



**THE PRESIDENCY
MINISTRY OF DEVOLUTION AND PLANNING**

National Drought Early Warning Bulletin

July 2017



Summary

Environmental conditions have improved on the previous month in some parts of the region, particularly at the coast, but the underlying recovery from the long rains has been limited. All but two pastoral counties report unusual livestock migration, and in two-thirds of counties the average distances to water and grazing are already longer than normal.

Food prices are still unusually high at a time when many households are dependent on the market. Most marginal agricultural counties expect that their long rains harvest will be well below normal, given both the poor performance of the long rains season and the infestation of Fall Armyworm / African Armyworm. As well as their obvious human impacts, conflict and insecurity represent an additional threat to productivity.

The outlook for the next three months is worrying. Livelihoods are already under significant stress which will only deepen as the dry season unfolds. Conditions will inevitably deteriorate, and drought interventions must be scaled up in response. A key mechanism to facilitate this will be the National Drought Emergency Fund which should be operationalised as a matter of urgency. A critical issue to monitor will be the onset of the short rains season, since any delay will have major consequences for food security and well-being.

1 Drought status

1.1 Drought indicators

Rainfall

There was very little rainfall in June, but for most arid and semi-arid counties this is normal. Off-season showers fell in the southern part of Garissa and the coastal areas of Tana River. Where rainfall was received, it was generally below normal and poorly distributed.

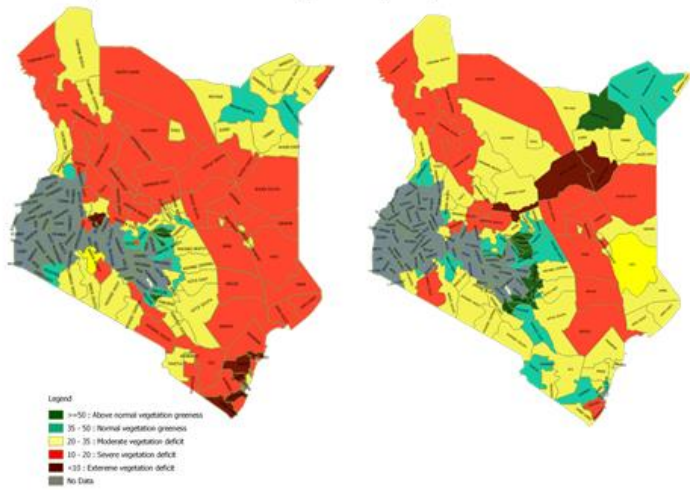
Vegetation condition

A comparison of the Vegetation Condition Index (VCI) in May and June 2017 shows some improvement over the past month, particularly at the coast and in Mandera (Figure 1). Annex 1 contains the detailed VCI values for 26th June 2017. The improvement at the coast is confirmed by field monitoring: 71 percent of informants in Kilifi, for example, now report that pasture and browse is in good condition, with the remainder being fair.

However, these improvements are localised. Conditions in other counties are already starting to worsen because the long rains did not perform well enough to generate recovery. In Kitui, 52 percent of informants now report that pasture is poor compared with 29 percent in May, while in Meru's agro-pastoral livelihood zone, 75 percent report poor browse compared with 50 percent in May. In Wajir, forage is declining not just in the west and south, which have now experienced two successive poor seasons, but also in the north and east where rainfall was higher but where, as a result, 80 percent of livestock are now concentrated.

