NATIONAL DROUGHT MANAGEMENT AUTHORITY

National Drought Early Warning Bulletin

February 2020

KEY HIGHLIGHTS

- January is normally a dry month across the arid and semi arid (ASAL) counties. This year, however, the 2019 October-November-December (OND) short rains season which usually terminates in December extended to January 2020. As a result, by the end of the month most ASAL counties had received cumulative rainfall that was above their January long term average.

- Return distances to water for households have generally reduced in all the 23 ASAL counties. Similarly, in nearly all ASAL counties access to water for livestock is currently below the seasonal average.

- Early onset of the October-November-December (OND) 2019 seasonal rainfall coupled with the above normal rainfall performance during the months of October to January has positively impacted on the pasture and browse condition. This has reduced distances covered between water points and grazing fields which has resulted to improvement in overall livestock productivity including substantial increase in milk production.

- Generally the October to December rainy season has been favourable to crop production and the condition of crops especially in the marginal agricultural counties is promising hence households expect to get a good harvest. In parts of the ASAL counties, farmers have already harvested beans, green grams and cowpeas while harvesting of maize, sorghum and millet was ongoing.

- The nutrition status of children in most counties improved this month with 18 counties now on a stable or improving trend. This improvement was attributed to higher milk consumption in pastoral counties and improved dietary diversity due to availability of green vegetables and pulses in the marginal agricultural counties.

- Following the good rains received since October 2019, environmental indicators in most ASAL counties have remained within the seasonal ranges and therefore, currently all counties are categorized in the normal drought phase, with the trend improving in 6 counties and remaining stable in 17 counties.

Drought phase classification, January 2020

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

1.0. Drought status

1.1 Drought indicators

Rainfall

During the October-November-December (OND) short rains season, most arid and semi arid (ASAL) counties recorded enhanced rainfall that was also fairly distributed both in time and space. Normally, January is a dry month but in 2020 most ASAL counties received rainfall that was above their January long term average. For instance, counties such as: Garissa, Kajiado, Embu, Narok, Taita Taveta, Makueni and Kilifi received rainfall that exceeded 125 percent of their long term mean for January.

Vegetation condition

Figure 1 compares the vegetation condition index (VCI) in late December 2019 with that in late January 2020. The good performance of the October-November-December (OND) 2019 seasonal rainfall is evident as it has led to significant rejuvenation of vegetation in the entire ASAL region. Therefore, as at end of January 2020 all arid and semi-arid counties were categorized in the above normal vegetation greenness band which is similar to the situation reported last month.

Figure 1: Comparison of Vegetation Condition Index (VCI), December 2019 and January 2020

Vegetation Condition Index (3 Month) December 2019	Vegetation Condition Index (3 Month) January 2020

Water sources

The rainfall has been sufficient to recharge most of the open water sources, improving the quantity and quality of water and reducing distances and waiting time. For example, in Baringo County most water pans and dams are holding water amounts of between 70 and 80 percent of their full capacity, while in Marsabit 80 percent of all open water sources are fully recharged and in Kitui County pans and dams have also impounded water to above normal levels. In most ASAL counties, majority of the main water sources are likely to last for more than three months.

Livestock production

The October-November-December rains have positively impacted on the pasture and browse condition. This has reduced distances covered between water points and grazing fields which has

resulted to improvement in overall livestock productivity including substantial increase in milk production.

Pasture and browse condition

Condition of pasture and browse in January in almost all the arid and semi-arid counties was good as depicted in Table 1. The observed state of pasture and browse in terms of both quantity and quality was above that normally experienced at such a time of the year in most ASAL areas and was attributed to the enhanced rainfall received in during the October to December rainfall season.

Table 1.0: Pasture and browse condition, January 2020

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

Livestock body condition

As presented in Table 2, livestock body condition has continued on an improving trend which is largely attributed to the increased availability of forage and water.

Table 2.0: Livestock body condition, January 2020

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

Milk production

Table 3 illustrates the trend in milk production in the 23 ASAL counties. Across the ASAL areas improvement in forage and water availability has led to enhanced livestock body condition consequently resulting to increased productivity. In Isiolo County, for example, the amount of milk produced per day per household increased by 32 percent to 3.7 litres in January from 2.8 litres in December. Likewise in Kajiado, average milk production per household per day rose by 25 percent

from 2.4 litres in December to 3 litres in January while in Kilifi, Makueni, Kitui, Tana River and Narok average milk production increased by 25, 23, 18, 14 and 12 percent respectively.

