



**THE PRESIDENCY
MINISTRY OF DEVOLUTION AND PLANNING**

National Drought Early Warning Bulletin

March 2017



Summary

Drought conditions persisted during February. Localised off-season showers had little impact on environmental conditions. Livestock continue to weaken under the stress of long distances to water and grazing, leading to further falls in productivity and in the purchasing power of pastoralists.

In marginal agricultural counties, land preparation is underway in advance of the long rains season. Large rises in the price of basic foodstuffs, attributed in part to the impact of the poor short rains harvest, are undermining food security.

There have been serious incidents of conflict in the past month in counties including West Pokot, Baringo, Laikipia, Samburu, Isiolo and Kitui. This requires close monitoring and rapid response, particularly in dry season grazing areas.

The outlook for the long rains season is that rainfall in arid and semi-arid counties is likely to be generally depressed (with the possible exception of the North Rift) and poorly distributed. As a result, the season may not support an adequate recovery. All actors should therefore prepare for deepening drought stress further into 2017.

1 Drought status

1.1 Drought indicators

Rainfall

February is generally a dry month. However, most counties, other than Garissa, Isiolo and Kwale, reported a few days of light off-season showers, particularly towards the end of the month. While these may have had some localised benefits, the rainfall was too limited and poorly distributed to have any significant impact on environmental indicators, particularly given the prevailing high temperatures.

Vegetation condition

The Vegetation Condition Index (VCI) communicates the vigour of vegetation cover, comparing it with the range of values for the same period in previous years. There are five categories: above-normal vegetation, normal, moderate deficit, severe deficit, and extreme deficit. Annex 1 contains the VCI data at 27th February 2017, which is summarised in Table 1. While there have been some modest improvements on the previous month in Kilifi and Kwale, the situation in most other counties continues to deteriorate.

Field observation confirms the VCI values, with pasture and browse generally far below the average for the season. Most pastoralists in Baringo have moved to the last phase of their fall-back grazing, while in Marsabit, there is pasture now in only a few dry-season areas where livestock are inevitably concentrated. In counties such as Kajiado, Kitui and Tharaka Nithi, crop residues are supplementing livestock feed. In West Pokot, conflict is impeding access to pasture and browse.

Table 1: Vegetation Condition Index, February 2017

Category	County		Sub-counties
Extreme vegetation deficit	Lamu		Mogotio & Baringo North (Baringo) Kacheliba & Sigor (West Pokot) Kaloleni, Rabai & Kilifi North (Kilifi)
Severe vegetation deficit	Baringo Garissa Isiolo Kilifi Kwale Laikipia Mandera	Marsabit Samburu Tana River Turkana Wajir West Pokot	Kajiado South (Kajiado) Mwatate & Taveta (Taita Taveta)
Moderate vegetation deficit	Kajiado Kitui Nyeri	Narok Taita Taveta Tharaka Nithi	Tigania East (Meru)
Normal vegetation	Embu Makueni	Meru	

Water sources

In arid counties, the unusually high and increasing use of boreholes is an indication that open sources of water have dried; 61 percent of households in West Pokot, and 56 percent in Turkana, are now using boreholes, which is not normal for the time of year. All pans in all livelihood zones in Wajir have dried, except for some in parts of Tarbaj and Wajir East which are unlikely to last long given the concentration of livestock and the high rate of evaporation. In Marsabit, 90 percent of open sources are dry; the remaining ten percent are mostly found in Moyale and will last less than one month. Most pans in Baringo have also dried; the remainder have less than 15 percent capacity.

In semi-arid counties, the condition of water sources is also generally below normal, particularly in Kajiado, Kitui, Kwale (Matuga and Msambweni sub-counties), Lamu, Narok, Taita Taveta and Tharaka Nithi (especially the marginal mixed farming livelihood zone where seasonal rivers have dried). In Embu and Makueni, water sources are close to seasonal norms.

Some households and institutions in both arid and semi-arid counties rely on water trucking, including in Isiolo, Kilifi, Lamu, Mandera (more than 80 centres) and Wajir (152 centres).

