NATIONAL DROUGHT MANAGEMENT AUTHORITY

National Drought Early Warning Bulletin

NOVEMBER 2022

1. Drought Situation Overview

The drought situation remained critical in twenty **(20)** of the 23 ASAL counties during the month of November 2022. The reported rains in pocket areas of the ASALs are yet to reverse the current drought situation. The situation may slightly improve especially on environmental indicators.

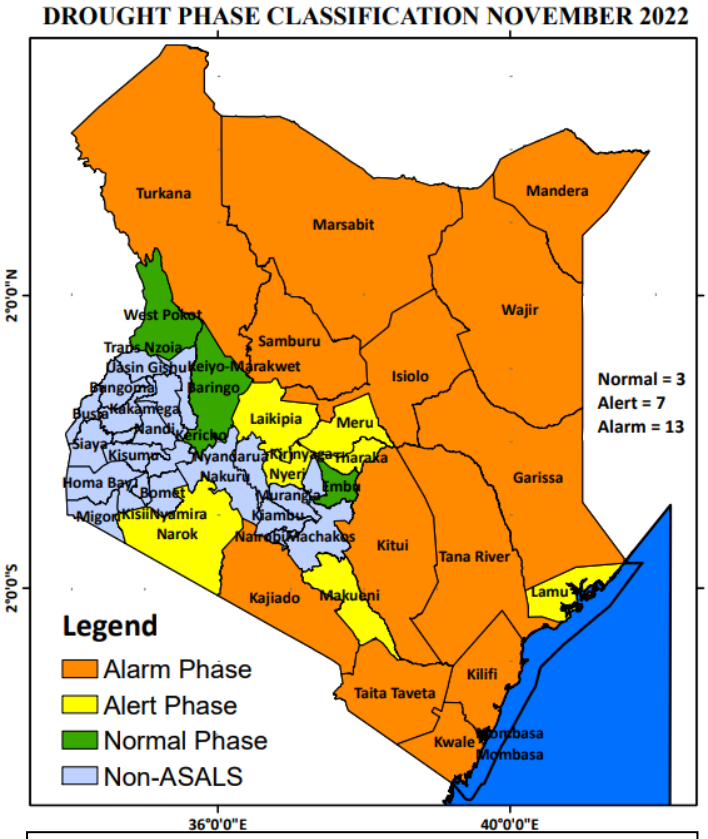

Fig 1: Drought Phase Classification

This is attributable to four failed rain seasons coupled with delayed onset of the OND 2022 rains in most parts of the ASALs. The impact of sustained drought situation has seen the number of people requiring humanitarian assistance stand at 4.35 million. Risks of Acute malnutrition continue to be reported in ASAL counties where 942,000 cases of children aged 6-59 months and 134,000 cases of pregnant or lactating women acutely malnourished continue to access treatment.

1.1 Drought phase classification

During the reporting month, only the county of Laikipia slightly improved to Alert phase leaving **Thirteen (13)** counties namely; Taita Taveta, Isiolo, Kilifi, Kwale, Samburu, Turkana, Wajir, Kitui, Kajiado, Mandera, Garissa, Tana River and Marsabit are in **Alarm drought phase**. **Seven (7)** counties including; Narok, Tharaka Nithi, Makueni, Nyeri, Meru and Laikipia are in the **Alert drought phase**. The remaining **three (3)** counties including Baringo, West Pokot and Lamu are in **Normal drought phase**.