However, milk production fell in a few counties such as Turkana, Kwale, Meru and Taita Taveta. For instance, in Turkana, average milk production per household per day reduced by 10 percent from 2.1 litres in December to 1.9 litres in January. All the same, the amount of milk produced during the month under analysis was above the five-year average by 12 percent which was accredited to availability of browse and pasture that was also easily accessible to livestock coupled with the good calving rate recorded in January.

Table 3.0: Milk production, January 2020

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

Cattle prices

As shown Table 4, enhanced market prices continued to be observed in cattle prices driven by improved livestock body condition as a result of good availability of forage and water. For example, in Samburu County the current average price for cattle was above the 2016 - 2018 average by 24 percent, similar to Mandera where average cattle prices increased by 13 percent to Kshs 20,500 in January from Kshs 18,100 in December.

Table 4.0: Cattle prices, January 2020

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

Goat prices

Table 5 summarizes the trend in goat prices in January in the 23 ASAL counties. During the month under review goat prices in nealy all ASAL counties were above average or close to LTA. The above average prices for goats was attributed to their good body condition. For example, in Kajiado County the average price of a two-year old goat in January was Kshs 4,660 which was 36 percent above the three-year average price of Kshs 3,430.

Table 5.0: Goat prices, January 2020

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

Crop production

Generally the October to December rainy season has been favourable to crop production and the condition of crops especially in the marginal agricultural counties is promising hence households expect to get a good harvest. For instance, in Embu (Mbeere) farmers have already harvested beans, green grams and cowpeas while harvesting of maize, sorghum and millet was ongoing. In Kitui crops are in good condition and harvesting of maize, cowpeas, beans, pigeon peas and green grams has started. Similarly in Kwale, Makueni and Tharaka maize, cowpeas, beans, pigeon peas and green grams were at the physiological maturity stage and harvesting was ongoing.

In January 2020, Desert Locust infestations were reported in a number of the arid and semi-arid counties including Mandera, Marsabit, Wajir, Isiolo, Garissa, Samburu, Baringo, Meru, Laikipia, Embu, Kitui and Tharaka Nithi. The infestation poses a substantial risk to food security and livelihoods of the ASAL communities who are mainly pastoralists and stallholder farmers.

Maize prices

Maize price trends in the ASAL counties are demonstrated in Table 6. In close to 70 percent of the counties, maize prices recorded in January were higher than usual compared with the 2016 - 2018 average. The high average maize price is attributed to poor crop harvest in the previous season which has led to limited maize stocks at household level and consequently creating a high demand of the maize in the local markets.

Table 6.0: Maize prices, January 2020

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

Access to water

Return distances to water for both households and livestock was largely favourable as most parts of the ASAL region continued to receive significant amounts of rainfall. For instance, in Garissa, the average return distance from household to water sources reduced from 4.2 km in December to 3.2 km in January, while in Narok the average distance for households declined by 10 percent from 1.7 to 1.5 km. The trend in distances walked by households to access water is provided in Table 7.

Table 7.0: Distance from households to main water sources, January 2020

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

Table 8 shows the trend in the distance trekked by livestock in search of water. Average return distances to water for livestock in many areas reduced in January as a result of the off season rains received during the month. In most ASAL counties access to water for livestock was below the seasonal average. For example, compared to the long term average trekking distance for the month of January the current average distance for livestock in Marsabit was shorter by 62 percent. Also in Kajiado County, the average trekking distance to water points for livestock of 4.6 km was 43 percent shorter than the normal distance of 8 km.

Table 8.0: Distance from livestock grazing areas to main water sources, January 2020

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

Terms of trade

In almost 80 percent of the ASAL counties the terms of trade (ToT) improved or remained stable in January 2020. An indication that households could obtain more kilogrammes of maize from the sale of a goat than they did during the previous month The lagest improvements were in Taita Taveta, Nyeri and Tharaka, where terms of trade appreciated by 61, 32 and 26 percent respectively. In 17 counties, the current ToT were above or close to the long term average for the month implying a favourable situation for livestock producers. In most counties the improvement in ToT is generally a reflection of rising goat prices. Table 9 summarizes the movements of ToT on the previous month and the trend.

Table 9.0: Terms of trade, January 2020

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

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 18 counties now on a stable or improving trend. This improvement was attributed to higher milk consumption in pastoral counties and improved dietary diversity due to availability of green vegetables and pulses in the marginal agricultural counties. Table 10 shows the trend in the proportion of children at risk of malnutrition across the ASAL counties.

Table 10.0: Children at risk of malnutrition (MUAC), January 2020

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

1.2 Drought phase classification

Table 11 shows the trend in drought status in the 23 ASAL counties. Following the good rains received since October 2019, environmental indicators in most ASAL counties have remained within the seasonal ranges and therefore, currently all counties are categorized in the normal drought phase, with the trend improving in 6 counties and remaining stable in 17 counties.

