

REPUBLIC OF KENYA



MINISTRY OF HEALTH



NUTRITION SITUATION REPORT FOR ARID AND SEMI ARID AREAS, AUGUST 2017

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CHAPTER 1: INTRODUCTION

The Kenya Food Security Steering Group (KFSSG) undertakes biannual seasonal assessments i.e. Long Rains Assessment (LRA) and Short Rains Assessment (SRA) every year to assess food and nutrition security situation following the long and short rains season. The analysis also takes into account the cumulative effect of previous seasons. Recommendations for possible response options based on the situation analysis are developed. During the assessments secondary data from different sources such as nutrition surveys, DHIS, NDMA early warning system is collated and reviewed.

Teams composed of Kenya Food Security Steering Group (KFSSG) members and County Steering Group (CSG) members make transect drives, carry out interviews, hold focus discussions and do market surveys in order to get a picture of the ongoing situation. Analysis is conducted using the IPCs for Food Insecurity and Acute Malnutrition. Nutrition team through the Nutrition Information Technical Working Group (NITWG) supports in the health and nutrition analysis and conducts the IPC for acute malnutrition to determine the severity of acute malnutrition, geographical areas that are most affected and the contributing factors to acute malnutrition. This helps to determine immediate, intermediate and long term response actions to address acute malnutrition.

The resulting food and nutrition security situation updates including the number of children and pregnant and lactating women requiring nutritional support informs the nutrition response plan and the integrated contingency plan in the National Drought Management Authority.

1.1 Analysis period

Integrated Phase Classification (IPC) for Acute Malnutrition was conducted from 17th July to 26th July 2017 alongside the Food Security Integrated Phase Classification during the 2017 Long Rains Assessment (LRA) Report Writing Workshop. The analysis workshop was preceded by field level visits by KFSSG and CSG members from 3rd to 15th July 2017. Integrated SMART surveys were conducted in June and July as part of the LRA.

1.2 Scope and Unit of Analysis

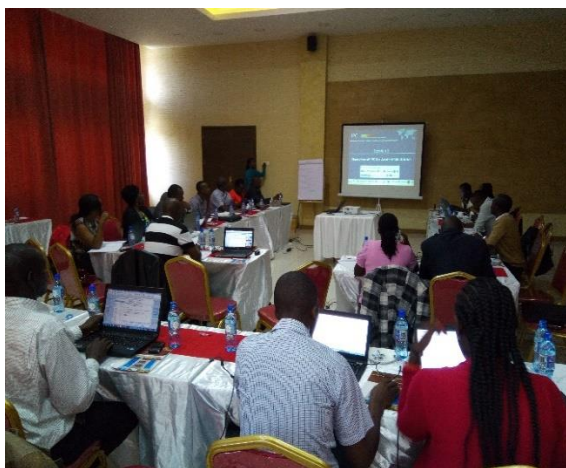
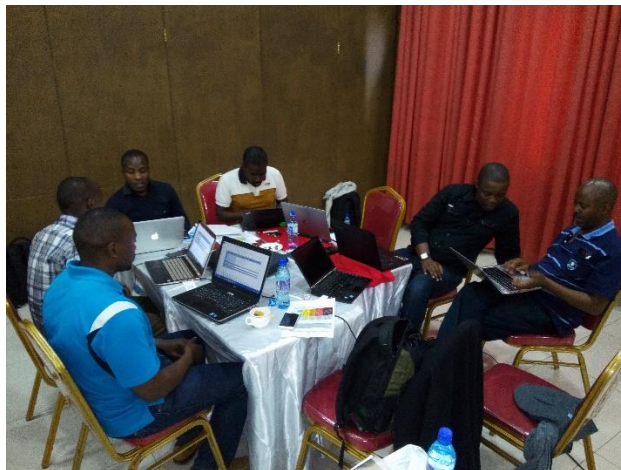
The assessment covered 23 counties classified as arid and semi-arid (Figure 1.1). These counties are also considered to be most vulnerable to acute malnutrition. They include: Mandera, Garissa, Tana River, Wajir, Isiolo, Turkana, Samburu, Marsabit, Baringo, Laikipia, West Pokot, Kajiado, Narok, Kitui, Makueni, Nyeri (Kieni), Meru (Meru North), Embu (Mbeere), Tharaka Nithi (Tharaka), Kwale, Taita Taveta, Kilifi and Lamu. The unit of analysis was dependent on homogeneity or heterogeneity of the prevalence of acute malnutrition in a county. Turkana and Marsabit Counties therefore had four units of analysis each, Wajir had 2 units of analysis while all the other counties were considered as single units of analysis.

Urban areas usually report low prevalence of acute malnutrition but high case-loads of acute malnutrition. This is due to higher populations living in these areas especially in the informal settlements. Children and PLW are also more vulnerable to acute malnutrition. In this regard, to ensure urban needs are met and ensure coordinated resource mobilization, calculated caseload for urban areas have been included in this report.



1.2 Analysis team

The IPC for acute malnutrition analysis team comprised participants from the national and county governments, line ministries, UN agencies, implementing partners and academia. The analysis team was trained on IPC for acute malnutrition before analysis (See agenda and participants list in the appendix).



1.3 Objectives

- To conduct training on IPC for acute malnutrition in order to reinforce skills of analysis team to conduct quality analysis
- To assess the severity of acute malnutrition by referencing against international standards and identify areas that are most affected by acute malnutrition
- Identify the main contributing factors to acute malnutrition
- Determine the number (caseloads) of children and PLW in order to inform response
- Identify the major priority response objectives
- Develop communication materials and disseminate after the Kenya Food Security Meeting (KFSM) (updated website, updated survey dashboard, infographic, situation report)

CHAPTER TWO: METHODS

The analysis applied the global protocols for Integrated Phase Classification for Acute Malnutrition released (November 2016). The IPC for Acute Malnutrition classified the severity of acute malnutrition into five Phases which was done based on the prevalence of GAM. A higher prevalence of acute malnutrition characterized the most severe phases as shown in Figure 2.1.