1.1 Drought observed indicators

1.1.1 November Rainfall Performance

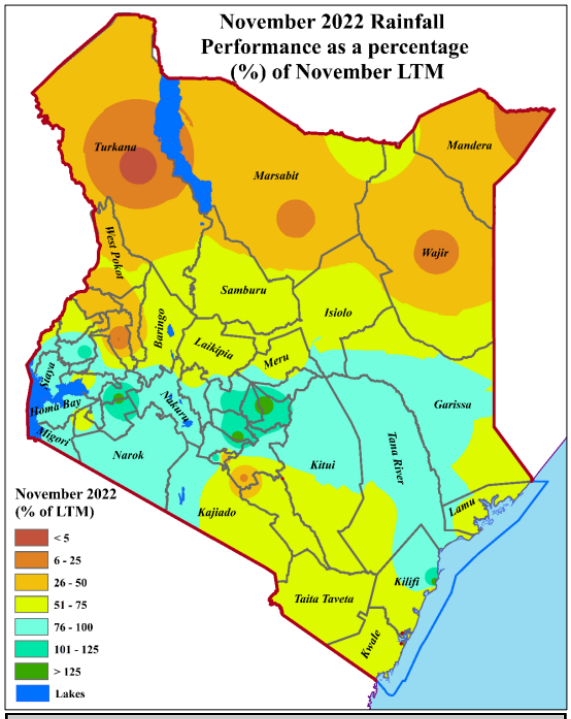

Figure 2. November 2022 Rainfall Performance

Analysis of the November 2022 monthly rainfall indicates that several parts of the ASALs counties experienced depressed rainfall including Pastoral North East (PNE), South East Marginal Agriculture (SEMA), Coast Marginal Agriculture (CMA) and Pastoral North West (PNW) clusters received 50% of the November long term mean. The PNE counties including; Mandera, Wajir, Isiolo, Tana River and parts of Garissa received less than 50% of the October LTM. However, Garissa and Tana River counties received between 76-100 mm of rainfall. The SEMA counties; Tharaka Nithi Embu, Kajiado, Meru, Makueni and Kitui counties received enhanced rainfall with some parts recording between 101-125 mm of rainfall. The CMA counties; Kwale, Kilifi and Lamu counties received between 50-75 mm of rainfall. The AGP cluster; Baringo and West Pokot did not receive notable rainfall during the month under review, however, Narok county received good rainfall between 76-100mm of rainfall amounts. Figure 2.0. Shows rainfall performance.

1.1.2 Rainfall outlook for December

The rainfall outlook for the month of December is illustrated in figure 3. Most ASAL counties in the following clusters; PNE, SEMA, AGP and CMA livelihood zones including; Marsabit, Samburu, Isiolo, Wajir, Mandera, Garissa, Meru, Kitui, Tana River, Lamu, Kilifi, Kwale, Taita Taveta, Makueni, Tharaka Nithi, Embu and Kajiado are forecasted to received depressed rainfall. Parts of PNE, including Mandera and parts of Wajir and northern eastern parts of Marsabit are forecasted to recieve near average to below rainfall during the month of December.

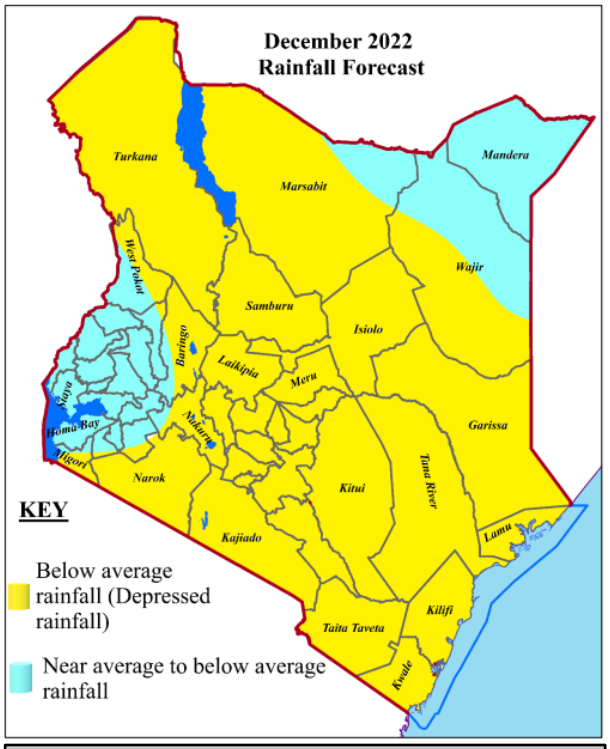

Figure 3. December 2022 Rainfall forecast

Parts of agropastoral clusters including southern parts of west Pokot and western parts of Baringo counties are forecasted to recieve near average to below rainfall during the month of december. Figure 3.0. Shows rainfall forecast for December 2022.

1.2 Vegetation condition

Generally, the vegetation condition in November 2022 has slightly deteriorated as compared to the previous month of October 2022.

