



**THE PRESIDENCY  
MINISTRY OF DEVOLUTION AND ARID AND SEMI ARID LANDS**

**STATE DEPARTMENT FOR ASALS**

**NATIONAL DROUGHT MANAGEMENT AUTHORITY**

## **Drought Status Bulletin**

**July 2018**



## Summary

Record rains received in the ASAL areas from March to May 2018 has resulted in good regeneration of forage. Currently, the condition of pasture and browse is good and, in the event that there are no rains, is expected to last up to October while water sources for both livestock and households are expected to remain unchanged over the next three months. On-going harvesting of pulses, millet and sorghum has replenished household food stocks in the marginal agricultural counties thereby improving food availability. During the month of June, prices of cereals and legumes declined further while those of livestock remained above average which has led to improved terms of trade for livestock keepers in nearly all the ASAL counties.

### 1.0 Drought status

#### 1.1 Drought indicators

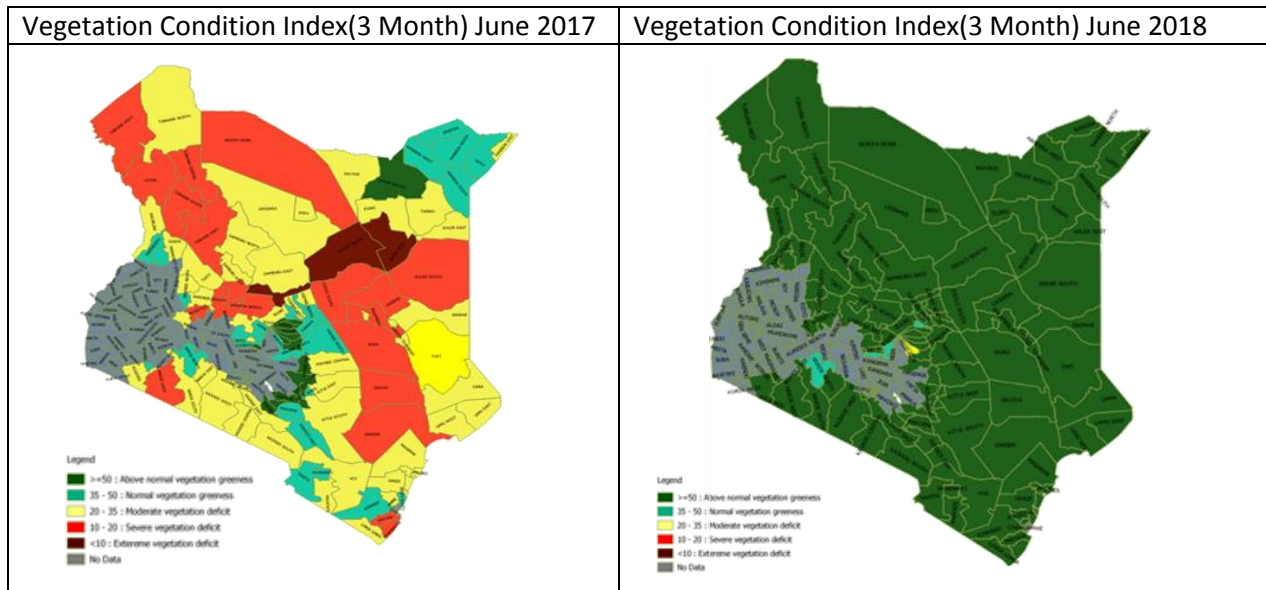
##### *Rainfall*

Most ASAL counties experienced generally cold and dry conditions during the month of June. However, a few counties such as Baringo, Embu, Kwale, West Pokot, Laikipia and Samburu received monthly average rainfall amounts that were normal to above normal in quantity. Overall for many counties, the above average March-April-May (MAM) 2018 rains has supported crop production and regeneration of pasture and browse for livestock, hence easing the effects of drought experienced in the first quarter of the year.

##### *Vegetation condition*

Figure 1 compares the vegetation condition index (VCI) in late June 2017 with that in late June 2018. The good performance of the March-April-May (MAM) 2018 seasonal rainfall is evident as it has resulted to high vegetation regeneration with all arid and semi-arid counties recording vegetation greenness values that are above normal ranges.