Table 11.0: Drought phase classification, January 2020

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

2 Projected food security situation

The rains received during the period from October to January is likely to sustain good conditions of pasture and browse which in turn is expected to maintain good body condition for livestock thus improved productivity.

Livestock body condition is expected to remain good to fair in the next three months due to the current good quantity and quality of browse and pasture in nearly all ASAL counties.

Market prices both for livestock and food commodities are likely to remain stable which will most probably translate to favourable terms of trade for livestock keepers.

Owing to the expected good livestock body condition and stable calving rates, households will be able to produce and consume more milk which is likely to keep malnutrition rates in children at low levels.

Desert locust infestation which is currently being experienced in the ASAL areas is likely to result in damage to browse and pasture and might also impact negatively on the late planted crops. Although, so far the effects of the desert locust invasion on both livestock and crop production has been minimal.

3 Recommendations

Agriculture

- Considering the ongoing desert locust infestation, both county and national governments should enhance measures to control the pest.
- Promotion of rain water harvesting technologies for crop production.
- Provision of farm inputs such as subsidized fertilizer and certified seeds in preparation for the MAM season
- Promotion of appropriate post-harvest management practices.

Livestock

- Promote pasture conservation including deferred grazing management in order to avoid quick destruction and depletion of the available pasture hence enable pastoralists to use it for a longer period.
- Conduct livestock vaccination campaigns and other disease control interventions

Water

- Rehabilitation of water catchments
- Repair and desilting of dams and water pans

Health and nutrition

- Intensify health promotion campaigns
- 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 27th January 2020

ADMINISTRATIVE UNIT		VEGETATION GREENNESS		DROUGHT CATEGORIES/REMARKS
COUNTY	**Sub County**	**VCI-3 month as at 30th Dec 2019**	**VCI-3 month as at 27th Jan 2020**	
BARINGO	**County**	86.29	92.75	**Following some rains received in October, November, December and January the vegetation greenness in all sub-counties is above normal.**
	Central	83.91	84.31	
	Eldama	75.15	74.7	
	Mogotio	91.3	95.62	
	North	80.15	84.29	
	South	86.31	91.12	
	Tiaty	89.9	100.86	
MANDERA	**County**	90.4	91.27	**Enhanced vegetation condition across all the sub counties with vegetation greenness above normal in all parts of the county.**
	Banissa	86.89	91.19	
	M East	85.37	82.88	
	Lafey	90.56	91.41	
	M North	92.73	98.51	
	M South	91.35	90.27	
	M West	90.42	86.97	
TURKANA	**County**	90.48	92.39	**The vegetation greenness is above normal across the county.**
	T Central	91.13	99.24	
	T. East	71.2	78.36	
	T. Loima	108.15	119.49	
	T. North	85.7	81.83	
	T. South	84.41	101.46	
	T. West	102.6	91.49	
MARSABIT	**County**	82.13	88.3	**The vegetation greenness is in the above normal range for the period.**
	Laisaimis	86.43	92.17	
	Moyale	89.84	91.47	
	N. Horr	76.71	84.73	
	Saku	101.15	99.15	
WAJIR	**County**	78.82	83.15	**The county and its sub counties is in above normal vegetation greenness.**
	W East	94.32	93.85	
	W.Eldas	75.18	71.64	
	W. North	95.64	92.8	
	W. South	68.44	77.63	
	W.Tarbaj	92.03	86.49	
	W West	67.41	86.52	
SAMBURU	**County**	74.9	85.6	**The vegetation greenness is in the above normal range for the period.**
	S East	72.4	81.93	
	S. North	76.79	88.1	
	S. West	78.64	91.79	

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

ADMINISTRATIVE UNIT		VEGETATION GREENNESS		DROUGHT CATEGORIES/REMARKS
COUNTY	**Sub County**	**VCI-3 month as at 30th Dec 2019**	**VCI-3 month as at 27th Jan**	

Colour	VCI values (3-month)	Drought Category
	≥50	Vegetation greenness above normal
	>=35 - <50	Normal vegetation greenness