Livestock production

The body condition of livestock continues to weaken due to the long distances to water, poor quality forage, and disease. The bulletins note the incidence of contagious livestock diseases, including:

Foot and Mouth Disease	Baringo, Isiolo, Kwale, Narok, Nyeri, Taita Taveta, Wajir (suspected)
Contagious Bovine Pleuropneumonia (CBPP)	Kajiado, Mandera, Marsabit, Narok, Taita Taveta, Turkana, Wajir, West Pokot
Contagious Caprine Pleuropneumonia (CCPP)	Baringo, Isiolo, Kilifi, Kitui, Kwale, Mandera, Marsabit, Samburu, Taita Taveta, Tharaka Nithi, Turkana, West Pokot
Peste des Petits Ruminants	Baringo, Garissa (suspected), Marsabit, Wajir (suspected), West Pokot

Milk production is at historically low levels. In Lamu, Tana River, Turkana, Mandera and Isiolo, it ranges between just two and eight percent of the long-term mean. Large falls on the previous month were recorded in Turkana (92 percent) and Kwale (41 percent). In Garissa, Isiolo, Mandera and Wajir, milk production in February was lower than the minimum recorded for that month, while in Marsabit, 95 percent of households reported no milk production at all.

Ten counties reported livestock deaths associated with drought: Baringo, Garissa, Kajiado, Lamu, Marsabit, Narok, Samburu, Tana River, Turkana and West Pokot. The Lamu bulletin notes that the number of deaths has reduced on the previous month.

All pastoralist counties except Garissa, Mandera and Wajir reported livestock migration whose pattern or timing was abnormal.

Crop production

As expected, the short rains crops in marginal agricultural areas were badly affected by moisture stress. Most of the rain-fed crops in Kitui withered prematurely, while in Nyeri, they were described as ‘beyond salvage’. Maize is at the tussling stage on a few farms in the marginal mixed farming zone of Laikipia but is drying up. In Meru, the maize harvest is underway in parts of the agro-pastoral and rain-fed cropping zones but the yield is expected to be below normal.

In West Pokot, the main short rains crop is beans, but no planting took place due to the late onset of the season. The potato crop has been badly affected by late blight in Laikipia and by frost in the mixed farming zone of West Pokot. Dry conditions in West Pokot’s main horticultural production areas, such as Wei Wei, have caused a significant drop in the supply of fruits and vegetables to the county’s markets. More positively, a good harvest of green grams and cowpeas is helping cushion households in Makueni.

Land preparation is underway in advance of the long rains. This is well-advanced in Nyeri, a county which normally depends on the short rains harvest, where 60 percent of the acreage is already prepared.

Access to water

The bulletins monitor the average distances to water for both households and livestock. Some of the largest increases on the previous month were as follows:

Household			Livestock		
County	% increase on previous month	% above long-term mean (LTM)	County	% increase on previous month	% above LTM
Turkana	80%	102%	Kitui	76%	57%
Wajir	40%	Below LTM	Wajir	40%	15%
Garissa	33%	9%	Garissa	32%	61%
Baringo	28%	217%	Isiolo	20%	33%
Meru (North)	24%	394%			

In other counties, these walking distances have reduced or remained stable, reflecting the impact of water trucking (Lamu) or the off-season rains (Marsabit). Even so, they may still be well above normal:

County	Type of distance	Change on previous month	% above LTM
Lamu	Household	Fell by 10%	389%
	Livestock	Fell by 30%	233%
Marsabit	Household	Fell by 24%	14%
	Livestock	Stable	55%
Kajiado	Household	Fell by 2%	68%
Tana River	Livestock	Stable	55%

Moreover, being averages, these figures mask significant inter-county differences. For example, in Magadi and Mosiro in Kajiado, the household distance to water is more than three times the county average.

Access to water is affected by a number of factors including waiting times, price, and the quality of maintenance of water sources. In Marsabit, waiting times are twice the normal length while the cost of water is ten times higher from vendors than at the source. Counties reporting non-operational boreholes include Baringo, Isiolo and Laikipia.

Terms of trade

A striking feature of this month's bulletins is the large increase in the price of foodstuffs, particularly in semi-arid counties, caused by a combination of high demand, low supply, and rising prices in source markets elsewhere in Kenya. In Kitui the maize price rose by 26 percent on the previous month. The average price of maize is currently well above the long-term mean in the following counties:

County	No. of Kshs. above LTM	Notes
Tana River	22	
Meru (North)	17	
Kitui	16	
Tharaka Nithi	16	Kshs. 10 above the maximum recorded in February
West Pokot	15	
Lamu	12	
Embu (Mbeere)	11	Kshs. 15 above the LTM in the marginal mixed farming zone

The price of other foodstuffs such as pulses has also risen sharply. Elsewhere, maize prices are falling due to the dampening effect of relief food. In Turkana the average price fell by Kshs. 5 on the previous month, although at Kshs. 82 per kg it remained high, and is as much as Kshs. 104 per kg in the fisheries livelihood zone.