Fig 4: VCI values for October 2022 and November VCI 2022

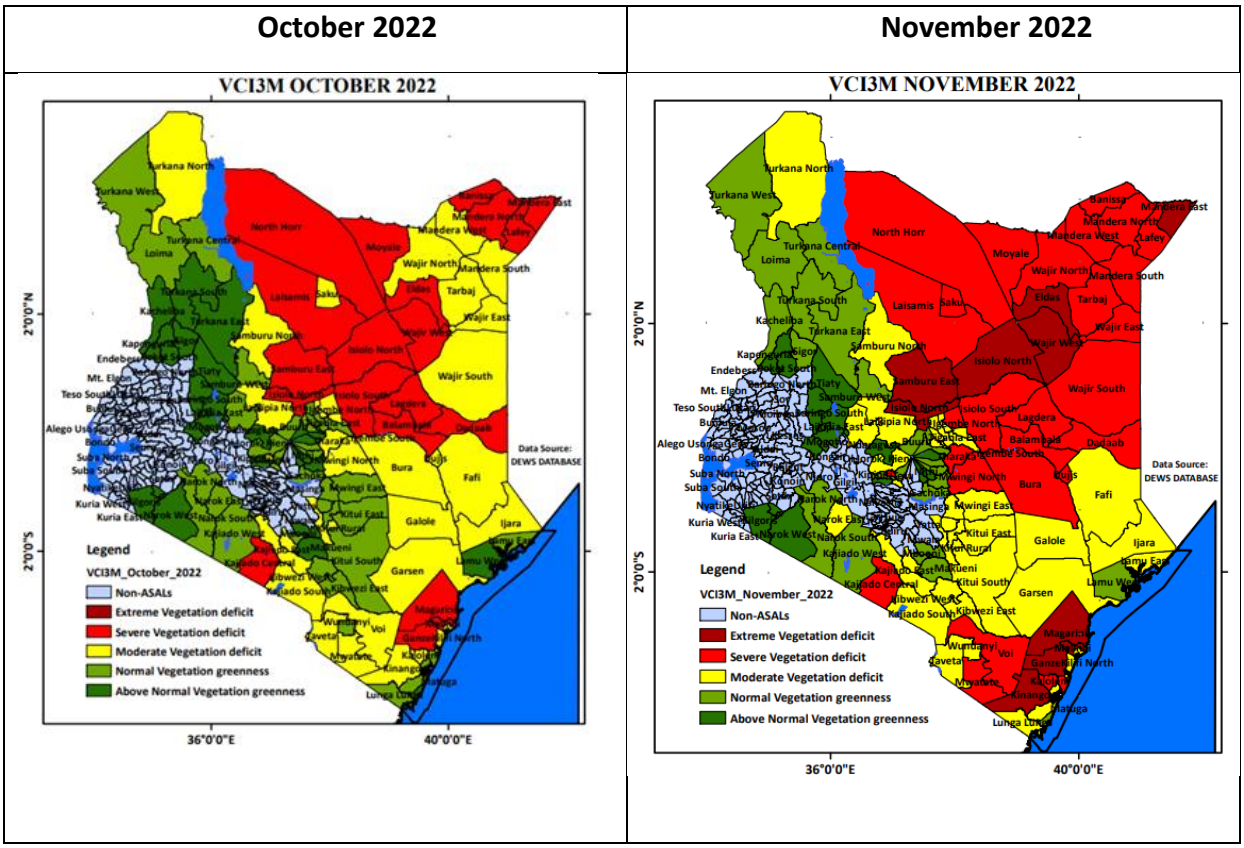

Figure 4: Maps comparing Vegetation Condition (VCI) October 2022 and November 2022

The month of November 2022 indicated alarming deterioration in vegetation condition across the Arid and Semi-Arid (ASAL) counties as compared to the previous month of October 2022. The alarming deterioration associated with ongoing poor performance of October-November-December (OND) short rains. Despite the reported rains in pocket areas of the ASAL counties, positive impacts on vegetation rejuvenation is yet to be registered. Two (2) counties including; Isiolo and Kilifi were in Extreme vegetation deficit. The following seven counties (7); Mandera, Marsabit, Wajir, Samburu, Garissa, Kwale and Taita Taveta are in Severe vegetation deficit. The following eight (8) counties including; Turkana, Tana River, Kajiado, Laikipia, Tharaka Nithi, Kitui,

Makueni and Meru are in Moderate vegetation deficit. The following five (5) counties including; West Pokot, Embu, Nyeri, Lamu and Narok recorded Normal vegetation greenness. Only Baringo County recorded above normal vegetation greenness.

The situation for each county disaggregated by sub-county is provided in Table1.