			2020			
					>=20 - <35	Moderate vegetation deficit
					>=10 - <20	Severe vegetation deficit
					<10	Extreme vegetation deficit
GARISSA	**County**	69.73	74.31	**The county and its sub counties is in above normal vegetation greenness.**		
	Balambala	63.11	75.61			
	Daadab	57.85	66.33			
	Fafi	75.85	72.39			
	Ijara	83.06	86.57			
	Lagdera	55.32	73.02			
	Dujis	72.52	60.7			
ISIOLO	**County**	70.41	84.17	**Enhanced vegetation condition across all the sub counties with vegetation greenness above normal in all parts of the county.**		
	I. North	73.87	85.68			
	I. South	65.11	81.85			
TANA RIVER	**County**	81.27	89.64	**The vegetation greenness is above normal across the county.**		
	Bura	65.61	73.39			
	Galole	82.24	95			
	Garsen	93.95	100.09			
KAJIADO	**County**	81.8	90.72	**The vegetation greenness is in the above normal range for the period.**		
	K. Central	76.63	85.6			
	K. East	85.33	85.94			
	K. North	63.43	71.56			
	K. South	93.99	97.92			
	K. West	73.72	90.28			
LAIKIPIA	**County**	80.93	87	**Enhanced vegetation condition across all the sub counties with vegetation greenness above normal in all parts of the county.**		
	L. East	84.28	87.08			
	L. North	81.05	89.06			
	L. West	79.11	83.11			
THARAKA NITHI	**County**	63.02	70.52	**The county and its sub counties is in above normal vegetation greenness.**		
	Chuka	69.96	70.25			
	Maara	62.23	64.86			
	Tharaka	60.65	72.43			
WEST POKOT	**County**	84.79	89.8	**The vegetation greenness is above normal across the county.**		
	Kacheliba	85.28	90.72			
	Kapenguria	88.1	92.23			
	Pokot South	84.09	89.57			
	Sigor	81.52	86.23			
EMBU	**County**	77.89	78.74	**Enhanced vegetation condition across all the sub counties with vegetation greenness above normal in all parts of the county.**		
	Manyatta	56.73	68.91			
	Mbeere North	77.31	78.62			
	Mbeere South	87.25	84.22			
	Runyenjes	68.24	69.58			

ADMINISTRATIVE UNIT						
COUNTY	**Sub County**	**VCI-3 month as at 30th Dec 2019**	**VCI-3 month as at 27th Jan 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
KITUI	**County**	71.29	80.84	**The vegetation greenness is in the above normal range for the period.**		
	Kitui Central	88.81	84.75			

	Kitui East	72	82.95	
	Mwingi Central	78.45	83.96	
	Mwingi North	67.26	77.28	
	Mwingi West	89.18	85.2	
	Kitui Rural	90.11	85.93	
	Kitui South	64	78.72	
	Kitui West	92.81	86.42	
MAKUENI	**County**	91.94	86.62	**The county and its sub counties is in above normal vegetation greenness.**
	Kaiti	100.66	96.52	
	Kibwezi East	75.45	76.03	
	Kibwezi West	89.91	83.76	
	Kilome	105.15	98.38	
	Makueni	106.77	94.46	
	Mbooni	97.03	91.28	
MERU	**County**	74.07	77.97	**The vegetation greenness is above normal across the county.**
	Buuri	70.34	74.71	
	Central Imenti	68.34	72.23	
	Igembe Central	81.56	85.45	
	Igembe North	81.39	86.14	
	Igembe South	80.34	84.31	
	North Imenti	68.28	65.63	
	South Imenti	62.1	65.42	
	Tigania East	72.3	77.95	
	Tigania West	74.78	76.5	
NYERI	**County**	70	73.13	**Vegetation greenness above normal in all parts of the county.**
	Kieni	71.45	72.46	
	Mathira	61.1	58.14	
	Mukurweini	75.5	88.36	
	Town	82.85	90.02	
	Othaya	67.96	79.05	
	Tetu	65.75	73.9	
KILIFI	**County**	82.73	86.32	**Enhanced vegetation condition across all the sub counties with vegetation greenness above normal in all parts of the county.**
	Ganze	83.69	85.55	
	Kaloleni	82.85	85.52	
	Magarini	85.91	87.66	
	Malindi	75.27	81.07	
	Kilifi-North	77.34	82.25	
	Rabai	78.33	85.77	
	Kilifi-South	81.52	86.2	
KWALE	**County**	85.02	89.34	**The vegetation greenness is in the above normal range for the period.**
	Kinango	86.49	89.67	
	Lungalunga	88.08	91.33	
	Matuga	77.03	86.23	
	Msambweni	73.21	83.7	
LAMU	**County**	85.53	87.73	**The county and its sub counties is in above normal vegetation greenness.**
	Lamu East	80.42	84.72	
	Lamu West	88.48	89.47	