Figure 1:

Vegetation Condition Index (3 Month) : May 2017 & June 2017



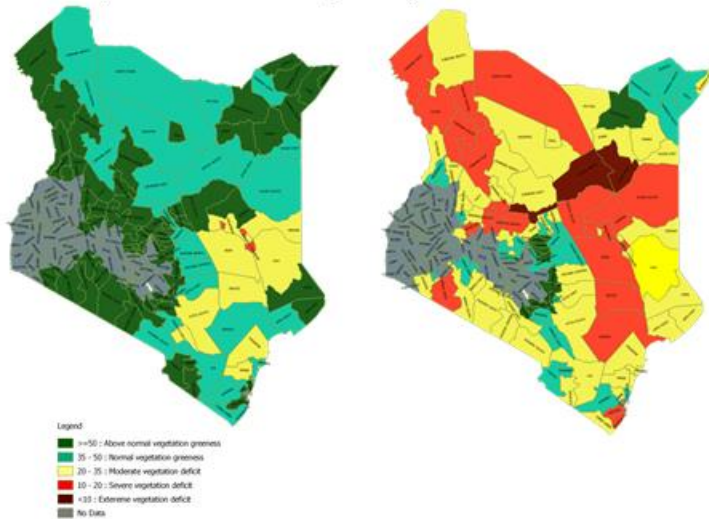
A comparison of the VCI values in June 2016 and June 2017 (Figure 2) shows how far the current situation is from normal. The areas of particular concern at present are:

Extreme deficit: Isiolo North and Wajir West.

Severe deficit: Isiolo South, Wajir South, Balambala and Lagdera (Garissa), North Horr (Marsabit), most of Turkana and Laikipia, Mogotio (Baringo), Matuga and Msambweni (Kwale), Narok West, and the whole of Tana River.

Figure 2:

Vegetation Condition Index (3 Month) : June 2016 & June 2017



Water sources

Water stress has reduced to some degree, particularly at the coast. In Kwale, for example, the state of water sources is now normal; open sources have recharged to more than 70 percent of their capacity and are likely to last approximately four months. In Lamu, the level of recharge is between 60 and 85 percent. However, there is significant water stress elsewhere, such that trucking has re-started in parts of Garissa (Lagdera), Isiolo, Kajiado, Mandera (East, North and Lafey), Marsabit (North Horr and Laisamis) and Wajir (West and South), supported by the NDMA’s drought contingency finance. One indicator of deepening water stress is the proportion of the population relying on boreholes and water vendors, which in Meru’s agro-pastoral livelihood zone increased from 28 percent in May to 43 percent in June.

Livestock production

One positive indicator this month is the continued fall in drought-related livestock deaths. These were reported by only three counties in June (Baringo, Isiolo and Laikipia), a reduction from seven in May, although the deaths in Baringo could not be verified because of insecurity. On the other hand, the number of counties reporting unusual livestock migration rose from ten to 15, which include all but two of the pastoral counties. Livestock are moving out of their wet season grazing much earlier in the year, and large numbers are concentrating in places with reasonable forage and water, such as the agro-pastoral areas of Lamu and the north of Wajir.

Livestock body condition has improved where environmental conditions have eased. For example, the proportion of animals in Garissa with poor body condition was two-thirds in May but reduced to 35 percent in June. Average milk production is now just below the long-term mean in both Garissa and Kilifi. However, underlying livestock productivity is still far from normal, particularly of cattle. Milk production remains unusually low in Turkana, Tana River and Mandera, where it is just two percent, three percent and four percent respectively of the long-term mean.

The bulletins report the incidence of critical livestock diseases such as Contagious Bovine Pleuropneumonia (CBPP), Contagious Caprine Pleuropneumonia (CCPP), Foot and Mouth Disease (FMD) and Peste des Petits Ruminants (PPR). These affected the following counties in June:

CBPP	Kajiado, Narok, Turkana, Wajir, West Pokot
CCPP	Baringo, Garissa, Isiolo, Kajiado, Kilifi, Samburu, Tharaka Nithi, Turkana, Wajir, West Pokot
FMD	Kilifi, Meru (North) (<i>suspected</i>), Narok, Nyeri (Kieni), Samburu (<i>unconfirmed</i>)
PPR	Baringo, Narok, Wajir

Crop production

Few marginal agricultural counties anticipate a reasonable harvest. Most report widespread moisture stress and crop failure caused by the late onset and early cessation of the long rains season. In many places the season ended when crops were at a critical stage of development. Embu, Kitui, Laikipia, Makueni, Meru, Narok and Nyeri all expect below-normal harvests, particularly of maize.