Table 2 summarises the trend in the terms of trade between goats and maize compared with the previous month.¹ In most counties, pastoralists' purchasing power continues to weaken as livestock prices fall and maize prices rise. Some of the largest falls in the terms of trade were in Kitui (by 31 percent), Mandera (by 20 percent), and Laikipia (by 15 percent). The improvement in Baringo and Turkana is attributed to the impact of drought response interventions, specifically livestock offtake and relief food distribution.

Table 2: Terms of trade, February 2017

<i>Trend</i>	Improving	Stable	Worsening	
Below long-term mean (LTM)	Baringo Makueni	Garissa	Kilifi Kitui Laikipia Lamu Mandera	Samburu Tana River Tharaka Nithi West Pokot
At / close to LTM			Kajiado Wajir	
Above LTM	Turkana			

Note: Data based on 15 counties

Health and nutrition

The bulletins monitor the percentage of children under five at risk of malnutrition, determined by a mid-upper arm circumference (MUAC) measurement (Table 3). The highest average rate in February was in Isiolo, at 32 percent, while the rate in Garissa, Mandera and Samburu exceeded 25 percent.

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

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

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

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.

Some of the largest movements in the MUAC rate on the previous month were in the following counties:

Worsening			Improving		
County	% increase	% above LTM	County	% decrease	% below LTM
Garissa	18%	88%	Nyeri (Kieni)	100%	100%
Isiolo	33%	59%	Marsabit	12%	29%
Narok	36%	9%			

The dramatic fall in Nyeri is because all five cases identified in January were referred to the county nutrition department for successful treatment.

In other counties the MUAC rate may be stable or even have improved on the previous month (usually attributed to the quality of nutritional surveillance and response) but still be very high:

County	Comparison with previous month	% above LTM
Kilifi	Improved by 15%	82%
West Pokot	Improved by 3%	45%
Lamu	Stable	21%

A critical factor affecting malnutrition is the level of milk consumption. In Lamu and Tana River, this is now as low as two percent and five percent respectively of the long-term mean, while in Turkana and Narok it fell by 83 percent and 48 percent respectively on the previous month. In Garissa, milk consumption in February was lower than the minimum recorded for that month.

The early warning system also monitors the quality of food consumption, identifying households whose food consumption is acceptable, borderline, or poor. Specific areas with high levels of poor food consumption include:

County	Livelihood zone	% households with poor food consumption score
West Pokot	Pastoral	93%
Lamu	Agro-pastoral	78%
Samburu	Pastoral	64%

Water shortages affect human health and nutrition as the quality of water deteriorates and less time and income is available to spend on prevention and treatment. More than 20 wards in Baringo reported cases of water-borne disease, while cases of cholera have been confirmed in Tana North and are suspected in Ijara.

1.2 Drought phase classification

The drought phase (Table 4) is determined by the indicators discussed in the previous sections. Livelihood zones that differ from the overall county status are shown in footnotes.

Table 4: Drought phase classification, February 2017

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

2 Other food security challenges

Conflict remains a major threat to food security and well-being. The most serious incidents were reported in the following counties.

- **Baringo:** numerous incidents which led to eight deaths and the displacement of 5,882 children and 10,195 adults.
- **West Pokot:** conflict along the borders with Marakwet and Turkana, which has constrained access to forage and cut off access to markets, leading to higher food prices. The bulletin notes that: 'Market inaccessibility especially in Pokot Central as a result of the ongoing conflict along the county borders remains the greatest impediment to food security.'
- **Isiolo:** one death in Garbatulla, with further conflict and displacement in Isiolo North, and continuing tensions in Gafarsa, Kombola and Belgesh.

² Pastoral livelihood zone: alarm

- **Samburu:** conflict and cattle theft in Baragoi, Marti and Archers Post, where tension is still high.
- **Turkana:** insecurity has forced a group of pastoralists who had migrated to Uganda to return.
- **Laikipia:** conflict between pastoralists and ranchers, the most affected ranches in February being Mugie, Kivuku, Suyian, Loisaba, Sosian and the Laikipia Nature Conservancy.
- **Kitui:** conflict over pasture and water along the border with Tana River, which led to the closure of three primary schools and the displacement of some families. Peace-building activities have calmed the situation, though tensions remain high.
- **Tana River:** conflict between pastoralists in Tana Delta. Peace meetings and the presence of security officers have contained the situation.
- **Meru:** conflict between herders and farmers in Tigania West, and cattle theft in the grazing areas of Igembe North and Igembe Central.