ADMINISTRATIVE UNIT		**VEGETATION GREENNESS**		**DROUGHT CATEGORIES/REMARKS**
COUNTY	**Sub County**	**VCI-3 month as at 30th Dec 2019**	**VCI-3 month as at 27th Jan 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
TAITA TAVETA	**County**	98.4	93.74	**The vegetation greenness is above normal across the county.**		
	Mwatate	97.07	98.28			
	Taveta	107.18	96.23			
	Voi	94.66	91.19			
	Wundanyi	103.52	95.92			
NAROK	**County**	72.12	81.27	**The vegetation greenness is in the above normal range for the period.**		
	Narok-East	84.15	91			
	Emurua Dikirr	86.96	89.49			
	Kilgoris	68.8	77.31			
	Narok-North	63.37	74.11			
	Narok-South	73.69	81.73			
	Narok-West	70.94	81.92			

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
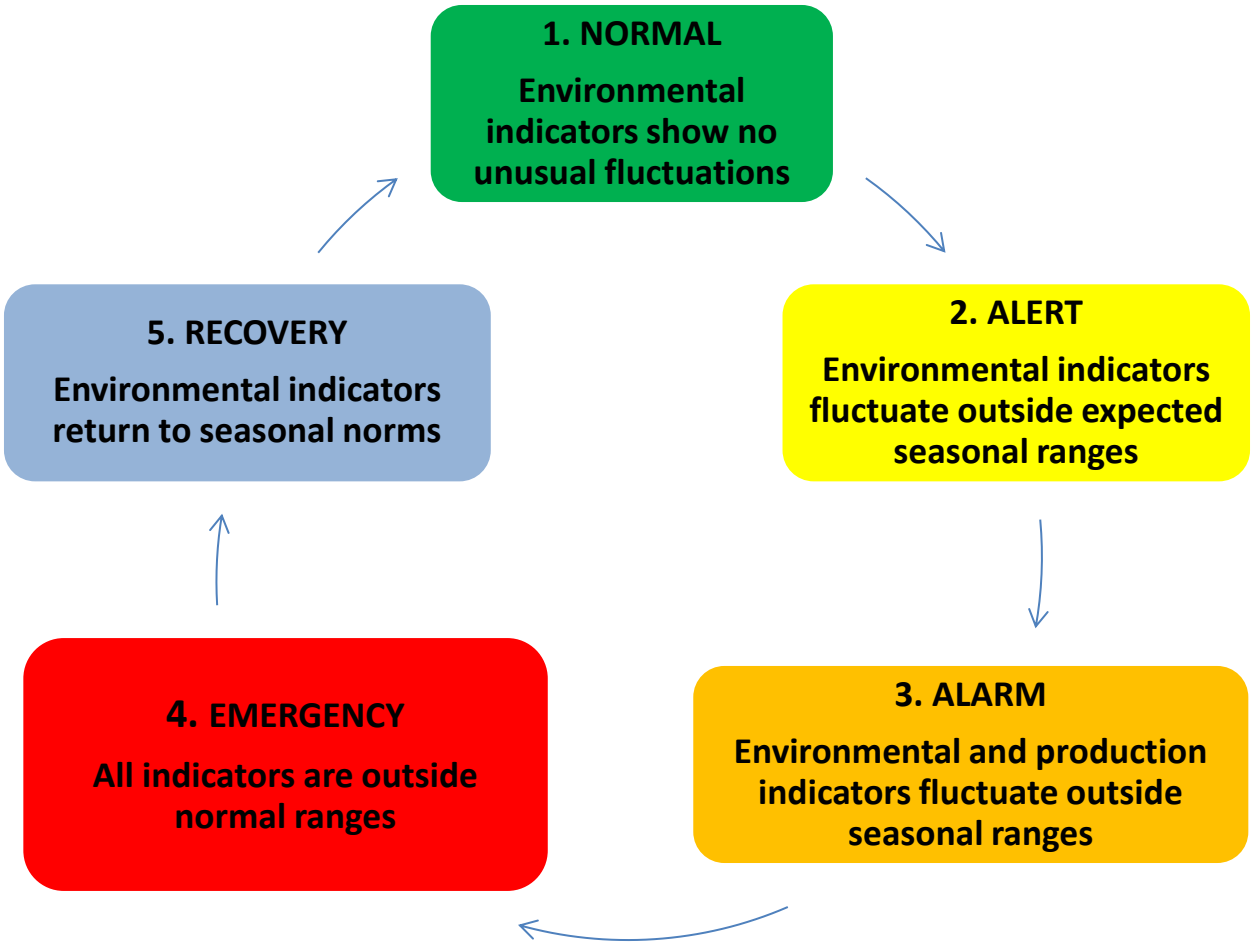
Figure 2.0: Drought Phase Classification