Table 1: Vegetation Condition Index (VCI), November 2022

Category	County	Sub Counties (No)
Extreme	**(2)** Isiolo Kilifi	**(8)** Wajir (Eldas, West) Samburu (East) Isiolo (North) Kilifi (Ganze, Magarini, Malindi) Kwale (Kinango)
Severe vegetation deficit	**(7)** Mandera, Marsabit, Wajir, Samburu, Garissa, Kwale, Taita Taveta	**(29)** Mandera (Banissa, East, Lafey, North, South, West) Marsabit (Laisamis, Moyale, North Horr, Saku) Wajir (East, North, South, Tarbaj) Garissa (Balambala, Daadab, Lagdera, Dujis) Isiolo (South) Tana River (Bura) Kajiado (Central) Tharaka Nithi (Tharaka) Kitui (Mwingi North) Meru (Igembe North) Nyeri (Township) Kilifi (Kaloleni, South) Taita Taveta (Mwatate, Voi)
Moderate vegetation deficit	**(8)** Turkana, Tana River, Kajiado, Laikipia, Tharaka Nithi, Kitui, Makueni, Meru	**(36)** Turkana (North) Samburu (North), Garissa (Fafi, Ijara), Tana River (Galole, Garsen) Kajiado (East, North, South) Laikipia (East, North) Kitui (Kitui Central, Kitui East, Mwingi Central, Mwingi West, Kitui Rural, Kitui South, Kitui West) Makueni (Kibwezi East, Kibwezi West, Kilome) Meru (Igembe Central, Igembe South, North Imenti, Tigania East, Tigania West) Nyeri (Kieni, Mukurweini), Kilifi (North, Rabai) Kwale (Lungalunga, Matuga) Lamu (East) Taita Taveta (Taveta, Wundanyi) Narok (East)
Normal vegetation greenness	**(5)** West Pokot, Embu, Nyeri, Lamu, Narok	**(24)** Turkana (Central, East, Loima, South, West) Samburu (West), Kajiado (West), Tharaka Nithi (Chuka, Maara), West Pokot (Kacheliba, Sigor), Embu (Mbeere North, Mbeere South) Makueni (Kaiti, Makueni, Mbooni) Meru (Buuri, Central Imenti) Nyeri (Mathira, Tetu), Kwale (Msambweni), Lamu (West) Narok (North, South)
Vegetation greenness Above normal	**(1)** Baringo	**(16)** Baringo (Central, Eldama, Mogotio, North, South, Tiaty) Laikipia (West), West Pokot (Kapenguria, Pokot South), Embu (Manyatta, Runyenjes) Meru (South Imenti), Nyeri (Othaya), Narok (Emurua Dikirr, Kilgoris, Narok West)

1.3 Livestock production

1.3.1 Pasture and browse condition

The state of pasture and browse in most of the arid and semi-arid counties remained poor as shown in Table 2. The current pasture and browse condition are below normal as compared to normal years with limited improvement realized compared to the previous month. The current pasture and browse condition would not last for long due to high concentration of livestock in the dry season grazing areas. Pasture deteriorated to poor condition in Embu, Isiolo, Kajiado, Kitui, Kwale, Makueni, Mandera, Marsabit, Narok, Kieni, Samburu, Tana River, Turkana and Wajir counties

Table 2.0: Pasture and browse condition, November 2022

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

1.3.2 Livestock body condition

Generally, the current body condition of most livestock is below normal in comparison to similar periods during a normal year. Consequently, most counties reported livestock body condition as fair to poor conditions with exception of Taita Taveta County which reported good body condition for cattle only shown in Table 3.

Table 3.0: Livestock body condition, November 2022

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

1.3.3 Milk production

In most of the counties, milk production during the month under review showed a decreasing worsening trend as compared to the previous month of October. The following counties including; Garissa, Kajiado, Mandera, Meru, Nyeri and Tana River recorded an improving trend. Despite reported rains in some parts of the counties, the impacts on vegetation rejuvenation and milk production is yet to be realized. The current milk production status is below average as compared to normal year. No county recorded above LTA. Milk production trends in the 23 ASAL counties is presented in table 4.0.

Table 4.0: Milk production, November 2022

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

NB: Turkana had zero readings

1.3.4 Cattle prices

In majority of the counties, cattle prices in the month of November remained stable compared to the previous month owing mainly to the markets functioning fairly. 100 percent of the counties' cattle prices were below normal with 7 counties reporting worsening trend. However, Kwale county reported above normal LTA due to increased demand of livestock market as compared to low supply. The following counties including Isiolo, Makueni, Narok, Tana River and Wajir reported a worsening trend as illustrated in Table 5.