The Fall Armyworm and African Armyworm are causing further damage to the maize crop, particularly in Baringo, Kitui (Kitui South and Mwingi West), Kwale, Narok (Narok East, Transmara East and West), and

West Pokot. Approximately 12,000 hectares of maize are affected in Baringo, and more than 65,000 hectares of maize have been destroyed in West Pokot. Kwale estimates that the pests will reduce its maize harvest by as much as 50 percent. The impact of insecurity on crop production is illustrated by Baringo, where farmers in Saimo Soi ward were forced to flee their homes and farms before they could plant.

The condition of pulses is generally better than that of maize, and harvests are underway or imminent in Embu and in all four coastal counties (Kilifi, Kwale, Lamu and Taita Taveta). However, elephants are destroying the cowpea and green gram crops in parts of Makueni bordering the national parks.

Access to water

Average distances to water for both households and livestock are now increasing in more counties than they are reducing. The household distances reduced in only five counties this month, and those for livestock in only eight; in all other counties they were the same as the previous month or longer. Average household distances are above the long-term mean in approximately three-quarters of counties, while livestock distances are above the long-term mean in approximately two-thirds of counties. The bulletins for Baringo and Samburu both note that these lengthening distances are caused not just by the state of water and forage but by insecurity: families and livestock are being forced to move to more secure locations that may be further from water points.

Terms of trade

Table 1 summarises the movements in the average prices of cattle, goats and maize across the ASAL counties. The price of maize (and other food crops) is still unusually high. As in April and May, the average maize price is above the long-term mean in all counties, with the largest differentials being in Baringo and Makueni. The highest average price was recorded in Kajiado West at Kshs. 120 per kg. Like previous months, there is a very large gap in some counties between the highest and lowest maize prices: as much as Kshs. 60 in Kajiado and Kshs. 40 in Samburu.

Table 1: Average cattle, goat and maize prices compared with the previous month, May 2017

	No. of counties with price movements			Largest falls on previous month	Largest rises on previous month	Comparison with long-term mean
	Fell	Rose	Stable			
Cattle	7	14	2	Lamu (25%) Embu (19%) Nyeri (16%)	Samburu (44%) Baringo (17%) Wajir (16%)	Below LTM in 14 counties At or above LTM in 9 counties
Goats	7	14	2	Kilifi (17%) Isiolo (14%) Embu (14%)	Meru (52%) Kwale (43%) Garissa (16%)	Below LTM in 13 counties At or above LTM in 10 counties
Maize	5	13	5	Kilifi (Kshs. 28) Kwale (Kshs. 5)	Garissa (10/=) Baringo (8/=)	Above LTM in all counties > Kshs. 20 per kg above LTM in 13 counties

The pattern of livestock price movements is also similar to the previous month. In approximately two-thirds of counties, prices are rising but are also below the long-term mean. The appreciation in goat prices this month was linked not just to improved body condition but also to the demand created by the Eid festival. The large rise in cattle prices in Samburu is something of an anomaly, since sales were only recorded in one sentinel site; in general, the body condition of cattle in this county is too poor to realise good prices.

Table 2 summarises the terms of trade between goats and maize.¹ In all but two counties the current value is below the long-term mean, and in some cases well below it. The largest downward movements on the previous month were in Isiolo and Tana River (by 30 percent and 16 percent respectively), while the largest upward movements were in Meru (North), Garissa and Wajir (by 52 percent, 13 percent and 13 percent respectively).

The data from Marsabit illustrates the large differentials within some counties. In its agro-pastoral livelihood zones, where cereals are more readily available and markets more accessible, the terms of trade reach 50kg, but in its pastoral livelihood zones they are as low as 29kg.

