NATIONAL DROUGHT MANAGEMENT AUTHORITY

National Drought Early Warning Bulletin

May 2019

KEY HIGHLIGHTS

- The delayed onset of March to May long rains and the poor rainfall performance aggravated shortage of water and pasture and also had an adverse effect on farming activities across ASAL counties.

- By end of April, the number of counties in the alarm drought stage had increased to ten from five in March. Another 11 counties are currently at the alert drought level. Counties classified in the alarm drought phase include: Wajir, Mandera, Garissa, Marsabit, Turkana, West Pokot, Tana River, Samburu, Kilifi and Baringo.

- Average distances to water for both households and livestock increased in April compared to March and were also above the five-year average in nearly all ASAL areas. The increase in distances was mainly attributed to drying up of most surface water sources such as rivers, water pans and dams as a result of the prolonged dry spell.

- Indications of deterioration in vegetative condition was observed in most ASAL areas. As at end of April, three (3) sub counties were in the extreme vegetation deficit class, eight (8) counties recorded severe vegetation deficit while twelve counties were in the moderate vegetation deficit category.

Drought phase classification, April 2019

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

1.0 Drought status

1.1 Drought indicators

Rainfall

Most of the arid and semi-arid lands (ASAL) counties experienced sunny and dry weather conditions during the month of April 2019. However, in the last week of the month, light to moderate rainfall was experienced over several parts of the ASAL areas such as Baringo, Embu (Mbeere), Garissa (Benane, Danyere and Ijara) Kajiado, Isiolo (Isiolo Central), Marsabit, Wajir and Turkana. Overall, the delayed onset of March to May long rains and the poor rainfall performance aggravated shortage of water and pasture and also had an adverse effect on farming activities across the ASAL region.

Vegetation condition

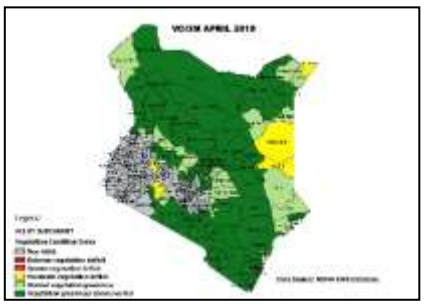
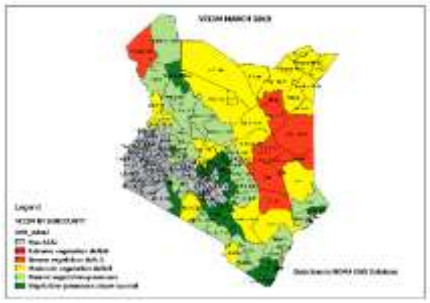
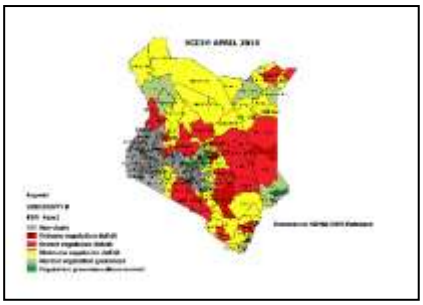
The month of April 2019 saw a continued decline in vegetation condition across ASAL counties. Currently, three (**3**) **sub counties**: Dadaab (Garissa), Kitui South (Kitui) and Tharaka (Tharaka Nithi) are in **extreme vegetation deficit** band while eight (**8**) **counties**: Baringo, Garissa, Kajiado, Kitui, Laikipia, Samburu, Tana River and West Pokot recorded **severe vegetation deficit**. The vegetation situation for each county as at end of April 2019 is provided in Table 1.