Table 5.0: Cattle prices, November 2022

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

1.3.5 Goat Prices

Goat prices in all the ASAL counties were below LTA with a stable and worsening with 48 percent of counties recording below LTA goat prices. Consequently 4 counties are depicting worsening trend due to the deteriorating pasture and browse conditions Table 6.0: Goat Prices, November 2022.

Table 6.0: Goat prices, November 2022

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

1.4 Crop production

Coast Marginal counties: In Kilifi County, few farmers were still harvesting maize, green grams and cowpeas during the month under review. In some areas, in Kwale county, with the onset of the October-November-December season, households engaged in land preparation this month while those who had begun earlier engaging in planting and weeding.

South East Marginal Agriculture counties: In Kitui county, land preparation and planting for the season was on-going across the livelihood zones. However, the early-planted crops were in germination stage and in good condition, in parts of the county where early planted crops had withered due to moisture stress, farmers were forced to re-plant. In Makueni county, in both the Mixed farming and marginal mixed farming livelihood zone, majority of the farmers had planted, and crops had germinated, main agricultural activity in most of the farms was weeding, gapping and top-dressing. Cases of crop pests - fall army worm infestation was reported in across most parts of the County. In Tharaka Nithi county: planting and first weeding was ongoing for the OND season crops. About 90% of the farmers have planted considering the OND is the food production season for the County. The crop development stage was at four leaves stage for legumes and knee high for the cereal crops and were of good condition. However, farmers continued to encounter production challenges particularly related to high input prices for herbicides, certified seeds and the fertilizers.

1.4.1 Maize prices

In Kwale, Kilifi and Marsabit counties, the price of maize was at a worsening trend in the month under review while the 14 counties were at Stable and six counties exhibited an improving trend as compared to the previous month as demonstrated in Table 7. The current maize prices are above LTA.

Table 7.0: Maize prices, November 2022

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

1.5 WATER ACCESS

1.5.1 Access to water for households

Distances to water for households in 14 counties is currently above the LTA. Arid counties distances to household water access ranged between 3.1 kilometers (km) and 11.2 km with Laikipia recording lowest and Marsabit recording highest distances to household water access. Counties including; Embu, Garissa, Isiolo, Kitui, Kwale, Laikipia, Mandera, Marsabit, Meru, Nyeri, Lamu, Samburu, Taita Taveta, Tana River and Tharaka Nithi showed an improving trend. The trend in distances walked by households to access water is provided in Table 8.

Table 8.0: Distance from households to main water sources, November 2022

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

1.5.2 Access to water for livestock

The trend in the distance trekked by livestock in search of water is presented in Table 9. Compared with the previous month, the current trekking distance to water source from grazing areas is above the LTA and on a worsening trend except for Baringo, Turkana, Kilifi and West Pokot counties which are at improving trend due to the little showers received in those particular counties. The average trekking distance for livestock in Arid counties ranged between 4.2 km and 30.5 kilometers(km) with West Pokot recording lowest distances and Marsabit highest while the average trekking distance for semi-arid counties ranged between 1.7 km to 10.2 km with Tharaka Nithi recording the lowest and Meru highest. Table 9.0. shows the trend of distances for livestock grazing area to water main source.

Table 9.0: Distance from livestock grazing area to main water sources, November 2022

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

1.6 Terms of trade

Table 10 shows the trends in terms of trade (ToT) between the relative prices of a goat and maize in ASAL counties. In most counties, ToT values are below the long-term average (LTA) displaying worsening conditions in most counties.

Table 10.0: Terms of Trade, November 2022

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

1.7 Health and nutrition

Table 11 shows the trend in the proportion of children at risk of malnutrition (MUAC) across the ASAL counties. About 61 percent of the ASAL counties recorded above average MUAC values contrary to less than 20 percent when the situation is normal. This is mostly attributed to the continued reduced milk consumption at household level due to a decrease in milk production, as well as poor dietary diversity, poor child feeding practices, and reduced food intake at household.