**Figure 1: Comparison of Vegetation Condition Index (VCI), June 2017 and June 2018**



Field observation confirms the VCI values. In most counties the current state of pasture and browse is generally above average for the season both in terms of quality and quantity. In Samburu, for example, 94 percent of the community key informants specified that pasture condition was good while in Laikipia, the proportion of respondents who described pasture as good increased from 96 percent in May to 100 percent in June.

However, in the northern parts of Garissa County, the current quality of the pasture slightly reduced when compared with previous month due to high evapotranspiration rates and heavy grazing pressure. Similarly, in Kwale, a slight reduction in pasture availability was observed with 83 percent of respondents reporting that the condition of pasture was good in June compared with 100 percent last month.

#### ***Water sources***

In almost all ASAL counties, majority of the open water sources such as water pans and dams have water and thus the water situation remained unchanged from what was reported in May 2018. As a result, average return distances to water for both households and livestock in most counties are stable and remained within seasonal ranges.

#### ***Livestock production***

Livestock production indicators continued improving during the month of June. Body condition of all species of livestock picked up when compared with the previous month. The improvement in livestock body condition was attributed to adequate pasture and browse and short trekking distances from grazing areas to water points. Livestock productivity especially milk production has increased in several ASAL areas as shown in Table 2.

**Table 1.0: Milk Production, June 2018**

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

Counties that have recorded an improvement in milk production are:-

- Kajiado: milk production in the month of June recorded an increase of 50 percent compared to May 2018 average
- Turkana: Milk production increased by 25 percent on the previous month
- Tharaka: Milk production increased by 25 percent
- Kilifi: Milk production increased by 15 percent compared to the preceding month
- West Pokot: Milk production rose by 6 percent

However, counties such as Narok, Tana River and Lamu recorded a decrease in milk production in June. In Narok, the reduction in milk production was attributed to increased trekking distance in the pastoral livelihood zone while in Lamu milk production dropped as a result of migration of livestock to Tana River County.

### ***Crop production***

The condition of crops in the ASAL counties such as Kitui, Makueni, Kwale, Embu (Mbeere), Tharaka, Meru North, Narok, and Nyeri (Kieni) is good and households expect to realize a normal to slightly above normal. Currently, harvesting of beans, green grams, cowpeas, millet, sorghum and dolichos is going in many areas.

Cases of Fall Armyworm were reported by the following counties: Kitui, Meru North and Tharaka. In Nyeri (Kieni) and in parts of mixed farming livelihood zone in Kitui crop losses due to heavy rains and flooding was reported.

### ***Terms of trade***

Each month, the drought early warning system monitors the relative price of goats and maize, showing the number of kilogrammes of cereal that can be exchanged for one goat. Table 1 summarises the movements on the previous month and the trend.

In almost all counties the terms of trade (ToT) are above the long term average for the month. The largest rise in terms of trade were:

- Tharaka: ToT were 104 percent higher than the long term average (LTA)
- Laikipia: ToT were 70 percent higher than LTA
- Mbeere: ToT were 69 percent higher than LTA
- Kilifi: ToT were 68 percent higher than LTA
- Taita Taveta: ToT were 66 percent higher than LTA
- West Pokot: ToT were 60 percent higher than LTA
- Kitui: ToT were 57 percent higher than LTA
- Samburu: ToT were 51 percent higher than LTA

Improving terms of trade are attributed to the fact that the price of goats had increased while the price of maize had reduced

**Table 2.0: Terms of trade, June 2018**

<i>Terms of trade (ToT)</i>	<i>Trend</i>				
	<b>Improving</b>		<b>Stable</b>		<b>Worsening</b>
<b>Below long term average (LTA)</b>					
<b>At / Close to LTA</b>	Kwale Isiolo Wajir		Garissa		
<b>Above long term average (LTA)</b>	Meru North Marsabit West Pokot Embu (Mbeere)	Kitui Baringo Narok Kilifi	Kajiado Taita Taveta Tana River Tharaka	Laikipia Turkana Mandera Makueni	Lamu Nyeri (Kieni) 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 (Table 2).

Overall, the trend in most ASAL counties is improving or stable. In the pastoral counties, improvement in the nutrition status of children is attributed to milk availability while in the marginal agricultural areas the positive trend is associated better dietary diversity due to availability of green vegetables, pulses and cereals.