Table 1.0: Vegetation Condition Index, April 2019

Category	County	Sub Counties
Extreme vegetation deficit		Dadaab (Garissa) Kitui South (Kitui) Tharaka (Tharaka Nithi)
Severe vegetation deficit	Baringo Garissa Tana River West Pokot Laikipia Samburu Kajiado Kitui	Banissa & Mandera North (Mandera) Wajir South (Wajir) Isiolo South (Isiolo) Igembe North (Meru) Ganze & Kilifi North (Kilifi) Mwatate (Taita Taveta)
Moderate vegetation deficit	Mandera Turkana Taita Taveta Wajir Narok Tharaka Nithi Marsabit Kwale Isiolo Kilifi Meru Makueni	
Normal vegetation greenness	Lamu	
Vegetation greenness above normal	Embu Nyeri	

Figure 1 compares the vegetation condition index (VCI) in April 2019 with that in March 2019 and April 2018. The maps show that the vegetation condition in most ASAL counties is on a declining trend compared to last month. In addition, the current situation is worse compared to the state of vegetation during the same period last year. The downward trend in the state of vegetation across ASAL counties is attributed to the drier than average conditions experienced during the month of April 2019 and delay in the start of the MAM season rains.

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

Vegetation Condition Index (VCI), April 2018	Vegetation Condition Index (VCI), March 2019	Vegetation Condition Index (VCI), April 2019
		

Livestock production

Pasture and browse condition

Pasture and browse condition was fair to poor across the ASAL counties compared to good to fair normally.

Livestock body condition

Livestock body condition for most cattle and sheep was fair to poor while that of goats and camel was fair across counties. The current livestock body condition has slightly declined compared to last month due to the increase in trekking distances in search of pasture and water coupled with reduction in pasture and browse availability. Overall, the current body condition of most livestock is below normal when compared with a similar period of the year. Counties where livestock body condition shows signs of worsening include: Turkana, Garissa, Tana River, Kajiado, Marsabit and Baringo.

Milk production

Table 4 shows the trend in milk production in the 23 ASAL counties. Milk production in most ASAL counties is currently below the long term average which is attributed to poor availability of water, pasture and browse. In Tana River, for example, average milk produced per household per day is 48 percent below the LTA for the month. In the same way average milk production in Lamu, Mandera, Garissa, Samburu, Kajiado and Narok was below LTA by 69, 47, 44, 42, 39 and 38 percent respectively. The below average milk production was attributed to shortage and poor quality of both pasture and browse across all ASAL areas, with pastoral counties being the most affected.

Table 4.0: Milk production, April 2019

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

Cattle prices

Despite the prolonged dry spell, markets are still vibrant and functioning well as demonstrated by the stable trend in cattle prices which is largely attributed to good market demand and the fact that body condition of most cattle in counties such as: Baringo, Garissa, Isiolo, Kajiado, Kitui, Laikipia, Samburu, Turkana and Wajir is still fair. However, in other counties like Mandera, West Pokot, Marsabit, Tana River and Tharaka Nithi cattle prices dropped as a result of the declining forage and water scarcity.

Table 5.0: Cattle prices, April 2019

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

Goat prices

In nearly all ASAL areas, the current goat prices are above or are at the same level with the average price for the period. However, goat prices in Turkana, Wajir, Tana River, and West Pokot are below the three year average price due to high supply of goats in the market.

Table 6.0: Goat prices, April 2019

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

Livestock migration

Earlier than normal livestock migration were observed in a number of counties as herders moved in search of pasture and water. For example, in Laikipia, cases of internal migration were reported with livestock moving from Chumvi area to Ilgwesi in Mukogodo East Ward. In addition, animals from neighbouring Isiolo and Samburu counties were also moving to Mukogodo while at the same time migration of cattle from Ilgwesi area to Mount Kenya Forest had also started.

In Isiolo, internal movement of livestock from Isiolo Central and Oldonyiro to Nakuprat Gotu and Lososia conservancies was observed. Herders from Samburu and Wajir moved their livestock into dry season grazing reserves in Kom, Yamicha and Duma. Similarly, herders from Garissa County migrated into Isiolo South sub-county.