Table 2: Terms of trade, June 2017 (data based on 19 counties)

<i>Trend</i>	Improving	Stable	Worsening
Below long-term mean (LTM)	Garissa Kajiado Laikipia Meru (North) Narok Turkana Wajir	Baringo West Pokot	Embu (Mbeere) Isiolo Kitui Makueni Marsabit Samburu Tana River Tharaka Nithi
Above LTM	Kilifi Mandera		

Health and nutrition

The bulletins monitor the percentage of children under five at risk of malnutrition as determined by a measurement of the mid-upper arm circumference (MUAC) (Table 3).

The number of counties where the average MUAC rate exceeds the 15 percent threshold of concern has risen from nine to 11, with the addition this month of Kajiado and Turkana; the rate in Narok is less than a percentage point below this (14.45 percent).

¹ 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. These terms of trade are an important indicator of pastoralists' purchasing power. As drought stress increases, animals lose condition and more of them enter the market causing the price to fall. At the same time, the price of cereals tends to rise as stocks become depleted. Thus, livestock-keepers are caught in a pincer movement, as the value of their principal asset reduces and the price of the food they need rises.

The largest movements in the average MUAC rate on the previous month were as follows:

Increase on the previous month		Decrease on the previous month	
Taita Taveta	48%	Garissa	32%
Tana River	35%	West Pokot	26%
Turkana	7%	Embu (Mbeere)	19%
Samburu	7%	Makueni	17%

The proportion of children at risk of malnutrition in Tana River is now more than twice the long-term mean; milk consumption here is still only five percent of what would normally be expected at this time of year. The deterioration in Turkana is also associated with the continued scarcity of milk. The improvements in Garissa and West Pokot were both attributed to the impact of health and nutrition services, as well as the increased availability of milk.

Table 3: Children at risk of malnutrition (MUAC), June 2017

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

Note: Counties highlighted in bold have average MUAC rates above 15 percent.

Other concerns in the health sector include a measles outbreak in Mandera town and reports of cholera in parts of Fafi, Garissa, which is apparently being contained. The Kilifi bulletin notes that the nurses' strike has interrupted the supplementary feeding programme in health facilities which lack nutritionists.

1.2 Drought phase classification

The drought phase is determined by the indicators discussed in the previous sections (Table 4). Another four counties have moved from alarm to alert, continuing the trend set last month: Kwale, Laikipia, Lamu and Samburu. However, the fragile state of recovery following the long rains is evident in the fact that the number of counties where the trend is worsening has risen within a month from four to fourteen.

Table 4: Drought phase classification, July 2017

<i>Drought status</i>	<i>Trend</i>	Improving	Stable	Worsening
Normal				
Alert		Embu (Mbeere) Kwale ² Lamu Samburu Taita Taveta	Tharaka Nithi ³ West Pokot	Kajiado Kitui Laikipia Makueni Mandera Marsabit ⁴ Meru (North) Narok Nyeri (Kieni) Wajir ⁵
Alarm		Garissa Turkana		Baringo Isiolo Kilifi Tana River
Emergency				
Recovery				

2 Other food security challenges

The most serious security challenges in June were in the North Rift (Baringo and West Pokot), where inter-communal violence continues to cause death, displacement and the loss of critical assets such as livestock, as well as limit access to forage and markets, and in the border area with Somalia (Mandera and Lamu), where there were deaths and injuries from land mines and other attacks by Al-Shabaab.

Cattle theft was reported in Laikipia, Meru (North) and on the Samburu/Isiolo border, the latter leading to the displacement of some families. Cases of insecurity in parts of Marsabit and Wajir have been contained, but tension remains high in Isiolo and in the Tana Delta. Four counties reported human-wildlife conflict: Baringo, Laikipia, Makueni and Taita Taveta.