| Phase Name and Description | PHASE 1 Acceptable | PHASE 2 Alert | PHASE 3 Serious | PHASE 4 Critical | PHASE 5 Extreme critical |
|---|---|---|--|--|--|
| | Less than 5% of children are acutely malnourished by GAM by WHZ measure or Less than 6% of children are acutely malnourished by GAM by MUAC measure | Even with any humanitarian assistance, about 5-10% of children are acutely malnourished by GAM by WHZ measure or about 6-11% of children are acutely malnourished by GAM by MUAC measure. | Even with any humanitarian assistance, about 10-15% of children are acutely malnourished by GAM by WHZ measure or about 6-11% of children are acutely malnourished by GAM by MUAC measure. | Even with any humanitarian assistance, 15-30% of children are acutely malnourished by GAM by WHZ measure or 11-17% of children are acutely malnourished by GAM by MUAC measure, showing conditions for excess mortality ³ . | Even with any humanitarian assistance, >30% of children are acutely malnourished by GAM by WHZ measure or >17% of children are acutely malnourished by GAM by MUAC measure, showing conditions for widespread death ³ . |
| Priority Response Objective to decrease Acute Malnutrition ⁴ | Maintain the low prevalence of acute malnutrition | Strengthen existing response capacity and resilience. Address contributing factors to malnutrition. Monitor conditions and plan response as required. | Urgently reduce acute malnutrition levels through → | | |
| | | | Scaling up of existing capacity and response as well as addressing contributing factors to malnutrition | Significant scale up with external help, if needed, of nutrition response and addressing of contributing factors to malnutrition in close co-ordination with other sectors | Addressing widespread acute malnutrition and death by all means. Also address all causes of malnutrition through greater scaling up of all public health programme interventions in close co-ordination with all other sectors. |
| GAM by WHZ) <-2 standard deviation and/or Oedema | < 5% | 5.0 to 9.9% | 10.0 to 14.9% | 15.0 to 29.9% | ≥30% |
| GAM by MUAC < 125 mm and/or Oedema | <6% | 6.0 to 10.9% | | 11.0 to 16.9% | ≥17% |

Figure 2.1: IPC for Acute Malnutrition Reference Table

The analysis resulted to a current situation update (May to July 2017) and projection of the situation in the next three months (August to October 2017). Key contributing factors both food security and non-food security related factors were identified using the UNICEF conceptual framework (Figure 2.2) as laid out in the analysis work sheet (Appendix 4.5). Since both IPCs were conducted simultaneously, results from the IPC for acute malnutrition were input into the Food Security IPC and results from Food Security IPC were also input in the IPC from acute malnutrition. Finally response actions were identified. A one page summary of the situation including maps was developed.

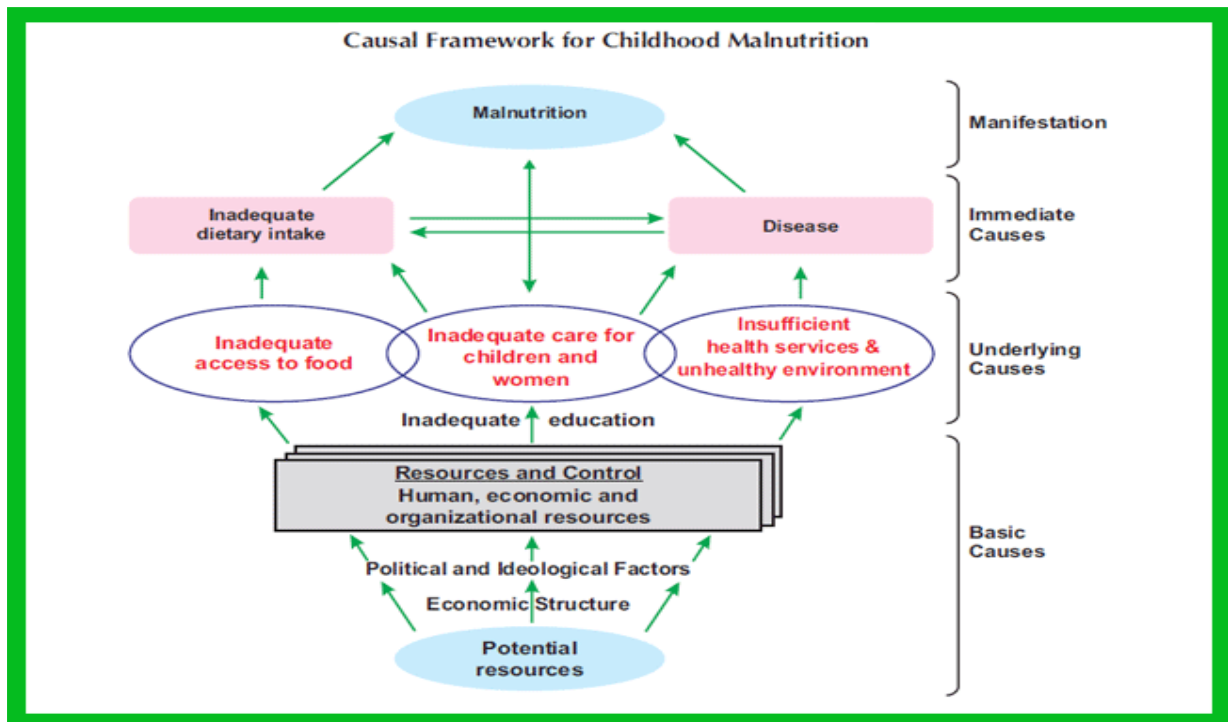


Figure 2.2: UNICEF Conceptual Framework

Data sources and quality: Data on Global Acute Malnutrition (GAM) used in the IPC for Acute Malnutrition were from representative surveys (GAM by WHZ) and the National Drought Management Authority sentinel sites (GAM by MUAC). Only data of acceptable quality was used in the analysis. Reliability scores were also assigned. Only areas with reliable information from the same season of analysis were classified for current classification while secondary information was used for the projection. Secondary data was gathered from multiple sources including the DHIS, small and large scale survey reports, sentinel surveillance, rapid assessments etc.

3. RESULTS

3.1 National Nutrition Situation

The IPC for Acute Malnutrition conducted in July 2017 has reported a *Very Critical* nutrition situation (Phase 5; GAM WHZ ≥ 30 percent) in Turkana Central, Turkana North, Turkana South, and North Horr in Marsabit. The prevalence of acute malnutrition in Turkana is **very alarming** and is comparable with the prevalence recorded in 2011 Horn of Africa Crisis with the highest Global Acute Malnutrition (GAM) of 37% recorded in Turkana South. A *Critical* nutrition situation (Phase 4; GAM WHZ 15.0 - 29.9 percent) was reported in East Pokot (Baringo), Samburu, West Pokot, Turkana West, Garissa, Wajir, and Mandera, while Laikipia reported a *Serious* nutrition situation (Phase 3; GAM WHZ 10.0 -14.9 percent). Moyale and Saku were classified as *Alert* (Phase 2; GAM WHZ ≥ 5 to 9.9 percent), while Narok, Kajiado, Makueni, Mbeere, Kwale, and Kilifi were *Acceptable* (Phase 1; GAM WHZ $< 5\%$) (Figure 3.1). The situation is at risk of further deterioration in most counties in the coming months due to the anticipated worsening of the food security situation (Figure 3.2). Compared to February 2017, the overall nutrition situation continues to remain of great concern, including deterioration recorded in some counties (Figure 3.3 and 3.4).