Cases of livestock migration within Baringo County were also reported with herders from the pastoral zones moving to areas such as Arabal, Paka Hills, Rugus, Kosechei, Kapau and Mochongoi.

In Tana River, about 60 percent of the livestock are currently in the Tana Delta and the normal movement of livestock out of the Delta area due to the wet conditions expected in April did not take place. High influx of livestock from north eastern region to Tana River were reported with some herders also moving their livestock further to Kitui.

In nearly all ASAL areas, livestock migration during the month of April is unusual because normally at this time of the year animals would be feeding in the wet season grazing areas which are located close to homesteads.

Livestock mortalities

In April, no unusual cases of livestock deaths were observed in the ASAL counties. However, death of sheep in Wamba West, Samburu County as a result of drought was reported during first half of the month. Coincidentally, heavy downpour experienced in the third week of April occasioned death of weak and emaciated sheep in Samburu Central sub county.

Delay in the season onset has impacted negatively on crop production in the marginal agricultural counties. By end of April, most farmers in areas such as Kitui, Embu (Mbeere), Makueni, Meru (Meru North), Narok, Nyeri (Kieni), Laikipia and Tharaka were mainly engaged in land preparation, planting or replanting, which is not usual because in a normal season, weeding would have been taking place. Considering the poor rainfall performance, it is expected that both acreage under cultivation and the likely yields will be below average by as much as 50 percent.

Maize prices

Maize prices went up sharply in April compared to March, for instance, in Kwale maize was retailing at Kshs 60 having increased by a 70 percent margin from Kshs 35 posted in March. The price recorded in April was also 30 percent higher than the three year average price of Kshs 46. Other counties where the current maize prices are above the long term mean include: Meru (Meru North) by 25 percent, Lamu - 24 percent, Isiolo - 23 percent, West Pokot - 21 percent, Embu (Mbeere) - 18 percent, Mandera - 17 percent, Tana River - 16 percent and Kilifi - 12 percent. The increase in maize price was attributed to a sudden shortage of maize that was occasioned by traders hoarding the produce in anticipation of a rise in maize prices.

Table 7.0: Maize prices

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

Access to water

In the month of April the average return distances to water for both households and livestock increased compared to those recorded during the previous month and were also above the five-year average in nearly all ASAL areas. The increase in distances was mainly attributed to drying

up of most surface water sources such as rivers, water pans and dams as a result of the prolonged dry spell.

Table 8.0: Distance from households to main water sources, April 2019

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

For example, in Kitui, the average return distances to water sources increased by 21 percent to stand at 7.6 km in April from 6.3 km in March hence the current distance travelled by households to fetch water is 29 percent above the long term mean. In Isiolo, average household return distances was 4.2 km compared to the long term mean of 3.1 km which is 35 percent above the usual distance.

Table 9.0: Distance from livestock grazing area to main water sources, April 2019

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

For instance, the average distance to water sources from grazing areas, in Garissa County increased from 18 km to 22 km during the month under review. In West Pokot, average trekking distance from the main water sources to grazing areas for livestock was 8.4 km, signifying an increase from 7.7 km reported in March. In comparison to the normal trekking distance of 5 km, the current trekking distance lies above the normal range by 68 percent.

Terms of trade

During the month under review the livestock-to-cereal terms of trade (ToT) were still favourable in most counties with 11 counties having a higher value than the long term average for the month while in seven counties the current ToT was close to LTA. The highest terms of trade was recorded in Meru (Meru North) where households could purchase 116 kg of maize from the sale of one goat, while Turkana recorded the lowest ToT at 38 kg of maize in exchange of an average sized goat. The good terms of trade in Meru North was attributed to the prevailing above average goat prices resulting from good body condition while the average price for maize in the county remained

stable. On the other hand, the low ToT recorded in Turkana was mainly as a result of a drop in the price of goats due to deterioration in body condition. In general, terms of trade were unfavourable in just a few counties, namely: Embu, West Pokot, Lamu and Kwale. The relatively disadvantaged situation for livestock keepers in these areas was caused by decrease in the price of goats while maize prices increased considerably. Table 8 shows the trend in the terms of trade (ToT) in ASAL counties.