² Mixed farming livelihood zone: stable

³ Marginal mixed farming livelihood zone: worsening

⁴ Pastoral all-species livelihood zone: alarm and stable

⁵ Pastoral cattle and pastoral all-species livelihood zones: alarm

3 Response

Annex 2 shows how the NDMA has used its drought contingency finance in the 2016-17 financial year. It approved a total of Kshs. 926 million for activities in 21 counties in seven sectors: water, livestock, agriculture, education, health and nutrition, security, and coordination. Of this total, Kshs. 637 million was disbursed in the course of the financial year, Kshs. 31.5 million of this in June.

Emergency cash transfers continue being paid in the four Hunger Safety Net Programme counties. The trigger for these is the Vegetation Condition Index, which in May was severe enough to activate payments to 9,730 households in Mandera, 2,804 in Marsabit, 16,402 in Turkana, and 9,849 in Wajir – a total of 38,785 households. The Kshs. 105 million required is being financed by the European Union.

4 Projected food security situation

The outlook for the next three months is worrying. Livelihoods in most arid and semi-arid counties are already under significant stress which will deepen as the dry season unfolds. With the exception of localised parts of the North Rift, it is unlikely that there will be further rain before October. A number of indicators, such as the state of water sources, distances to water, livestock body condition, and milk production and consumption, are already outside their normal ranges in many counties and will only deteriorate from here onwards.

A further consideration this year is the impact of the election period and the risk of critical services being disrupted during the transition. If this happens, it may worsen outcomes for vulnerable households.

The most challenging scenario will be if the onset of the short rains is late, as happened in 2016. Given the early end to the long rains season, this would create an extended dry period in the middle of 2017 which will inevitably have a major impact on food security and well-being.

5 Recommendations

- 1. Enhance the level of drought preparedness and response throughout this dry season and beyond.**
The key priorities are to ensure unimpeded access to water and to critical health and nutrition services, to reinforce livestock production with measures such as feed supplements, disease surveillance, and offtake, and to monitor and respond quickly to insecurity and conflict. Food or cash transfers for the 3.5 million people in need of immediate assistance must also be maintained.
- 2. Formalise the National Drought Emergency Fund as a matter of priority,** so that contingency finance is properly institutionalised. The immediate creation of the fund will also ensure that critical services can be maintained throughout the election period and beyond, when other funds may be delayed.
- 3. Ensure that the Kenya Vision 2030 Medium Term Plan III contains the necessary measures to reduce drought risk,** and that these are integrated in the relevant sector and county plans and budgets.