There were no reports of conflict in Garissa, Mandera, Marsabit or Wajir.

Five bulletins (Baringo, Laikipia, Lamu, Taita Taveta and Tana River) mention human-wildlife conflict as a concern. In Lamu and Taita Taveta its incidence is increasing. Elsewhere, there were two deaths from flash floods in Lomut, West Pokot, triggered by rainfall in Marakwet.

3 Response

On 10th February, the President declared the current drought situation a national disaster, recognising that the situation continues to deteriorate and will worsen significantly if the long rains perform poorly. The government has embarked on the second stage of a three-phase programme approved by the Cabinet in November 2016, for which the National Treasury has approved a further Kshs. 7.4 billion against total needs of Kshs. 10.5 billion. The principal areas of response are food and safety nets, water, livestock, agriculture, health and nutrition, education, peace and security, environment, and coordination.

Two response mechanisms managed by the NDMA are drought contingency finance, supported by the European Union (EU), and scalable cash transfers through the Hunger Safety Net Programme (HSNP), supported by UK Aid.

3.1 Drought contingency fund

Since July 2016, the NDMA has disbursed Kshs. 242 million of drought contingency finance in 21 counties, complementing what the county governments and their partners are doing in the key sectors of livestock, agriculture, water, health and nutrition, education and security. A further Kshs. 526 million has been committed. A full financial statement is in Annex 2.

There has been a significant expansion in the use of drought contingency finance since the beginning of 2017. Approximately 46 percent of total disbursements have been made since January. A major scale-up of support to the livestock sector is underway, with three components: (i) the provision of animal feeds, (ii) commercial destocking for fattening through contracts with both private and governmental

stakeholders, and (iii) slaughter destocking of animals which have lost their commercial value. Contracts have recently been agreed with the Agricultural Development Corporation for commercial offtake and the provision of animal feeds.

The EU has approved a new grant which will build on their previous support to the drought management system. It includes a further €6.1 million of drought contingency finance, and a contribution of nearly €10 million towards the shock-responsive transfers managed through the HSNP. An additional €6.5 million are earmarked to support drought preparedness.

3.2 Shock-responsive transfers

In February 2017, and with funding from UK Aid, the HSNP made emergency cash transfers totalling Kshs. 144.8 million to an additional 53,637 households in its four counties of operation, i.e. over and above the programme's core caseload. The payments are triggered by the previous month's Vegetation Condition Index. Each household receives Kshs. 2,700, equivalent to the monthly receipts by the regular beneficiaries. The breakdown by county of the February transfers was as follows:

County	No. households	Amount disbursed (Kshs.)
Mandera	5,830	15,741,000
Marsabit	9,841	26,570,700
Turkana	21,473	57,977,100
Wajir	16,493	44,531,100
TOTAL	53,637	144,819,900

Since November 2016, more than Kshs. 609 million have been transferred to drought-affected households in the four counties through this mechanism.

4 Projected food security situation

The outlook for the forthcoming long rains season, published by the Kenya Meteorological Department on 13th February, is that rainfall in the Northern Rift Valley is forecast to be average, but generally depressed in other arid and semi-arid counties. The distribution of rainfall is expected to be poor, and the onset of the season in the north and north-east may delay until April.

A late start to the season will prolong the current drought stress and worsen its already substantial impacts on production, incomes, health and nutrition. A late onset in crop-producing counties may lead to losses among farmers who have dry planted, while poorly distributed rainfall will affect the growing period.

The seasonal outlook warns that food security is expected to deteriorate, particularly in the north of the country, and that measures should be taken to enhance the implementation of contingency plans.