The main contributing factor to the increased malnutrition is household food insecurity resulting from reduced milk availability at household level, reduced household food stocks and increased food prices. Other contributing factors include: common illnesses such as diarrhea, disease outbreaks (Figure 3.5), low coverage of supplementation programs, poor child feeding practices and poor water and hygiene practices. Pre-existing factors such as high poverty rates, low literacy, poor access to health facilities and frequent shocks aggravate the situation. Detailed cluster information is presented in the sections that follow. Comprehensive County Food and Nutrition Security LRA 2017 reports can be found at ndma.go.ke. A summary of GAM, SAM and contributory factors is presented in appendices 1, 2 and 3.

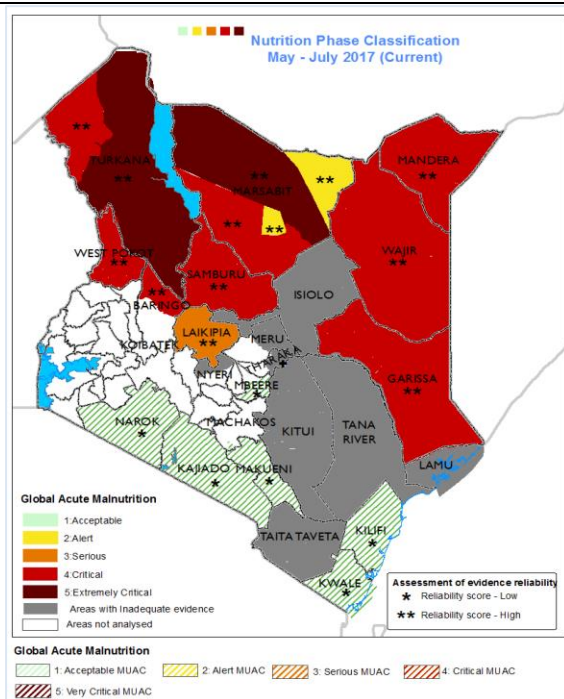


Figure 3.1: Current nutrition situation

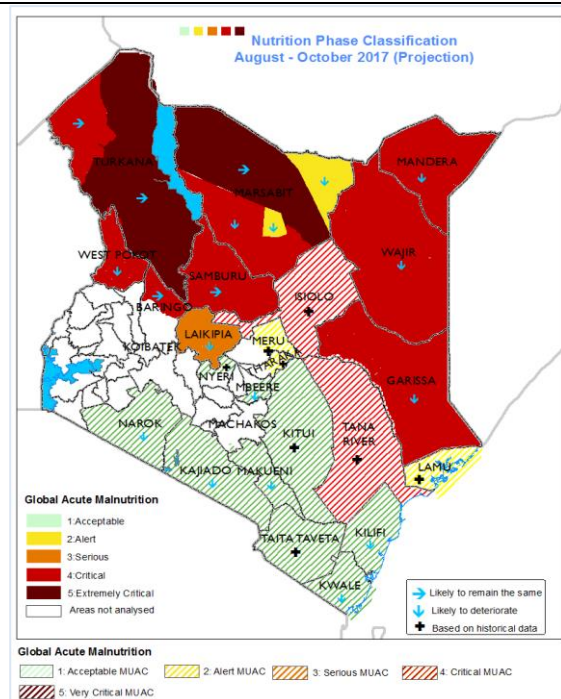


Figure 3.2: Projected nutrition situation

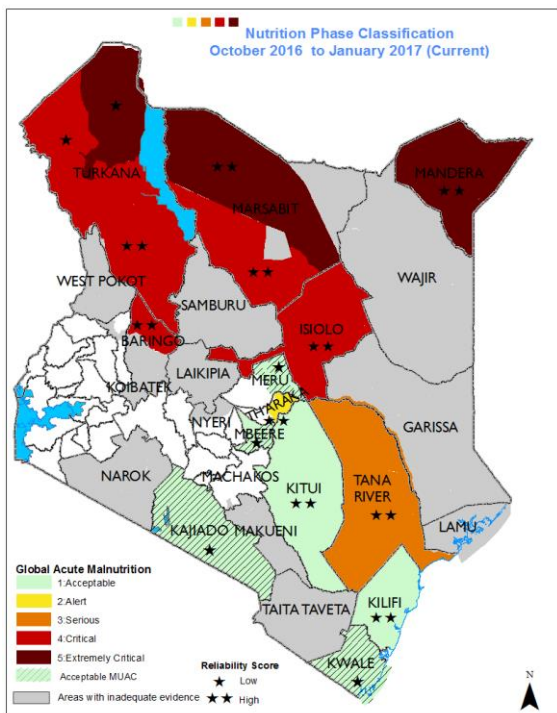


Figure 3.3: October-January 2017 nutrition situation

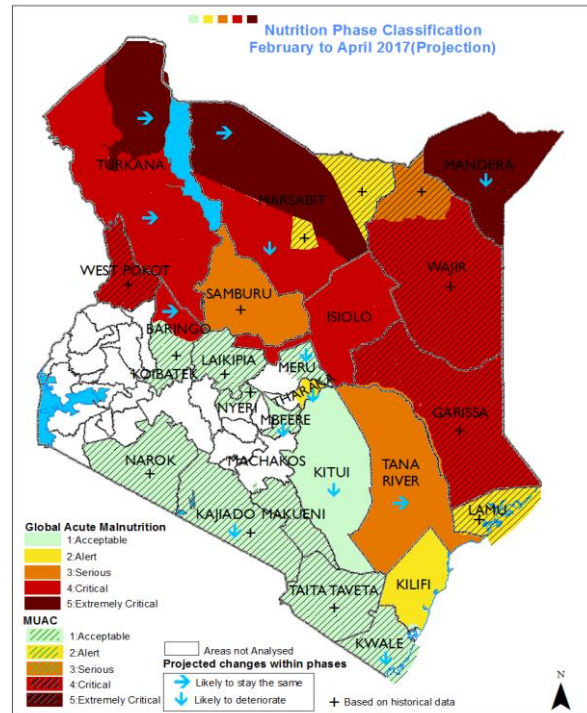


Figure 3.4: Projection, February–April 2017

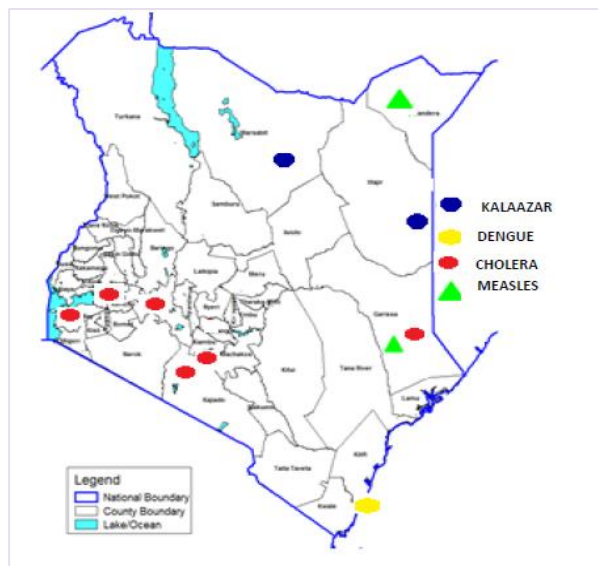


Figure 3.5: Map showing counties reporting disease outbreaks as at 25th July 2017