However in a number of counties such as Samburu, Garissa, Tana River, Mandera, Narok and Turkana, the percentage of children under 5 years at risk of malnutrition increased during the month of June compared to May. The high MUAC rates are attributed to low milk consumption, reduced dietary diversity as well as poor feeding and care practices.

**Table 3.0: Children at risk of malnutrition (MUAC), June 2018**

<i>MUAC</i>	<i>Trend</i>		
	<b>Improving</b>	<b>Stable</b>	<b>Worsening</b>
<b>Below long term average (LTA)</b>	Meru (Meru North) Baringo West Pokot	Wajir Marsabit Taita Taveta	Turkana Tharaka Nithi Narok Mandera Laikipia
<b>At / Close to long term average (LTA)</b>	Isiolo Kitui	Embu (Mbeere) Lamu	
<b>Above long term average (LTA)</b>	Makueni Kwale Kilifi Kajiado		Samburu Garissa Tana River

## 1.2 Drought phase classification

On the basis of the range of indicators monitored above, all the 23 ASAL counties are currently categorized in the normal drought phase with the trend improving in seven counties and remaining stable in 16 counties as shown in Table 3.

**Table 4.0: Drought phase classification, June 2018**

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

## **2.0 Other food security challenges**

- No major incidences of resource-based conflict were reported during the month under review. In all counties, livestock migration occurrences were minimal as a result of the good state of the rangeland resources.
- However, threats of insecurity exist in areas along the border with Somalia. In Wajir, Al shabab /cross-border insecurity related incident occurred in Tarbaj sub-county where eight security officers were killed.
- In Tana River, farms and villages mainly in Tana Delta area are still flooded. People who were displaced by floods are still living in camps. In addition, most of the infrastructure and facilities destroyed by floods are yet to be rehabilitated.
- In Kilifi, flooding along Sabaki River submerged farms and washed away crops
- In Samburu tension is high along Archers and Ngare Mara following cattle rustling episodes in Loruko that took place in May.
- Incidents of insecurity were reported in Turkana East: Nang'ol at Elelea and Kang'ipeta near Lokori bridge where unknown number of livestock were stolen by bandits.

## **3.0 Projected food security situation**

Following the above-average March to May long rains received in most of the ASAL areas, pasture and water availability for livestock has increased significantly. In the pastoral areas, the available forage and water is projected to last up to the next rains in October. The abundant rangeland resources are expected to result to increased livestock productivity, especially average to above-average livestock prices and near-average milk production.

In the marginal agricultural counties, it is expected that crop production will be average to above average hence the long rains crop harvest is likely to improve food security in the agro pastoral areas by providing casual wage labour income earning opportunities and increasing household food availability during the period between July and September 2018.

#### **4.0 Recommendations**

- Enhance implementation of priority drought preparedness interventions
- Promote participatory livestock disease surveillance and active screening in all the identified hotspots and also intensify livestock disease control measures
- Continued advocacy for pasture conservation including deferred grazing management and participatory rangeland management
- Sensitize farmers on appropriate post-harvest management techniques in the marginal agricultural and agro-pastoral areas.
- Upscale nutritional screening in areas with high prevalence of children at risk of malnutrition.
- Provision of water treatment chemicals for households getting water from open water sources.
- Continue sensitization on, scouting for and monitoring of Fall Armyworm infestation in order to avert crop losses.