Table 11.0: Children at risk of malnutrition (MUAC), November 2022

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

2.0 Drought phase classification

Table 12 sums up the trends in drought phase classification as at the end of November 2022. On the basis of the range of indicators monitored above, **seven (7)** counties including, Narok, Tharaka Nithi, Makueni, Nyeri, Meru, Lamu and Laikipia are in the **Alert** drought phase, while **three (3)** counties including Baringo, Embu and West Pokot remain in the Normal drought phase. **Thirteen (13)** counties namely; Taita Taveta, Isiolo, Kilifi, Kwale, Samburu, Turkana, Wajir, Kitui, Kajiado, Mandera, Garissa, Tana River and Marsabit are in **Alarm** drought phase. During the month under review, **six (6)** counties reported an improving trend, **two (2)** counties recorded a stable trend, while **fifteen (15)** counties reported a worsening trend.

Table 12.0: Drought phase classification, November 2022

Drought status	*Trend*		
	Improving	*Stable*	*Worsening/Deteriorating*
Normal	Embu		Baringo, West Pokot
Alert	Narok, Tharaka Nithi, Makueni, Lamu	Nyeri	Meru, Laikipia
Alarm	Garissa, Tana River	Marsabit	Taita Taveta, Isiolo, Kilifi, Kwale, Samburu, Turkana, Wajir, Kitui, Kajiado, Mandera
Emergency	None	None	None
Recovery			

Recommendations

Food and safety nets

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

Livestock sector

- Provision of livestock feeds and supplements.
- Support to livestock off-take (commercial/slaughter in situ)
- Treatment and vaccination against emerging livestock diseases.

Water sector

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

Health and nutrition sector

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

- Supplies for moderate acute malnutrition - Ready to Use Supplementary Food (RUSF).

Education sector

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

Peace and security sector

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

Coordination

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

Table 1: Vegetation Condition Index (VCI-3 month) as at 27th November 2022

ADMINISTRATIVE UNIT		VEGETATION GREENNESS		DROUGHT CATEGORIES/REMARKS
COUNTY	**Sub County**	**VCI-3 month as at 30th Oct 2022**	**VCI-3 month as at 27th Nov 2022**	
BARINGO	**County**	72.67	56.99	The entire county and five of its sub-counties recorded Above Normal vegetation greenness however, there was slight decrease in VCI values when compared with the previous month of October.
	Central	76.34	66.98	
	Eldama	71.57	66.98	
	Mogotio	68.6	54.37	
	North	74.99	56.93	
	South	72.23	57.98	
	Tiaty	72.79	54.52	
MANDERA	**County**	18.54	15.64	The county recorded worsened to severe vegetation deficit from moderate vegetation condition during the last month of November. Mandera South and Mandera West worsened to severe vegetation deficit
	Banissa	16.34	17.96	
	M East	11.24	10	
	Lafey	13.55	15.4	
	M North	18.93	17.84	
	M South	21.95	11.89	
	M West	22.31	17.66	
TURKANA	**County**	44.32	34.86	The county recorded worsening trend in vegetation greenness to moderate vegetation deficit
	T Central	46	42.83	
	T. East	52.39	37.27	
	T. Loima	42.08	36.87	

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 Oct 2022**	**VCI-3 month as at 27th Nov 2022**	

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

	T. North	32.84	26.54	
	T. South	57.73	41.84	
	T. West	47.45	35.99	
MARSABIT	**County**	15.61	12.5	The county remained stable at severe vegetation condition during the month of October. Saku worsened to severe vegetation deficit form moderate vegetation greenness.
	Laisaimis	15.79	11.77	
	Moyale	16.08	11.43	
	N. Horr	15.14	13.19	
	Saku	20.23	12.46	
WAJIR	**County**	22.81	13.84	The County worsened to severe vegetation deficit from moderate vegetation deficit when compared to the previous month of October.
	W East	26.07	14.83	
	W. Eldas	15.91	9.33	
	W. North	28.24	19.08	
	W. South	22.22	12.89	
	W. Tarbaj	28.93	16.9	
	W West	23.22	9.69	
SAMBURU	**County**	10.59	18.7	The county worsened to severe vegetation deficit during the month under review from moderate vegetation deficit in the last month of October
	S East	30.71	9.31	
	S. North	49.11	23.26	
	S. West	23.22	41.47	
GARISSA	**County**	23.98	17.59	The county worsened to severe vegetation deficit form moderate vegetation deficit during the month under review.
	Balambala	17.46	11.49	
	Daadab	18.42	13.77	
	Fafi	26.79	21.95	
	Ijara	34.04	21.71	
	Lagdera	14.67	10.26	
	Dujis	27.07	16.67	
ISIOLO	**County**	13.98	9.86	The county and tow its sub-counties recorded extreme vegetation deficit during the month under review compared to severe vegetation deficit during the month of October.
	I. North	12.7	9.46	
	I. South	15.93	10.46	
TANA RIVER	**County**	31.29	20.62	The county and all two of its sub counties recorded moderate vegetation deficit during the month of November. Bura worsened to severe vegetation deficit
	Bura	29.32	17.99	
	Galole	30.74	20.22	
	Garsen	33.32	23.1	
KAJIADO	**County**	32.54	26.3	The county recorded moderate vegetation deficit. Kajiado central maintained at severe vegetation deficit during the month of November.
	K. Central	19.58	15.44	
	K. East	29.98	23.79	
	K. North	41.84	31.99	
	K. South	29.76	23.97	
	K. West	42.99	35.29	
LAIKIPIA	**County**	37.63	32.04	The County recorded moderate vegetation deficit which was a stability. Laikipia West remained stable at above normal vegetation greenness.
	L. East	37.53	31.34	
	L. North	25.7	21.64	
	L. West	60.03	51.85	