Caseloads of Children 6-59 months and PLWs requiring treatment for Acute Malnutrition

The total number (caseloads) of children 6 to 59 months requiring treatment for acute malnutrition in ASAL and Urban counties are 420,674 while 39,068 pregnant and lactating women require treatment. Figure 3.6 present the total caseloads by county. Considering a program target of 50% for Supplementary Feeding Program and 75% for outpatient therapeutic program (SPHERE standards), at least 232,013 are expected to be admitted to the Integrated Management of Acute Malnutrition (IMAM) program in the next one year (Table 3.1).

Compared to the 2017 SRA, the total number of children requiring treatment has increased from 412,297 to 420,674 (Table 3.2). MAM caseloads have increased while SAM caseloads have decreased. The discrepancies observed despite an overall deteriorating situation are attributed to varying population distribution of under-five children across the counties.

Table 3.1: Estimated Caseloads of Children and PLW Requiring Treatment for Acute Malnutrition, July 2017

| Area | Global Acute Malnutrition Children 6 to 59 months | | Severe Acute Malnutrition Children 6 to 59 months | | Moderate Acute Malnutrition Children 6 to 59 months | | Pregnant and lactating women | |
|--------------------|--|----------------|--|----------------|--|----------------|------------------------------|----------------|
| | Total Caseload | Program Target | Total Caseload | Program Target | Total Caseload | Program Target | Total Caseload | Program Target |
| ASAL | 369,277 | 202,796 | 72,632 | 54,474 | 296,645 | 148,322 | 36,988 | 36,988 |
| Urban | 51,397 | 29,217 | 10,478 | 8,323 | 40,919 | 20,894 | 2,081 | 2,081 |
| Grand Total | 420,674 | 232,013 | 83,110 | 62,797 | 337,564 | 169,216 | 39,068 | 39,068 |

Table 3.2: Estimated Caseloads of Children and PLW Requiring Treatment for Acute Malnutrition, February 2017

| Area | Global Acute Malnutrition Children 6 to 59 months | | Severe Acute Malnutrition Children 6 to 59 months | | Moderate Acute Malnutrition Children 6 to 59 months | | Pregnant and lactating women | |
|--------------------|--|----------------|--|----------------|--|----------------|------------------------------|----------------|
| | Total Caseload | Program Target | Total Caseload | Program Target | Total Caseload | Program Target | Total Caseload | Program Target |
| ASAL | 343,559 | 190,532 | 75,010 | 56,258 | 268,549 | 134,274 | 37,223 | 37,223 |
| Urban | 68,738 | 40,232 | 23,454 | 17,590 | 45,284 | 22,642 | 6,229 | 6,229 |
| Grand Total | 412,297 | 230,765 | 98,464 | 73,848 | 313,833 | 156,916 | 43,452 | 43,452 |