5 Recommendations

1. **Urgent measures to expand drought response and sustain it, particularly if the long rains perform poorly.** This should involve the rapid scale up of interventions across all sectors, including:
 - a. Food and cash transfers.
 - b. Water: maintenance of all sources, pre-positioning of fast-moving spares, and water trucking where necessary.
 - c. Livestock: feed supplements, offtake, and disease surveillance and control.
 - d. Health and nutrition: integrated outreach services, monitoring, and associated response.
 - e. Education: measures to help students remain in school, such as food for fees or school feeding programmes.
 - f. Security: facilitation of peaceful livestock mobility, including inter-communal and international agreements, and an expansion of monitoring and rapid response capacity in dry season grazing areas.
2. **Timely preparedness for the long rains season.** Given that the season may be below normal, it is critical that preparation is timely and that maximum benefit is secured. Appropriate activities include:
 - a. Desilting of water points.
 - b. Expansion of rainwater harvesting capacity.
 - c. Farmer sensitisation and training, including post-harvest storage.
 - d. Positioning / provision of inputs, such as relief seeds in areas where the short rains harvest was poor.
 - e. Expansion of public health interventions, including the provision of water treatment supplies.
3. **Accelerated implementation of measures that will reduce drought vulnerability,** in line with the Common Programme Framework for Ending Drought Emergencies, as well as their integration within planning frameworks for the 2017-18 budget year and beyond, including:
 - a. Investment in appropriate and sustainable water infrastructure.
 - b. Repair or expansion of the rural road network.
 - c. Expanded access to appropriate education, health and nutrition services.
 - d. Measures that manage conflict and build peace.
 - e. Strengthening of market systems and producer power in markets.

Annex 1 Vegetation Condition Index, 27th February 2017

ADMINISTRATIVE UNIT				Remarks		
COUNTY	Sub-County	VCI-3month 30 th January 2017	VCI-3month 27 th February 2017	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	17.75	12.58	Marginal off-season rains were received in February, but not sufficient to affect the vegetation greenness. As a result, the VCI continues to worsen with now two sub-counties in the extreme vegetation deficit category and all the others in the severe vegetation deficit band.		
	Central	26.40	13.42			
	Eldama	21.42	12.29			
	Mogotio	10.03	3.47			
	North	15.19	8.63			
	South	22.75	17.69			
	Tiaty	16.84	14.57			
MANDERA	County	20.80	19.80	No significant changes from the previous month.		
	Banissa	17.09	16.50			
	Mandera East	19.18	21.26			
	Lafey	25.21	24.32			
	Mandera North	17.41	17.13			
	Mandera South	26.45	24.79			
	Mandera West	17.03	14.82			
TURKANA	County	15.64	16.95	There have been marginal improvements following limited off-season rains. The sub-counties that recorded better rainfall in February (such as Turkana North and West) may record some limited increase in vegetation greenness in the next couple of weeks, given the time lag involved. All sub-counties except Turkana Central and Loima are currently in the severe vegetation deficit band.		
	Turkana Central	27.51	27.97			
	Turkana East	15.81	16.62			
	Loima	18.96	20.79			
	Turkana North	10.64	11.91			
	Turkana South	18.59	19.93			
	Turkana West	13.67	15.39			
MARSABIT	County	11.87	11.07	Like Turkana, Marsabit received some off-season rains in February which should slightly improve the VCI in the next couple of weeks. However, the vegetation deficit continues to be very severe.		
	Laisaimis	11.63	10.74			
	Moyale	18.43	12.88			
	North Horr	9.94	10.49			
	Saku	19.24	16.59			
WAJIR	County	16.41	14.32	No significant changes recorded with four sub-counties still in the severe deficit band.		
	Wajir East	24.30	21.80			
	Eldas	14.59	13.46			
	Wajir North	17.37	14.53			
	Wajir South	13.77	11.16			
	Tarbaj	25.37	22.51			
	Wajir West	10.67	11.3			
SAMBURU	County	19.45	15.44	Further worsening conditions with all sub-counties now in the severe vegetation deficit band and Samburu North fast approaching the extreme deficit category.		
	Samburu East	24.16	17.59			
	Samburu North	13.53	12.80			
	Samburu West	20.74	15.82			
GARISSA	County	16.83	16.68	Severe vegetation deficit across all sub-counties except Fafi, which is in the moderate deficit band.		
	Balambala	18.90	16.62			
	Daadab	15.69	13.06			
	Fafi	20.9	21.45			
	Ijara	10.88	13.21			
	Lagdera	13.58	13.1			
	Dujis	21.90	19.79			