Annex 1 Vegetation Condition Index, 26th June 2017

COUNTY	Sub County	VCI 3-month 29 th May 2017	VCI3-month 26 th June 2017	Color	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	18.02	27.51	A general improvement has been recorded across all sub-counties, with only Mogotio still in the severe vegetation band but on a positive trend. All the other sub-counties have a moderate vegetation deficit except Central, which is in the normal band. The situation will further improve if some rains are received in July-August (as usually happens in this county).		
	Central	29.91	41.28			
	Eldama	10.95	25.22			
	Mogotio	8.66	18.69			
	North	17.97	25			
	South	21.71	32.14			
	Tiaty	18.92	27.51			
MANDERA	County	32.7	40.91	The vegetation greenness has continued to improve and is now within the normal ranges for the period except in Mandera East, which is in the moderate deficit band.		
	Banissa	32.98	44.41			
	M East	18.13	24.23			
	Lafey	26.25	36.53			
	Mandera North	30.26	39.45			
	Mandera South	42.41	45.97			
	Mandera West	34.17	43.01			
TURKANA	County	18.7	18.49	No improvements recorded, with all sub-counties currently in the severe deficit band except for Turkana North, which is experiencing a moderate deficit. Unless off-season rains are received in July, the drought impacts will become more acute in August and September. Hence, it is important to be ready for early response starting in July.		
	Turkana Central	21.3	14.87			
	Turkana East	16.33	17.68			
	Loima	17.84	16.58			
	Turkana North	20.23	23.05			
	Turkana South	17.85	17.98			
	Turkana West	18.41	15.99			
MARSABIT	County	14.73	19.05	Positive trend from the previous month with only North Horr still in the severe deficit band. However, the vegetation greenness is well below the normal ranges for the period and therefore it is projected that significant drought impacts will become evident in the course of the current dry season, especially if the next short rains are late.		
	Laisaimis	15.19	20.01			
	Moyale	22.41	32.63			
	North Horr	12.14	14.36			
	Saku	21.65	31.69			
WAJIR	County	21	24	While the greenness in Wajir North is above the normal ranges for the period, Wajir South and West are in the severe and extreme deficit bands respectively. This situation requires targeted interventions to mitigate the expected drought impacts. Over-concentration of livestock in Wajir North might exacerbate conflict and the risk of disease outbreaks, which will require response initiatives in the areas of conflict resolution and vaccination.		
	Wajir East	22.36	26.03			
	Eldas	21.75	21.49			
	Wajir North	37.07	51.34			
	Wajir South	12.59	14			
	Tarbaj	32.12	32.62			
	Wajir West	11.58	9.16			
SAMBURU	County	15.71	24.3	Some significant improvements recorded, with all three sub-counties shifting from the severe to the moderate deficit band. However, the trend could worsen in the next couple of months if sufficient off-season rains are not received in July (some rains could be received, especially in the western part of the county).		
	Samburu East	14.4	20.18			
	Samburu North	16.34	27.35			
	Samburu West	18.94	30.64			
GARISSA	County	15.89	23.31	Some improvements recorded in Daabab, Fafi and Ijara, but the situation remains critical in Balambala and Lagdera. The latter is experiencing an acute water shortage which requires the implementation of intensive water trucking activities.		
	Balambala	17.55	17.98			
	Daadab	17.55	28.02			
	Fafi	16.91	27.01			
	Ijara	13.84	23.61			
	Lagdera	11.1	10.74			
	Dujis	31.5	34.9			

ISIOLO	County	11.3	10.72	This is one of the worst drought-stricken counties, with Isiolo North now in the extreme vegetation deficit band and Isiolo South in the severe deficit band. There is an urgent need to assess the trend of drought impacts to design proper early response activities that can support local livelihoods and minimise livestock mortality.
	Isiolo North	10.08	7.39	
	Isiolo South	13.18	15.82	
TANA RIVER	County	15.17	18.62	No significant improvement has been recorded, with all three sub-counties still in the severe vegetation deficit band. Since no further rains are expected, significant drought impacts will occur in the course of this dry season, especially in the water and livestock sectors.
	Bura	17.08	18.73	
	Galole	15.36	18.44	
	Garsen	13.44	18.64	
KAJIADO	County	21.27	24.96	The vegetation greenness has significantly improved from the end of May but is still below the normal ranges for the period.
	Kajiado Central	27.17	23.83	
	Kajiado East	19.63	25.21	
	Kajiado North	20.12	32.74	
	Kajiado South	17.72	27.56	
	Kajiado West	21.54	23.22	
LAIKIPIA	County	14.13	19.89	No sufficient recovery has occurred so far, with two out of three sub-counties still in the severe vegetation deficit band.
	Laikipia East	20.47	23.9	
	Laikipia North	13.31	19.45	
	Laikipia West	12.62	18.78	
THARAKA NITHI	County	36.6	46.62	Vegetation greenness is within or above the normal ranges for the period.
	Chuka	42.61	52.82	
	Maara	55.71	60.72	
	Tharaka	28.24	39.78	
W POKOT	County	25.02	32.2	Marked improvement from the previous month with only two sub-county experiencing a moderate vegetation deficit.
	Kacheliba	20.82	29.91	
	Kapenguria	32.43	36.48	
	Pokot South	38.96	41.83	
	Sigor	18.18	27.06	
EMBU	County	41.3	51.79	Vegetation greenness is within / above normal ranges for the period.
	Manyatta	43.87	49.17	
	Mbeere North	42.5	53.46	
	Mbeere South	37.16	49.7	
	Runyenjes	51.3	58.92	
KITUI	County	25.39	34.95	The vegetation greenness has improved across all sub-counties with only Mwingi Central recording a significant deficit.
	Kitui Central	39.3	51.12	
	Kitui East	25.72	30.98	
	Mwingi Central	21.88	24.02	
	Mwingi North	30.92	39.33	
	Mwingi West	39.98	57.57	
	Kitui Rural	23.79	40.05	
	Kitui South	21.68	33.2	
	Kitui West	31.73	52.93	
MAKUENI	County	33.52	50.53	Vegetation greenness is within or above normal ranges for the period.
	Kaiti	56.23	69.92	
	Kibwezi East	32.89	46.74	
	Kibwezi West	23.63	42.53	
	Kilome	42.77	61.41	
	Makueni	27.78	47.9	
MERU	County	31.45	38.33	Moderate deficit recorded in Igembe North and Tigania East.
	Buuri	26.72	31.86	