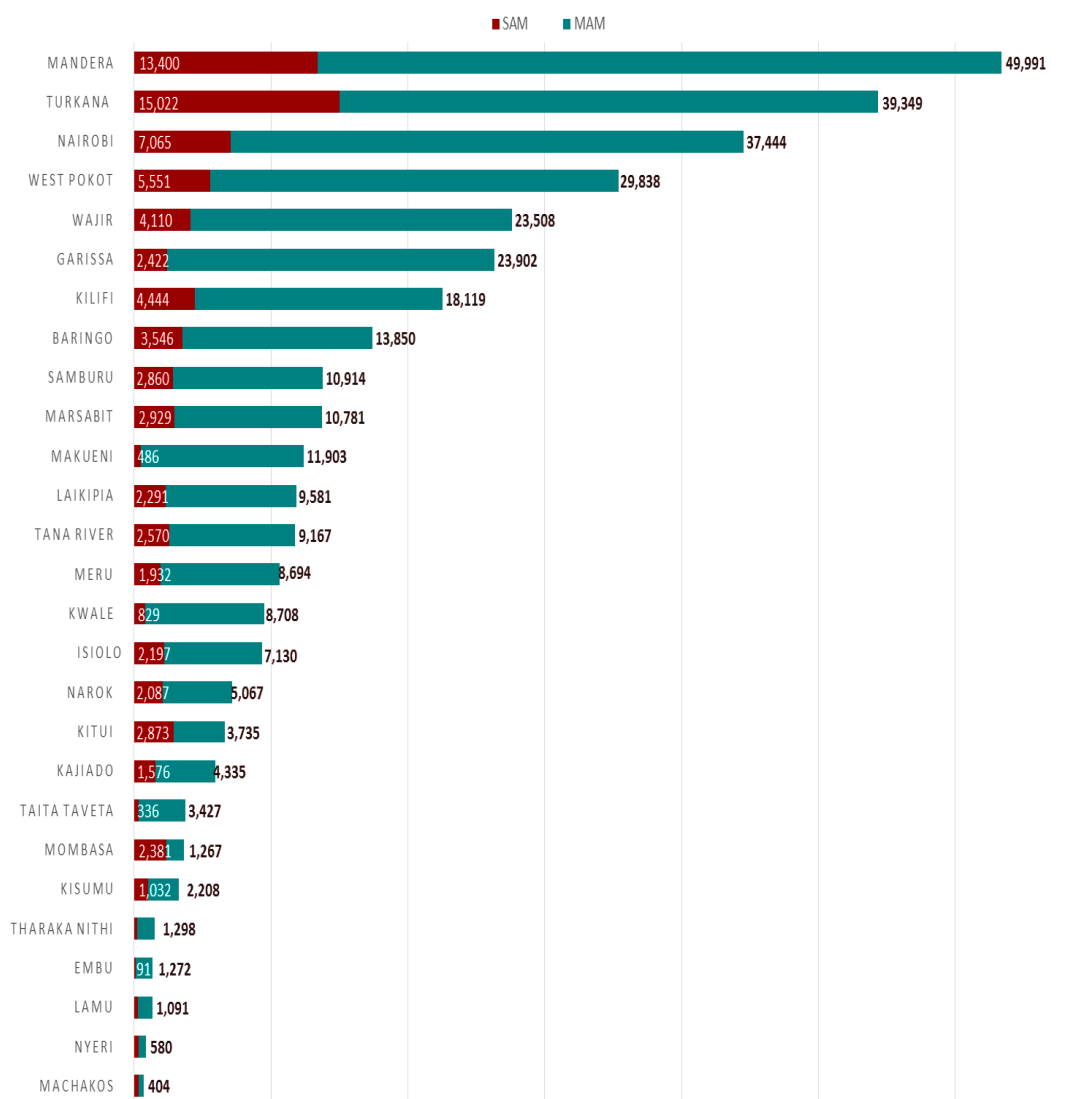


Figure 3.6: Estimated Caseloads of Children 6-59 months requiring treatment for Acute Malnutrition - ASAL and Urban counties, July 2017

Ongoing interventions

Various interventions have been targeting children below five years and pregnant and lactating women to address health and nutrition issues. Some of the nutrition specific interventions include: vitamin A supplementation, zinc supplementation in diarrhea management, promotion of exclusive breastfeeding and appropriate complementary feeding and iron and folic acid supplementation for pregnant women. Integrated Management of Acute Malnutrition (IMAM) Program has been targeting children with SAM and MAM and pregnant and lactating with acute malnutrition. Figure 3.7, 3.8 and 3.9 presents total admission trends for the Integrated Management of Acute Malnutrition in the arid and semi-arid areas for children 6 to 59 months and pregnant and lactating women. Health services have been hampered by the ongoing health worker strike resulting to reduced admissions and reporting.

Other sectors are also implementing multiple programs such as cash transfer, water trucking in the most affected areas, school meals programs etc. Detailed county information can be found in LRA 2017 county reports which can be accessed at ndma.go.ke.

Figure 3.7: Trends of Admissions for Children <5 years, SAM ASAL

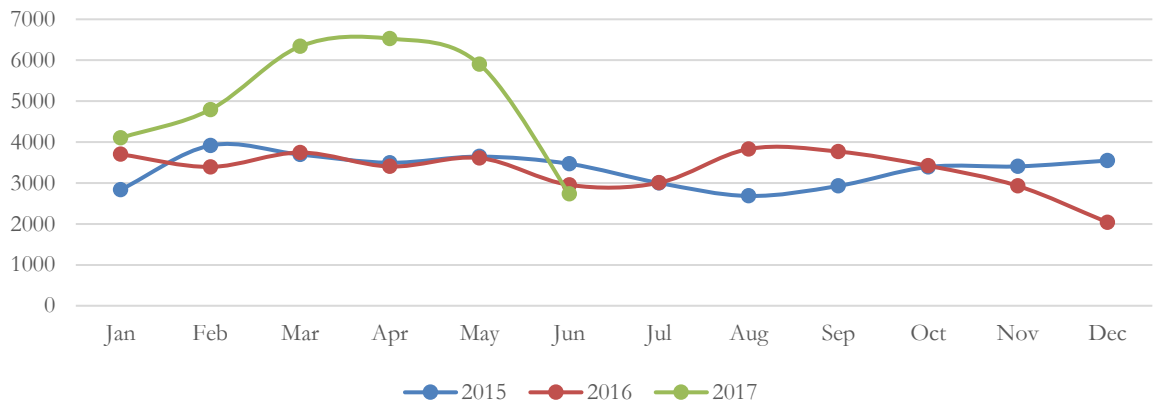


Figure 3.8: Trends of Admission for Children <5 years, MAM ASAL

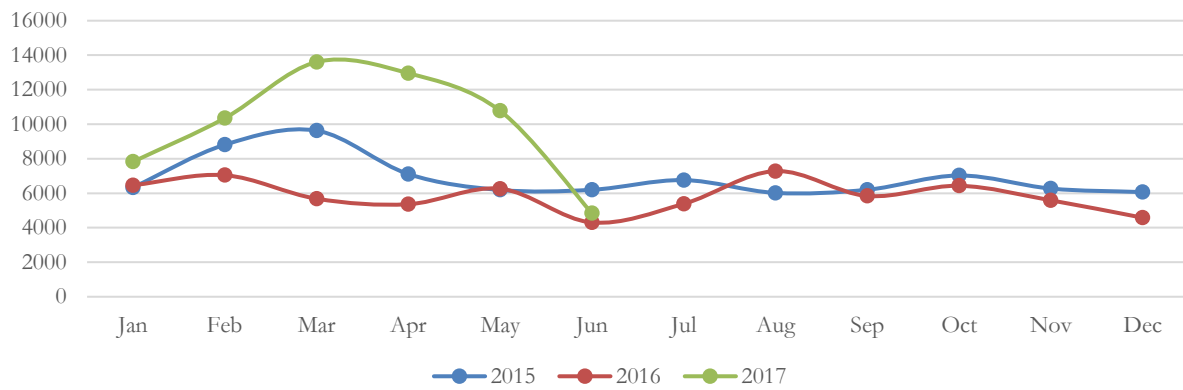
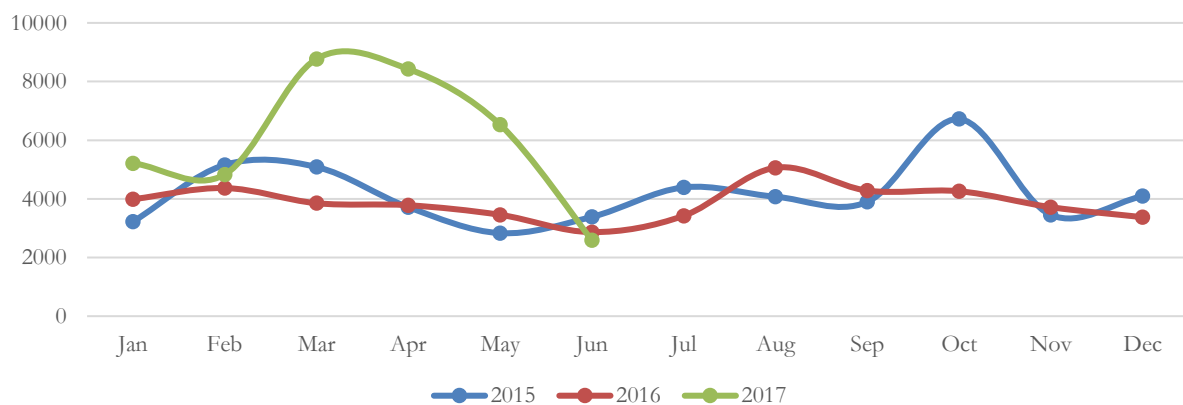