Table 10.0: Terms of trade, April 2019

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

Health and nutrition

Table 11 summarizes the trend in the percentage of children at risk of malnutrition in ASAL counties. Overall, the situation in most ASAL areas is worsening. In the month of April, counties with a high proportion of children at risk of malnutrition were: Samburu - 26.7 percent, Mandera - 26.3, Garissa - 21.7, Turkana - 21.4, Meru (Meru North) - 18.9, Wajir - 18, Tana River - 17.3, Marsabit - 17.2, and Baringo - 14.8 percent. The increase in the proportion of children rated as being at risk of malnutrition during the month was attributed to decrease in milk production and consumption and reduction in the number of meal frequency and dietary diversity.

Table 11.0: Children at risk of malnutrition (MUAC), April 2019

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

1.2 Drought phase classification

In April, additional counties entered into the alarm drought stage, with the total number of counties in alarm, increasing from five (5) in March to 10 in April. Counties which are in the alarm stage are: Wajir, Mandera, Garissa, Marsabit, Turkana, Baringo, Kilifi, Samburu, Tana River and West Pokot. 11 counties are currently categorized in the alert drought phase. As at end of April, out of

the 23 ASAL counties, 10 were reporting a worsening trend.

Table 12.0: Drought phase classification, April 2019

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

2 Projected food security situation

Given the delayed season onset and below average rainfall performance which has resulted to a reduction in area cultivated, crop production is expected to be at least 50 percent below average.

Forage and water sources are expected to benefit from the modest rains received towards end of April. Distances from grazing areas to water sources will likely decrease to below average levels and hence livestock productivity will most probably realize some marginal improvement in terms of body condition and milk production.

Maize prices are expected to continue rising and therefore the likelihood of the purchasing power of livestock keepers remaining low shall be high as the terms of trade stagnate.

3 Recommendations

Close monitoring of the long rains performance to facilitate early response.

Agriculture: Considering the late onset and likelihood of insufficient rainfall during the MAM season, farmers are advised to plant drought tolerant and/or early maturing crops

Health and Nutrition: Up scaling of medical outreaches targeting counties exhibiting high malnutrition rates while promoting utilization of various methods of water treatment to minimize the risk of water borne disease outbreak.

Water: Intensify the repair of broken down water structures while installing water tanks at strategic points to facilitate effective water trucking in areas that are currently water stressed.

Livestock disease surveillance and enhance animal health services.

Food and Safety Net: Provision of relief food/cash to households requiring food assistance.

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.

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

ADMINISTRATIVE UNIT				DROUGHT CATEGORIES/REMARKS
COUNTY	**Sub County**	**VCI-3 month as at 25th March 2019**	**VCI-3 month as at 29th April 2019**	
BARINGO	**County**	**29.47**	**19.39**	**The county is in severe vegetation deficit with Baringo Central, Baringo South and Tiaty just marginally into the moderate vegetation deficit.**
	Central	37.48	22.65	
	Eldama	28.42	18.45	
	Mogotio	26.31	12.97	
	North	24.39	17.19	
	South	35.22	22.7	
	Tiaty	29.03	20.44	
MANDERA	**County**	**20**	**25.33**	**The county is in moderate vegetation deficit with two sub-counties in severe vegetation deficit. The recorded rains have yet to result into vegetation improvement.**
	Banissa	14.86	20.47	
	East	21.1	18.11	
	Lafey	19.67	21.54	
	North	14.7	18.35	
	South	28.39	37.96	
	West	19.71	27.31	
TURKANA	**County**	**37.31**	**30.28**	**Entire county in moderate vegetation deficit with pockets of normal conditions in 3 sub-counties.**
	Central	53	48.86	
	East	35.54	25.75	
	Loima	51.36	38.27	
	North	36	26.64	
	South	40.32	35.85	
	West	23.01	22.83	
MARSABIT	**County**	**23.79**	**24.19**	**The county and all sub-counties are experiencing moderate vegetation deficit.**
	Laisaimis	23.38	20.74	
	Moyale	20.34	30.31	
	North Horr	24.61	24.49	
	Saku	29.09	25.76	
WAJIR	**County**	**17.91**	**23.92**	**County in moderate vegetation deficit with 1 sub-county (Wajir South) in severe vegetation deficit and Wajir North within normal bands.**
	W. East	21.14	29.79	
	Eldas	16.13	24.82	
	W. North	28.89	37.18	
	W. South	11.48	15.01	
	Tarbaj	22.26	30.94	
	W. West	17.33	21.12	