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	Central Imenti	43.95	51.68	
	Igembe Central	27.95	38.08	
	Igembe North	20.85	25.66	
	Igembe South	37.17	49.88	
	North Imenti	34.77	46.56	
	South Imenti	57.73	60.53	
	Tigania East	23.55	28.48	
	Tigania West	30.69	37.73	
NYERI	County	37.64	46.61	Vegetation greenness is within normal ranges for the period, except in Town (which is not relevant in terms of food security).
	Kieni	37.45	45.92	
	Mathira	42.35	49.45	
	Mukurweini	40.9	52	
	Town	18.42	31.11	
	Othaya	39.83	46.61	
	Tetu	37.64	45.92	
KILIFI	County	10.59	25.11	The additional rains received in June have significantly improved the vegetation greenness in all sub-counties, although this is still below the normal ranges for the period. Some more rainfall received in the last dekad of June should further improve the VCI in July.
	Ganze	9.58	30.68	
	Kaloleni	2.31	26.54	
	Magarini	11.25	20.83	
	Malindi	9.27	25.69	
	Kilifi-North	10.41	29.26	
	Rabai	11.22	29.82	
	Kilifi-South	23.58	43.43	
KWALE	County	6.25	30.34	Significant improvements recorded in the arid part of the county while Matuga and Msambweni are still in the severe deficit band. However, some rainfall received in the last dekad of June should improve the VCI in July in both sub-counties.
	Kinango	10.63	39.34	
	Lungalunga	-4.06	20.97	
	Matuga	1.86	11.46	
	Msambweni	15.1	17.71	
LAMU	County	12.06	25.31	Very significant improvements from the end of May, with both sub-counties shifting from the severe to the moderate deficit band. Good rains in the last dekad of June should further improve the VCI in July.
	Lamu East	14.58	27.93	
	Lamu West	10.58	23.78	
TAITA TAVETA	County	16.88	31.08	Significant improvement recorded across all sub-counties.
	Mwatate	13.02	31.01	
	Taveta	20.62	37.02	
	Voi	15.85	28.25	
	Wundanyi	23.53	35.32	
NAROK	County	27.74	28.67	Major improvement recorded in Narok East, while in Narok West the VCI has shifted from the moderate to the severe deficit band.
	Narok East	17.59	34.71	
	Emurua Dikirr	36.08	37.46	
	Kilgoris	44.43	28.4	
	Narok North	30.31	36.11	
	Narok South	23.3	32.65	
	Narok West	27.74	18.53	