Figure 3.9: Trends of Admission for Pregnant and Lactating - ASAL



Recommendations

Immediate recommendations

- Continued scale up screening and treatment of acutely malnourished children and women through integrated outreaches to the most affected areas
- Enhanced mobilization and community engagement to further improve demand coverage of integrated health and nutrition programs
- Scale up of WASH services in most affected areas
- Scale up blanket supplementary feeding in the most affected counties
- Ensure nutrition commodities are prepositioned and supply chain monitoring is routinely done to avoid stock outs
- Urgent increase in household food access interventions including cash tops up and in kind to meet HH food needs in the most affected areas
- Specific focus on increasing HH food access in Turkana county to reduce risk of malnutrition related mortality
- Advocate for resolution of nurses strike to ensure lives are not lost due to impaired service delivery at facility level.
- Increased surveillance with real time reporting and action at national and county levels
- Continued support to effective coordination for monitoring of the emergency response plan

Medium term and Long term interventions

- Investment in water infrastructure and WASH interventions including Community Led Total Sanitation
- Develop intervention to promote behavior change to improve health seeking behavior
- Social behavior change communication and nutrition education addressing improved maternal, infant and young child nutrition
- Focus on resilience programming targeting basic and underlying causes
- Increase investment in infrastructure to improve market access and household food security.
- Increased investment in education of all children (and especially the girl child) as a long term measure
- Strengthening community based family protection structures for children

Factors to monitor:

Factors to monitor closely which are likely to affect food and nutrition situation in the coming months include:

- Staple food prices which have implications of household food access
- Livestock health and mortality: this is likely to impact negatively on milk availability and sources of income
- Resource based conflicts and insecurity
- Household food stocks: the effects of failed season and army worm
- 2017 General Elections:
 - Can result to displacement in case of violence.
 - Can lead to delay in implementation of programs during the transition period to the next government cycle
- Impacts of programs and interventions
- The performance of the upcoming 2017 short rains

3.2 Nutrition Situation by Livelihood Zone Cluster

3.2.1 Pastoral North West

(Marsabit, Turkana and Samburu Counties)

Morbidity and Mortality patterns

Across the cluster, there was notable increase in reported cases of diarrhea with a sharp decline in the month of June, which could probably be attributed to nurse's strike that has led to disruption of primary health care services. In addition, notable decline in malaria cases was noted across the cluster from January to June 2017 compared to same period last year (Fig 3.10). Cholera and Kalazaar outbreaks was reported in Turkana (29 cases of cholera/AWD in Turkana West) and Marsabit Counties (105 cases of Kalazaar with 3 deaths with majority (45) of cases being from Laisamis sub-county. No disease outbreak was reported in Samburu County. The mortality across the cluster was within the normal ranges (below 1 persons/10,000/day).

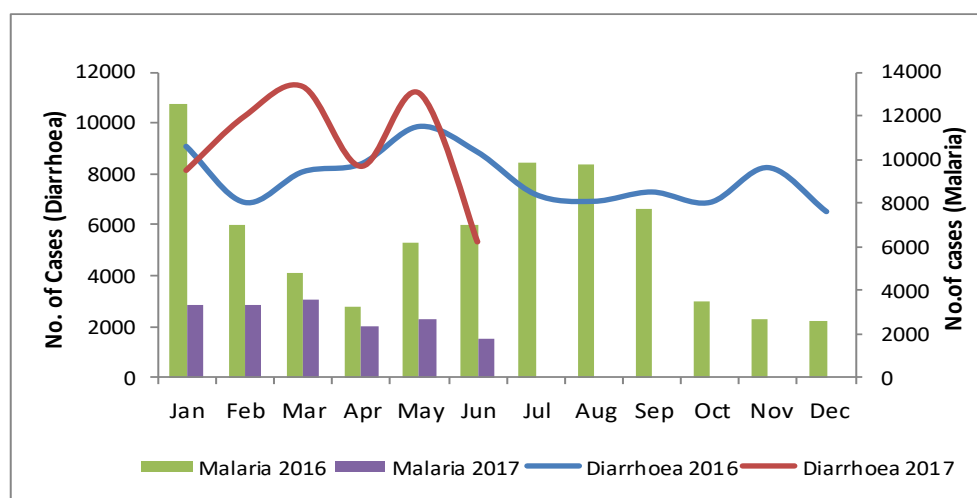


Figure 3.10: North West Pastoral Morbidity Pattern for Under Five LRA 2017

Immunization and vitamin A supplementation

Routine Vitamin A and immunization coverage reported through the DHIS was generally poor across the cluster, with none of the county achieving the national target of 80%. Marsabit recorded the highest proportion of children under one year who are fully immunized at 61.8 %, while Samburu had the lowest 56.3%. Vitamin A coverage for children aged 6-59 month was low in all the Counties at 73.1%, 49.5% and 52% in Marsabit, Samburu and Turkana, respectively. In all the Counties, a reduction in vitamin A compared to same period last year was noted with Samburu recording the highest reduction from 60.3% to 49.5%. The observed reductions in coverage was attributed to poor health seeking behavior, poor documentation of VAS at health facilities and the effects of ongoing nurse's strike that has led to major disruption of basic health service provision including vaccination and micronutrient supplementation programs.

Nutrition status and dietary diversity

According to the Integrated Phase Classification (IPC) for Acute Malnutrition conducted between June and July 2017, Turkana Central, Turkana South, Turkana North and North Horr in Marsabit counties reported extreme Critical Nutrition situation (phase 5; Global Acute Malnutrition ≥ 30 percent). A Critical Nutrition Situation (Phase 4; GAM WHZ 15.0 - 29.9 percent) was reported in Samburu, Turkana West, and Laisamis sub-county, in Marsabit County. Saku and Moyale sub counties in Marsabit were in phase 2 (alert GAM WHZ ≥ 5 to 9.9 percent) with potential to deteriorate in the next three months. Compared with June 2016, deterioration in the nutrition situation was noted most areas in the cluster with malnutrition levels in Turkana South being as high as those reported during the horn of Africa crisis in 2011. Samburu and Turkana

West moved from Serious to Critical, Turkana North and Central moved from critical to extreme critical nutrition situation, while Turkana South remained at extreme critical. The nutrition situation is expected to deteriorate further across all the counties in the North West cluster in the coming months as the food security situation is predicted to deteriorate in the next three months.