### Annex 1.0 Vegetation Condition Index (VCI-3 month) as at 25<sup>th</sup> June 2018

ADMINISTRATIVE UNIT				DROUGHT CATEGORIES/REMARKS		
COUNTY	Sub County	VCI-3 month as at 28 <sup>th</sup> May 2018	VCI-3 month as at 25 <sup>th</sup> June 2018	Colour	VCI values (3-month)	Drought Category
					≥50	Vegetation greenness above normal
					35 to 50	Normal vegetation greenness
					21 to 34	Moderate vegetation deficit
					10 to 20	Severe vegetation deficit
					<10	Extreme vegetation deficit
BARINGO	County	80	92.15	Vegetation greenness remained above normal in all parts of the county with exception of Eldama ravine which slightly reduced to normal vegetation greenness.		
	Central	72.49	83.3			
	Eldama	47.47	63.55			
	Mogotio	77.2	97.39			
	North	80.99	89.28			
	South	83.91	94.88			
	Tiaty	86.99	98.15			
MANDERA	County	65.49	68.12	All sub counties maintained vegetation greenness above normal.		
	Banissa	66.92	59.13			
	M East	53.82	80.44			
	Lafey	59.85	70.8			
	M North	65.11	65.89			
	M South	73.16	74.22			
	M West	64.77	63.91			
TURKANA	County	82.73	91.17	All sub counties maintained vegetation greenness above normal		
	T Central	97.47	98.55			
	T. East	84.27	98.28			
	T. Loima	92.06	96.23			
	T. North	76.18	88.48			
	T. South	100.76	105.43			
	T. West	68.71	75.5			
MARSABIT	County	99.96	99.57	All sub counties maintained vegetation greenness above normal		
	Laisaimis	103.84	105.51			
	Moyale	86.35	82.28			
	N. Horr	101.34	100.48			
	Saku	97.92	102.19			
WAJIR	County	74.82	81.92	All sub counties maintained vegetation greenness above normal.		
	W East	76.01	89.17			
	W.Eldas	83.87	84.15			
	W. North	85.86	85.42			
	W. South	59.13	72.78			
	W.Torbaj	84.49	84.29			
	W West	88.12	95.59			
SAMBURU	County	75.14	74.91	All sub counties maintained vegetation greenness above normal		
	S East	68.23	64.54			

	S. North	83.14	85.07			
	S. West	75.65	82.06			
ADMINISTRATIVE UNIT		DROUGHT CATEGORIES/REMARKS				
COUNTY	Sub County	VCI-3 month as at 28 <sup>th</sup> May 2018	VCI-3 month as at 25 <sup>th</sup> June 2018	Colour	VCI values (3-month)	Drought Category
					≥50	Vegetation greenness above normal
					35 to 50	Normal vegetation greenness
					21 to 34	Moderate vegetation deficit
					10 to 20	Severe vegetation deficit
					<10	Extreme vegetation deficit
GARISSA	County	74.97	84.8	All sub counties maintained vegetation greenness above normal		
	Balambala	100.79	119.75			
	Daadab	62.38	75.22			
	Fafi	60.92	71.19			
	Ijara	63.91	68.08			
	Lagdera	119.44	125.34			
	Dujis	84.78	94.63			
ISIOLO	County	110.61	99.17	All sub counties maintained vegetation greenness above normal		
	I. North	109.4	96.87			
	I. South	112.46	102.69			
TANA RIVER	County	83.76	87.42	All sub counties maintained vegetation greenness above normal.		
	Bura	88.52	104.16			
	Galole	82.39	86.55			
	Garsen	80.58	73.76			
KAJIADO	County	82.78	91.32	All sub counties maintained vegetation greenness above normal.		
	K. Central	79.16	87.33			
	K. East	82.1	87.49			
	K. North	71.23	61.97			
	K. South	89.68	104.09			
	K. West	79.78	85.53			
LAIKIPIA	County	71.97	84.44	All sub counties maintained vegetation greenness above normal.		
	L. East	85.14	95			
	L. North	68.45	80.3			
	L. West	72.22	87.12			
THARAKA NITHI	County	58.04	65.04	Significant improvement especially for Chulga and Maara to above normal vegetation greenness.		
	Chuka	49.94	59.18			
	Maara	46.81	57.99			
	Tharaka	64.68	69.5			
WEST POKOT	County	76.55	78.05	All sub counties maintained vegetation greenness above normal		
	Kacheliba	82.72	83.83			
	Kapenguria	72.09	72.83			
	Pokot South	64.75	62.51			
	Sigor	76.07	81.12			
EMBU	County	64.19	58.4			