ISIOLO	County	22.13	18.32	Negative trend, with all sub-counties shifting to the severe vegetation deficit band.
	Isiolo North	21.20	18.34	
	Isiolo South	23.56	18.28	
TANA RIVER	County	16.65	17.22	The VCI values show a severe vegetation deficit across all sub-counties.
	Bura	22.07	18.48	
	Galole	17.04	17.44	
	Garsen	11.85	16.02	
KAJIADO	County	31.46	23.86	VCI shows a declining trend from the previous month with one sub-county (Kajiado South) now in the severe deficit band.
	Kajiado Central	34.66	29.74	
	Kajiado East	36.47	23.84	
	Kajiado North	45.61	41.35	
	Kajiado South	27.47	18.22	
	Kajiado West	30.40	24.71	
LAIKIPIA	County	22.38	16.11	Negative trend with worsening vegetation conditions in all sub-counties.
	Laikipia East	32.51	21.81	
	Laikipia North	17.82	14.95	
	Laikipia West	26.04	15.51	
THARAKA NITHI	County	37.99	30.31	After a marked improvement recorded in January as a result of rains received in December, the situation in February has reversed and is now on a worsening trend, with all sub-counties in the moderate deficit band.
	Chulga	46.97	29.90	
	Maara	46.42	34.01	
	Tharaka	31.92	29.28	
WEST POKOT	County	14.20	11.68	The VCI continues to worsen significantly, with Kacheliba and Sigor sub-counties now in the extreme deficit band.
	Kacheliba	8.45	9.60	
	Kapenguria	20.44	15.12	
	Pokot South	26.29	16.82	
	Sigor	12.25	9.51	
EMBU	County	53.87	42.43	All sub-counties still within normal ranges for the period but with a worsening trend.
	Manyatta	50.65	38.49	
	Mbeere North	50.7	39.21	
	Mbeere South	55.78	46.36	
	Runyenjes	57.66	39.5	
KITUI	County	36.8	27.48	Worsening trend, with all sub-counties, except Kitui Central, entering the moderate deficit band.
	Kitui Central	49.49	37.48	
	Kitui East	40.47	28.99	
	Mwingi Central	41.68	33.08	
	Mwingi North	34.48	26.88	
	Mwingi West	41.57	31.6	
	Kitui Rural	45.14	28.53	
	Kitui South	33.23	24.75	
	Kitui West	37.26	24.38	
MAKUENI	County	50.94	38.06	All the sub-counties are in the normal range for the period but with a worsening trend.
	Kaiti	57.45	49.96	
	Kibwezi East	49.1	37.38	
	Kibwezi West	50.44	35.24	
	Kilome	46.32	35.85	
	Mbooni	55.55	45.53	
MERU	County	41.49	36.34	Modest worsening trend but with only one sub-county in the moderate deficit band.
	Buuri	38.82	35.21	
	Central Imenti	41.75	38.98	
	Igembe Central	41.89	35.44	
	Igembe North	44.31	35.51	

	Igembe South	44.39	38.52	
	North Imenti	33.82	35.85	
	South Imenti	47.23	40.60	
	Tigania East	39.33	31.58	
	Tigania West	37.81	40.55	
NYERU	County	40.45	29.45	The vegetation greenness is on a worsening trend with now four sub-counties in the moderate deficit band.
	Kieni	42.28	26.62	
	Mathira	40.72	37.26	
	Mukurweini	30.11	25.34	
	Town	32.62	40.09	
	Othaya	42.45	34.05	
	Tetu	37.64	26.9	
KILIFI	County	4.38	12.99	Some improvements recorded from the previous month, with three sub-counties shifting from the extreme to the severe deficit band.
	Ganze	12.12	17.97	
	Kaloleni	-6.14	0.24	
	Magarini	3.49	13.05	
	Malindi	2.27	12.09	
	Kilifi-North	-5.29	6.75	
	Rabai	-5.28	6.08	
	Kilifi-South	9.03	15.82	
KWALE	County	13.58	19.03	The VCI continues to improve in Matuga and Msambweni, which are now in the moderate deficit band.
	Kinango	12.26	18.11	
	Lungalunga	12.77	16.27	
	Matuga	19.20	26.94	
	Msambweni	18.49	22.72	
LAMU	County	-2.53	3.7	Lamu County continues to experience an extreme vegetation deficit across both sub-counties.
	Lamu East	5.9	8.55	
	Lamu West	-7.45	0.87	
TAITA TAVETA	County	27.35	23.55	Negative trend with one more sub-county entering the severe deficit band.
	Mwatate	19.95	15.23	
	Taveta	20.95	16.77	
	Voi	32.05	28.84	
	Wundanyi	28.88	23.33	
NAROK	County	29.88	24.55	VCI showing some moderate vegetation deficit in all sub-counties except Emurua Dikirr.
	Narok-East	31.43	29.79	
	Emurua Dikirr	58.33	50.02	
	Kilgoris	36.95	25.09	
	Narok North	39.43	31.18	
	Narok South	25.88	21.36	
	Narok West	23.23	20.40	