Detailed analysis of contributory factors show that the poor nutrition status reported across all the Counties in the North West cluster is majorly due to household level food insecurity and poor dietary intake. This is further compounded by morbidities and the chronic issues prevalent in these areas such as limited access to quality health services, inappropriate child care and feeding practice which increase the vulnerability of the population, and aggravate the high malnutrition rates. Current situation is further compounded by the ongoing nationwide nurse’s strike which has led to disruption of health care service delivery.

The percentage of children under five at risk of malnutrition based on analysis of mid-upper-arm circumference (MUAC <135 mm) surveillance data from sentinel sites within the cluster was high compared to the LTA in Samburu, while in Turkana and Marsabit Counties was below the LTA, but above the 2016 values for both counties (Figure 3.11 and 3.12).

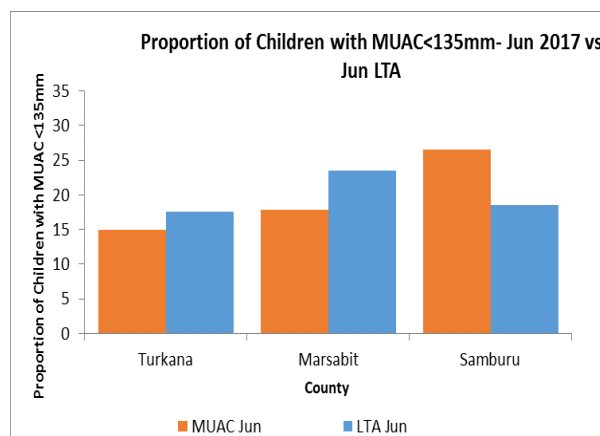


Figure 3.11: Proportion of Children with MUAC less than 135mm - June 2017 versus June LTA

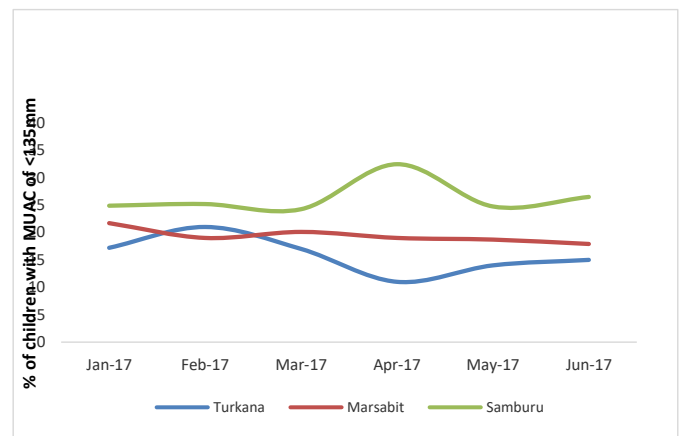


Figure 3.12: Pastoral Northwest Cluster Trends of Proportion of Children with MUAC <135mm) -2017

IMAM admission trends in the cluster from January 2017 to June 2017 are notably higher in Marsabit and Turkana Counties compared to same period over the last two years, while it is stable Samburu. A sharp increase was observed in the months of February to April in Marsabit and Turkana Counties, which is attributed to scale up of services through mobile health and nutrition clinics (also referred to as outreaches), active case finding and immediate treatment of children and women identified as being acutely malnourished. In the months of June and July, a decline has been noted in admissions across all counties in the cluster which is largely attributed to the ongoing nurse’s strike. The strike has resulted in closure of majority of peripheral facilities, negatively impacting on the running of the integrated management of acute malnutrition programs across the cluster is sub optimal with an average of about 44.5%¹ in Samburu, 56% in Marsabit* and 21.4% in Turkana County*². The counties will therefore need to boost their mobilization strategies to ensure that most children are reached and enrolled in the programs in a timely manner.

Water Sanitation and Hygiene

¹ Samburu SQUEAC Survey, May 2017

² *Proxy coverage SMART June 2017

The main water Sources across the cluster were surface water (water pans, shallow wells) and 40 percent of water pans were reported to be dry in Marsabit. Trekking distance to water sources increased in all the Counties. Latrine coverage remains low.

Short term recommendations for the Cluster

- Continue screening of malnourished children and treatment through existing health facilities and mapped outreaches.
- Enhance mobilization and community engagement to further improve coverage and attendance across the health and nutrition programs
- Scale up integrated outreach services to improve access to health and nutrition services in hard to reach areas.
- Full roll out of Blanket supplementary feeding in all sub counties in Turkana, sustain the same in Marsabit county
- Food sector to review and roll out general food distribution in the most affected sub counties in the cluster to complement the existing social safety net programs that are ongoing
- Ensure nutrition commodities are prepositioned and supply chain monitoring is routinely done to avoid stock outs
- Emergency food support/distribution need to target the ECDs
- Scale up for HSNP emergency household to consider following the indicated hot spots.
- Short term Emergency safety nets could consider using a food voucher to complement cash to cushion populations from the increase food prices and also control the proportion of the allocations that goes directly to food purchase.
- Enhance surveillance through the IDSR especially Diarrhea and ARI and also the IMAM surge approach where facilities are already implementing the approach.
- Due to the increased SAM, the county departments of health to procure additional routine antibiotics used in treatment and management of malnourished children.
- Distribution of Water treatment chemicals and Jerricans in areas where unprotected water sources are used.

Medium to Long term Recommendations for Cluster

- Investment in water infrastructure and WASH interventions including Community Led Total Sanitation
- Develop intervention to promote behavior change to improve health seeking behavior
- Social behavior change communication and nutrition education addressing improved maternal, infant and young child nutrition

3.2.2 Pastoral North East Cluster Report

(Wajir, Mandera, Garissa, Isiolo, Tana River)

The most common diseases affecting under-fives and the general population across the cluster were; diarrhea, upper respiratory infection and malaria/fever. Disease outbreaks were reported in the cluster with 32 two cases reported in Garissa while dengue fever, Kalazar and cholera outbreaks were reported in Garissa. Cholera was reported in Wajir South (Dagahaley) but has since been controlled. There were also reported cases of cholera outbreaks in Garissa County in Sadagose in Fafi sub-county where cholera is still active however, interventions are ongoing. In Mandera Measles out breaks were reported in Kamor, Bulla mpya, Barwaqo, Township and Border point locations of Mandera town. Diarrhea cases have been on the rise in the cluster with more reported cases compared with the same season last year, while malaria cases have reduced (Fig 3.13)