Annex 2 Drought contingency fund approvals and disbursements, 2016-17

	Agriculture	Coordination	Education	Health & Nutrition	Livestock	Security	Water	County Total	Disbursements July 2016 to May 2017	Disbursements June 2017	Total Disbursements July 2016 to June 2017	FRF Balance as at 30th June 2017)
Baringo	75,000.00	2,848,900.00	1,404,400.00	1,226,200.00	28,232,160.00	399,400.00	4,611,200.00	38,797,260	26,837,505	947,600	27,785,105	11,012,155
Garissa		3,178,900.00	7,732,200.00	5,256,800.00	64,235,000.00		12,520,800.00	92,923,700	47,319,609		47,319,609	45,604,091
Isiolo		1,574,800.00	11,130,205.00	2,074,500.00	20,196,200.00	1,898,400.00	6,668,550.00	43,542,655	34,267,620		34,267,620	9,275,035
Kajiado		2,088,300.00		1,523,900.00	15,191,360.00		9,310,800.00	28,114,360	10,729,800	464,633	11,194,433	16,919,927
Kilifi		627,900.00		2,963,700.00	22,137,600.00	160,950.00	4,934,600.00	30,824,750	23,609,350		23,609,350	7,215,400
Kitui		2,645,800.00		1,076,100.00	5,370,900.00	1,112,500.00	3,138,980.00	13,344,280	4,162,600		4,162,600	9,181,680
Kwale		689,575.00		4,870,550.00	20,970,800.00	93,000.00	2,632,568.00	29,256,493	19,513,782		19,513,782	9,742,711
Laikipia	398,800.00	940,800.00	1,100,000.00	2,701,000.00	13,740,700.00		2,141,900.00	21,023,200	6,650,350		6,650,350	14,372,850
Lamu		1,314,800.00	5,800,300.00	567,800.00	52,903,974.00	677,700.00	4,464,400.00	65,728,974	29,229,124	5,884,450	35,113,574	30,615,400
Makueni		784,700.00		1,362,600.00	2,046,800.00		862,300.00	5,056,400	4,166,400		4,166,400	890,000
Mandera		2,417,800.00		1,337,700.00	50,858,800.00		11,368,000.00	65,982,300	35,106,077		35,106,077	30,876,223
Marsabit		12,210,400.00		4,420,600.00	89,312,900.00	2,865,200.00	7,163,400.00	115,972,500	43,861,060		43,861,060	72,111,440
Narok		317,180.00			6,264,954.00		4,500,250.00	11,082,384	4,329,884	987,500	5,317,384	5,765,000
Nyeri					4,500,400.00			4,500,400	1,676,950		1,676,950	2,823,450
Samburu		2,676,000.00		764,340.00	72,236,900.00		5,146,650.00	80,823,890	43,754,990		43,754,990	37,068,900
Taita Taveta		2,584,650.00		1,883,950.00	20,240,160.00	653,100.00	4,101,880.00	29,463,740	11,716,685		11,716,685	17,747,055
Tana River		2,374,800.00	3,580,300.00	1,623,800.00	34,401,800.00	519,000.00	5,216,000.00	47,715,700	23,069,700		23,069,700	24,646,000
Tharaka Nithi		546,800.00		1,580,000.00			1,062,000.00	3,188,800	3,188,800		3,188,800	0
Turkana		3,731,100.00	5,326,800.00	2,928,800.00	66,584,380.00	2,675,000.00	5,394,900.00	86,640,980	42,110,050		42,110,050	44,530,930
Wajir		1,048,500.00		1,816,200.00	68,540,500.00		6,092,000.00	77,497,200	20,411,100		20,411,100	57,086,100
West Pokot	223,200.00	1,441,200.00		3,830,500.00	4,773,818.50	1,255,800.00	3,537,930.00	15,062,449	12,963,249		12,963,249	2,099,200
ADC Requisition					19,136,867			19,136,867	19,136,867		19,136,867	0
NDMA HQ (Payments made centrally from HQ for livestock feeds)									137,384,614	23,173,500	160,558,114	-160,558,114
											0	0
Sector Total	697,000	46,042,905	36,074,205	43,809,040	681,876,974	12,310,050	104,869,108	925,679,282	605,196,166	31,457,683	636,653,849	289,025,433

Annex 3 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 3). Identifying the correct drought phase helps to guide the most appropriate response for that stage in the drought cycle.

Table 5: 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 3: Drought Phase Classification

