106.61	106.72			
	Town	100.93	98.41			
	Othaya	86.81	90.37			
	Tetu	86.83	90.5			
KILIFI	<b>County</b>	<b>84.45</b>	<b>86.20</b>	The county and its sub counties is in above normal vegetation greenness.		
	Ganze	89.5	95.66			
	Kaloleni	89.99	100.39			
	Magarini	80.38	80.38			
	Malindi	80.7	83.46			
	Kilifi-North	88.51	82.41			
	Rabai	93.87	99.48			
	Kilifi-South	100.29	95.55			
KWALE	<b>County</b>	<b>97.41</b>	<b>101.81</b>	The vegetation greenness is in the above normal range for the period.		
	Kinango	106.65	105.45			
	Lungalunga	94.14	97.3			
	Matuga	90.54	96.54			
	Msambweni	92.00	93.58			
LAMU	<b>County</b>	<b>90.74</b>	<b>89.19</b>	The county and its sub counties is in above normal vegetation greenness.		
	Lamu East	89.8	88.89			
	Lamu West	91.28	89.36			
TAITA TAVETA	<b>County</b>	<b>105.70</b>	<b>107.94</b>	The vegetation greenness is above normal across the county.		
	Mwatate	107.2	107.36			
	Taveta	106.68	103.13			
	Voi	106.71	109.76			
	Wundanyi	113.42	112.32			
NAROK	<b>County</b>	<b>91.18</b>	<b>91.78</b>	Enhanced vegetation condition across all the sub counties with vegetation greenness above normal in all parts of the county.		
	Narok-East	96.41	97.00			
	Emurua Dikirr	90.84	83.02			
	Kilgoris	87.39	85.70			
	Narok North	83.4	84.99			
	Narok South	92.75	94.33			
Narok West	93.31	94.09				

## Annex 2.0 Summary of the drought early warning system

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

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

**Table 12.0: Indicators monitored by the drought early warning system**

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

Figure 2.0: Drought Phase Classification