ADMINISTRATIVE UNIT		VEGETATION GREENNESS		DROUGHT CATEGORIES/REMARKS
COUNTY	**Sub County**	**VCI-3 month as at 30th Oct 2022**	**VCI-3 month as at 27th Nov 2022**	
THARAKA NITHI	**County**	37.56	26.19	The county worsened to moderate vegetation deficit. Tharaka subcounty worsened to severe vegetation greenness.
	Chuka	46.28	39.26	
	Maara	49.42	41.89	
	Tharaka	30.48	16.24	
WEST POKOT	**County**	64.25	47.2	The County and three of its sub-counties recorded normal vegetation greenness during the month under review which was a decrease when compared with the previous month of October.
	Kacheliba	61.81	40.59	
	Kapenguria	73.79	57.72	
	Pokot South	75	66.9	
	Sigor	54.3	38.71	
EMBU	**County**	50.65	41.19	The county and two its sub-counties recorded normal vegetation greenness except manyatta and Runyenjes which recorded above normal vegetation greenness.
	Manyatta	52.94	51.3	
	Mbeere North	52.19	38.92	
	Mbeere South	46.84	36.31	
	Runyenjes	58.95	53.21	
KITUI	**County**	37.97	24.67	The county deteriorates to moderate vegetation deficit during the month under review from normal vegetation greenness in the previous month of October.
	Kitui Central	35.77	25.99	
	Kitui East	37.04	23.54	
	Mwingi Central	37.9	22.49	
	Mwingi North	30.31	19.05	
	Mwingi West	49.24	34.41	
	Kitui Rural	33.41	24.26	
	Kitui South	40.08	26.4	
	Kitui West	41.33	29.65	
MAKUENI	**County**	43.51	33.34	The county recorded moderate vegetation deficit during the month under review compared to normal vegetation greenness during the month of October.
	Kaiti	49.14	38.34	
	Kibwezi East	35.62	26.26	
	Kibwezi West	38.62	31.82	
	Kilome	34.94	26.93	
	Makueni	57.65	43.31	
	Mbooni	55.01	40.73	
MERU	**County**	39.11	29.98	The county recorded moderate vegetation deficit during the month under review compared to normal vegetation greenness during the month of October.
	Buuri	38.84	36.64	
	Central Imenti	53.65	40.6	
	Igembe Central	33.26	23.05	
	Igembe North	21.35	14.55	
	Igembe South	41.82	25.48	
	North Imenti	47.13	31.15	
	South Imenti	63.63	52.4	
	Tigania East	37.36	26.3	
	Tigania West	35.86	26.87	
NYERI	**County**	46.65	36.65	The county remained stable at normal vegetation greenness during the month of November.
	Kieni	44.44	34.39	
	Mathira	45.88	35.64	