	Manyatta	36.88	31.12	Vegetation greenness above normal except Manyatta with deterioration to moderate vegetation deficit.		
	Mbeere North	70.44	63.37			
	Mbeere South	74.44	67.59			
	Runyenjes	42.59	43.75			
<b>ADMINISTRATIVE UNIT</b>				<b>DROUGHT CATEGORIES/REMARKS</b>		
<b>COUNTY</b>	<b>Sub County</b>	<b>VCI-3 month as at 28<sup>th</sup> May 2018</b>	<b>VCI-3 month as at 25<sup>th</sup> June 2018</b>	<b>Color</b>	<b>VCI values (3-month)</b>	<b>Drought Category</b>
					≥50	Vegetation greenness above normal
					35 to 50	Normal vegetation greenness
					21 to 34	Moderate vegetation deficit
					10 to 20	Severe vegetation deficit
					<10	Extreme vegetation deficit
<b>KITUI</b>	<b>County</b>	78.65	85.05	All sub counties maintained vegetation greenness above normal		
	Kitui Central	75.53	77.16			
	Kitui East	79.44	85.09			
	Mwingi Central	75.69	86.64			
	Mwingi North	72.34	76.75			
	Mwingi West	78	80.7			
	Kitui Rural	72.83	80.46			
	Kitui South	82.51	88.67			
	Kitui West	76.05	83.66			
<b>MAKUENI</b>	<b>County</b>	73.75	85.98	All sub counties maintained vegetation greenness above normal		
	Kaiti	63.78	58.44			
	Kibwezi East	78.67	95.21			
	Kibwezi West	68.84	86.41			
	Kilome	76.17	73.19			
	Makueni	71.62	88.66			
	Mbooni	78.23	81.39			
<b>MERU</b>	<b>County</b>	63.34	65.85	Vegetation greenness above normal except in North and South Imenti.		
	Buuri	61.71	63.25			
	Central Imenti	53.06	53.58			
	Igembe Central	69.79	75.24			
	Igembe North	76.7	77.3			
	Igembe South	66.99	72.94			
	North Imenti	45.92	35.13			
	South Imenti	48.58	52.7			
	Tigania East	60.46	65.25			
	Tigania West	67.24	70.31			
<b>NYERI</b>	<b>County</b>	56.78	62.6	Vegetation greenness above normal except in Mathira, Othaya and Tetu in moderate vegetation deficit.		
	Kieni	65.61	71.75			
	Mathira	43.7	47.98			
	Mukurweini	51.66	44.67			
	Town	72.96	69.1			

	Othaya	37.87	49.81			
	Tetu	40.83	52.05			
KILIFI	<b>County</b>	70.57	74.02	The vegetation greenness is above normal across the sub counties		
	Ganze	79.08	81.57			
	Kaloleni	84.15	83.61			
	Magarini	68.31	72.37			
	Malindi	50.91	60.54			
	Kilifi-North	55.21	62.06			
	Rabai	76.17	72.51			
	Kilifi-South	77.86	73.14			
KWALE	<b>County</b>	80.42	75.96	The vegetation greenness is above normal across the sub counties		
	Kinango	81.57	75.93			
	Lungalunga	88.26	82			
	Matuga	67.85	70.81			
	Msambweni	61.09	60.23			
LAMU	<b>County</b>	65	71.53	The vegetation greenness is above normal across the sub counties		
	Lamu East	71.05	73.66			
	Lamu West	61.5	70.3			
<b>ADMINISTRATIVE UNIT</b>			<b>DROUGHT CATEGORIES/REMARKS</b>			
<b>COUNTY</b>	<b>Sub County</b>	<b>VCI-3 month as at 28<sup>th</sup> May 2018</b>	<b>VCI-3 month as at 25<sup>th</sup> June 2018</b>	<b>Colour</b>	<b>VCI values (3-month)</b>	<b>Drought Category</b>
					≥50	Vegetation greenness above normal
					35 to 50	Normal vegetation greenness
					21 to 34	Moderate vegetation deficit
					10 to 20	Severe vegetation deficit
					<10	Extreme vegetation deficit
TAITA TAVETA	<b>County</b>	83.44	87.13	The vegetation greenness is above normal across the sub counties		
	Mwatate	66.25	78.67			
	Taveta	81.24	97.95			
	Voi	89.41	84.27			
	Wundanyi	82.69	96			
NAROK	<b>County</b>	61	68.23	Vegetation greenness above normal with Narok North improving to normal vegetation greenness.		
	Narok-East	54.71	60.65			
	Emurua Dikirr	68.85	76.06			
	Kilgoris	63.87	66.73			
	Narok-North	27.09	38.19			
	Narok-South	62.89	71.02			
	Narok-West	76.85	83.93			

## 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 5). 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 5.0: 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**