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

COUNTY	Sub County	VCI-3 month as at 25th March 2019	VCI-3 month as at 29th April 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
SAMBURU	**County**	**24.37**	**17.8**	**Severe vegetation deficit across entire county but with moderate vegetation deficit for Samburu North**		
	S. East	17.85	14.39			
	S. North	31.41	21.46			
	S. West	26.65	19.1			
GARISSA	**County**	**18.34**	**19.07**	**Severe vegetation deficit for entire county but with Extreme deficit conditions for Daadab sub-county.**		
	Balambala	19.81	15.86			
	Daadab	10.22	9.95			
	Fafi	12.73	15.22			
	Ijara	36.28	38.87			
	Lagdera	17.74	16.48			
	Dujis	16.06	14.38			
ISIOLO	**County**	**23.65**	**21.47**	**Moderate vegetation deficit condition across the entire county with Isiolo South sub-county in severe vegetation deficit.**		
	I. North	24.45	22.87			
	I. South	22.43	19.33			
TANA RIVER	**County**	**21.01**	**18.46**	**Severe vegetation deficit condition for the county but with moderate conditions for Garsen.**		
	Bura	17.95	15.18			
	Galole	16.77	14.66			
	Garsen	26.25	23.63			
KAJIADO	**County**	**27.86**	**17.07**	**County in moderate vegetation deficit. Kajiado North records moderate conditions at sub-county level.**		
	K. Central	25.17	14.55			
	K. East	32.06	16.07			
	K. North	34.63	20.94			
	K. South	33.17	19.95			
	K. West	23.12	16.5			
LAIKIPIA	**County**	**21.25**	**13.62**	**Severe vegetation deficit for the county and sub-counties.**		
	L. East	31.46	17.79			
	L. North	21.88	14.2			
	L. West	15.13	10.53			
THARAKA NITHI	**County**	**40.91**	**25.99**	**Moderate vegetation deficit conditions for the county with Tharaka recording extreme deficit.**		
	Chuka	61.68	45.79			
	Maara	67.85	55.7			
	Tharaka	24.47	9.04			
WEST POKOT	**County**	**21.7**	**18.7**	**Severe vegetation deficit across the county and sub-counties.**		
	Kacheliba	22.16	18.95			
	Kapenguria	20.5	17.25			
	Pokot South	21.42	19.4			
	Sigor	22.03	19.04			

ADMINISTRATIVE UNIT				DROUGHT CATEGORIES/REMARKS
COUNTY	**Sub County**	**VCI-3 month as at 25th March 2019**	**VCI-3 month as at 29th April 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