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 Oct 2022**	**VCI-3 month as at 27th Nov 2022**	
	Mukurweini	44.96	28.22	
	Othaya	59.03	55.09	
	Tetu	54.59	47.22	
	Township	32.31	12.72	
KILIFI	**County**	18.21	7.36	The vegetation condition in the county worsened to extreme vegetation deficit during the month of November from severe vegetation deficit.
	Ganze	12.15	2.48	
	Kaloleni	22.87	13.62	
	Magarini	17.92	6.21	
	Malindi	14.86	8.2	
	Kilifi-North	26.07	20.44	
	Rabai	36.33	21.37	
	Kilifi-South	40.29	18.14	
KWALE	**County**	30.07	17.33	The county recorded worsening trend in vegetation greenness to severe vegetation deficit from moderate vegetation deficit from normal vegetation greenness during the month of November.
	Kinango	20.98	9.15	
	Lungalunga	42.06	24.56	
	Matuga	41.65	32.65	
	Msambweni	51.44	40.92	
LAMU	**County**	49.71	37.41	The County and one of its sub-counties recorded normal vegetation greenness which was a worsening trend when compared to the previous month of October.
	Lamu East	43.79	31.76	
	Lamu West	53.14	40.68	
TAITA TAVETA	**County**	27.65	17.95	The county and two of its sub-counties recorded severe vegetation deficit which was a decrease when compared to the previous month of October.
	Mwatate	21.25	11.83	
	Taveta	30.13	21.01	
	Voi	27.76	17.94	
	Wundanyi	35.83	23.79	
NAROK	**County**	53	48.29	There a deterioration in vegetation cover in the county to moderate vegetation deficit during the month of November.
	Narok-East	37.57	34.05	
	Emurua Dikirr	78.88	69.31	
	Kilgoris	69.62	64.44	
	Narok-North	37.97	43.32	
	Narok-South	40.68	36.78	
	Narok-West	68.62	58.21	

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

Table 14.0: Indicators monitored by the drought early warning system

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

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

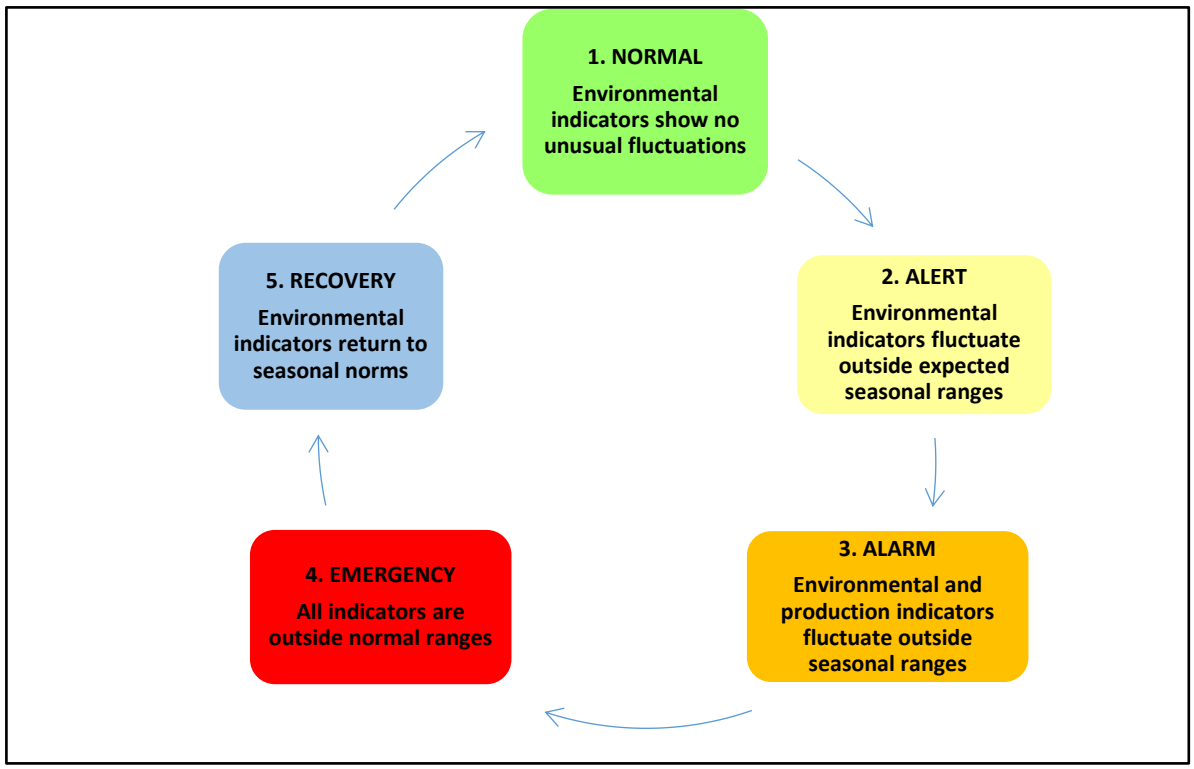

Figure 4.0: Drought Phase Classification