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

DCF Disbursements (Disbursed & Approved)													
Financial Year: 2016/2017													
Approved FRF's									Disbursements			Balances	
	Agriculture	Coordination	Education	Health & Nutrition	Livestock	Security	Water	County Total	Disbursements July to Dec 2016	Disbursements Jan 2017 to date	Total Disbursements to date	FRF Balance (Committed as at 9th March 2017)	
Baringo	75,000	1,901,300	1,404,400	1,226,200	28,232,160	399,400	4,611,200	37,849,660	9,286,060	10,115,345	19,401,405	18,448,255	
Garissa		3,178,900	7,732,200	5,256,800	64,235,000		7,484,700	87,887,600	10,660,400	6,917,500	17,577,900	70,309,700	
Isiolo		775,400	499,760	1,019,750	11,911,800	813,600	3,635,150	23,153,305	6,190,300	11,867,920	18,058,220	5,095,085	
Kajiado		2,088,300		1,523,900	15,191,360		9,310,800	28,114,360	2,991,000	2,247,200	5,238,200	22,876,160	
Kilifi		627,900		2,963,700	22,137,600	160,950	4,934,600	30,824,750	21,964,750		21,964,750	8,860,000	
Kitui		931,200		1,076,100	4,699,600		1,060,300	7,767,200	4,162,600		4,162,600	3,604,600	
Kwale		689,575		4,870,550	12,760,250	93,000	2,632,568	21,045,943	11,865,943	2,440,700	14,306,643	6,739,300	
Laikipia		940,800	1,100,000	2,701,000	4,595,100		2,141,900	11,478,800		3,000,000	3,000,000	8,478,800	
Lamu		1,314,800	5,800,300	567,800	40,317,924	677,700	4,464,400	53,142,924	8,746,300	6,401,000	15,147,300	37,995,624	
Makueni		784,700		1,362,600	2,046,800		862,300	5,056,400	4,166,400		4,166,400	890,000	
Mandera		2,417,800		1,337,700	49,947,800		7,553,500	61,256,800	5,881,577	9,994,000	15,875,577	45,381,223	
Marsabit		3,988,000		4,420,600	74,301,300	2,865,200	4,843,400	90,418,500	12,122,800	12,367,000	24,489,800	65,928,700	
Narok		810,980			6,169,954		7,657,230	14,638,164	2,285,080	2,044,804	4,329,884	10,308,280	
Nyeri		722,500			458,250			1,180,750		1,180,750	1,180,750	0	
Samburu		2,676,000		764,340	28,430,800		2,778,650	34,649,790	4,361,440	6,186,800	10,548,240	24,101,550	
Taita Taveta		2,482,500		1,883,950	15,539,810	653,100	4,101,880	24,661,240	3,086,500	3,000,000	6,086,500	18,574,740	
Tana River		1,334,400	3,580,300	1,623,800	31,264,200	519,000	1,889,600	40,211,300	4,534,000	9,423,000	13,957,000	26,254,300	
Tharaka Nithi		633,000	3,150,000	1,580,000			2,182,000	7,545,000			0	7,545,000	
Turkana		1,734,800		1,125,800	57,440,700		3,036,000	63,337,300	5,205,500	13,876,300	19,081,800	44,255,500	
Wajir		1,048,500		1,816,200	61,498,400		6,092,000	70,455,100	6,354,700	10,582,200	16,936,900	53,518,200	
West Pokot	223,200	1,441,200		5,032,500	4,227,000	1,255,800	3,537,930	15,717,630	6,908,300		6,908,300	8,809,330	
ADC Requisition					57,410,600			57,410,600		19,136,867	19,136,867	38,273,733	
NDMA HQ (Payments made centrally from HQ for livestock feeds)										13,318,000	13,318,000	-13,318,000	
											0	0	
Sector Total	298,200	32,522,555	27,764,805	42,153,290	592,816,408	7,437,750	84,810,108	787,803,116	0	130,773,650	111,644,519	242,418,169	526,248,080

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 1). 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 1: Drought Phase Classification