EMBU	**County**	**49.81**	**49.81**	**Vegetation greenness normal to above normal ranges for the period.**
	Manyatta	73.95	73.95	
	Mbeere North	37.41	37.41	
	Mbeere South	44.19	44.19	
		71.7	71.7	
KITUI	**County**	**26.61**	**16.27**	**Moderate vegetation deficit for county. Kitui East and Mwingi East in Severe vegetation deficit for the period while Kitui South experienced Extreme vegetation deficit.**
	Kitui Central	60.55	37.41	
	Kitui East	27.99	15.72	
	Mwingi Central	27.86	17.31	
	Mwingi North	27.11	21.63	
	Mwingi West	46.41	30.18	
	Kitui Rural	49.34	28.2	
	Kitui South	18.27	9.82	
	Kitui West	48.39	28.06	
MAKUENI	**County**	**47.47**	**28.65**	**Moderate vegetation deficit with only Kaiti recording normal conditions for the period.**
	Kaiti	72.26	53.68	
	Kibwezi East	35.63	20.04	
	Kibwezi West	48.23	28.18	
	Kilome	50.11	28.27	
	Makueni	49.69	30.67	
	Mbooni	57.56	36.44	
MERU	**County**	**43.17**	**32.75**	**Moderate vegetation deficit for the county with Igembe North in severe deficit for the period.**
	Buuri	45.71	38.15	
	Central Imenti	58.63	49.68	
	Igembe Central	31.66	20.73	
	Igembe North	30.76	19.76	
	Igembe South	34.68	24.04	
	North Imenti	55.44	43.33	
	South Imenti	70.6	61.49	
	Tigania East	38.02	25.96	
	Tigania West	46.8	28.92	

ADMINISTRATIVE UNIT				DROUGHT CATEGORIES/REMARKS
COUNTY	**Sub County**	**VCI-3 month as at 25th March 2019**	**VCI-3 month as at 29th April 2019**	
NYERI	**County**	**61.01**	**51.84**	**The vegetation greenness is normal/ above normal across the entire county.**
	Kieni	50.7	43.9	
	Mathira	77.41	71.56	
	Mukurweini	71.61	53.23	
	Town	63.94	46.66	
	Othaya	77.11	64.09	
	Tetu	71.39	58.13	
KILIFI	**County**	**34.4**	**27.32**	**Moderate vegetation deficit across the county with Ganze and Kilifi North experiencing severe vegetation deficit conditions for the period.**
	Ganze	29.13	16.77	
	Kaloleni	44.11	31.01	
	Magarini	35.83	32.69	
	Malindi	31.77	22.28	
	Kilifi-North	28.85	18.65	
	Rabai	48.38	32.5	
	Kilifi South	38.56	27.46	
KWALE	**County**	**43.91**	**34**	**Moderate vegetation deficit conditions for Kwale with normal conditions in Matuga and Msambweni.**
	Kinango	41.11	32.49	
	Lungalunga	40.56	27.29	
	Matuga	59.64	49.07	
	Msambweni	52.96	45.56	
LAMU	**County**	**48.69**	**49.61**	**Normal conditions for the county**
	Lamu East	53.32	53.69	
	Lamu West	46.02	47.26	
TAITA TAVETA	**County**	26.04	20.46	**Moderate vegetation deficit for the county with Mwatate experiencing severe vegetation deficit.**
	Mwatate	23.48	17.7	
	Taveta	23.38	22.14	
	Voi	27.36	20.5	
	Wundanyi	32.36	21.15	
NAROK	**County**	42.53	31.75	**Moderate vegetation conditions for the period for the county with Emurua Dikirr and Kilgoris recording normal conditions for the period.**
	Narok-East	35.73	20.46	
	Emurua Dikirr	53.74	45.25	
	Kilgoris	50.29	52.35	
	Narok-North	31.32	21.75	
	Narok-South	40.94	30.63	
	Narok-West	47.97	31.74	

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

Annex 2.0 Summary of the drought early warning system

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

Four types of indicator are monitored, capturing different kinds of impact (Table 13). The combined analysis from all four indicator groups then determines the particular drought phase: normal, alert, alarm, emergency or recovery (Figure 2). Identifying the correct drought phase helps to guide the most appropriate response for that stage in the drought cycle.

Table 13.0: Indicators monitored by the drought early warning system

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

Figure 2.0: Drought Phase Classification