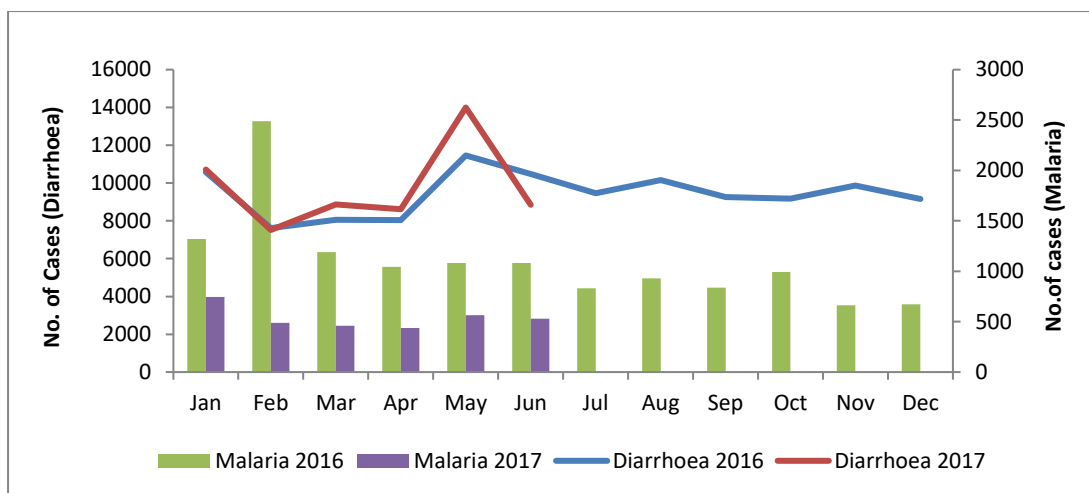


Figure 3.13: North East Pastoral morbidity pattern for under-fives LRA 2017

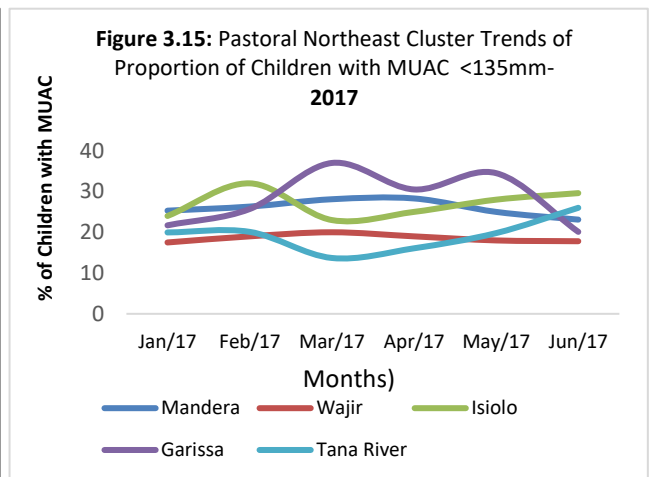
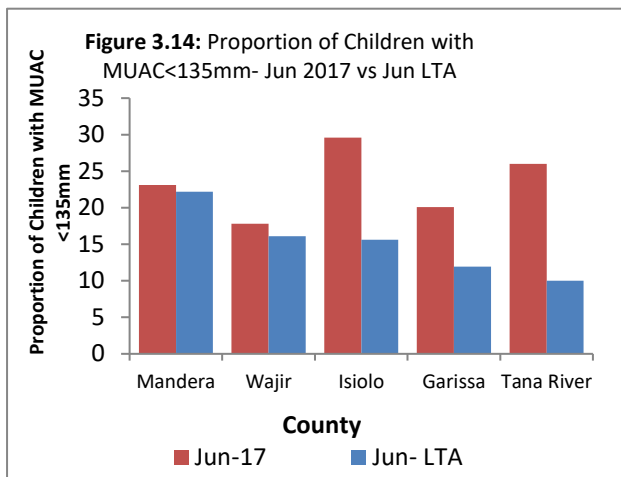
Nutrition status and dietary diversity

Acute malnutrition analysis from the Counties under Pastoral North East indicates a deteriorating situation. According to the Integrated Phase Classification (IPC) for acute malnutrition Mandera and Wajir are classified in critical phase. The results of SMART surveys indicate Mandera has GAM of 25.3 percent, Wajir Agro-pastoral 16.8 percent and Wajir Pastoral 16.4 percent. Isiolo and Tana River did not conduct SMART survey and the MUAC data available was not adequate to make a phase classification. However, the sentinel sites MUAC data indicate deteriorating trend with June 2017 higher being higher than long term average (Figure 3.14 and 3.15). The Food consumption scores across the cluster according to FSOM May 2017 indicates households with poor food consumption increased from 1.4 to 3.4 percent in May 2017 compared to May 2017 while the borderline increased to 25.5 percent from 5.1 percent during the same period. Households with acceptable consumption scores also reduced from 93.5 to 71 percent. A SMART survey conducted in Garissa in July 2017 indicated a deterioration in food consumption scores from 0.14, 2.29 and 97.6 percent in June 2016 to 1.7, 9.8 and 88.5 percent for poor, borderline and acceptable food consumption respectively in July 2017.

Vitamin a supplementation and immunization

Routine Vitamin A supplementation for children under five ranged from 7.1 - 50.8 percent across the cluster, with Mandera reporting the lowest (7.1 percent) and Wajir the highest coverage (50.8 percent).

According to SMART conducted in Garissa, Vitamin A coverage was 62 and 50.3 percent for children aged 6-11 months and 12-59 months respectively. The proportion of children 6-59 months Fully Immunized ranged from 26.3 to 63.3 percent respectively, with Mandera being the lowest at 26.3 percent and Garissa at 63.3 percent.



Short term recommendations for the cluster

- Scale up integrated outreach services to increase coverage especially in hard to reach areas
- Further scale of surveillance activities and disease surveillance: conduct mass screening and active case finding especially in hot spot areas
- Monitor the effects of general elections closely to mitigate negative effects
- Increase access to food by the poor and vulnerable households that are not currently targeted by the existing social safety nets
- Scale up hygiene promotion and water treatment
- Water trucking in most affected areas to increase access to water for domestic use
- Strengthen routine vitamin A supplementation program through existing health facility and community structures
- Maintain current nutrition interventions with a focus on treatment and prevention of acute malnutrition, breastfeeding and complementary feeding.
- Further scale-up of surge model
- Capacity building of MOH and partners on nutrition in emergency (IMAM, IYCF-E)
- Further strengthening of supply chain for nutrition commodities
- Alternative family care for unaccompanied and separated children affected drought through gender and social services department (children's office).
- Strengthen inter sector linkages to address malnutrition issues wholesomely

Medium to longer term recommendations for the cluster

- Focus on resilience programming targeting basic and underlying causes
- Increase investment in WASH and infrastructure to improve market access and household food security.
- Increased investment in education of all children (and especially the girl child) as a long term measure
- Increase investment in livestock and agriculture
- Resource mobilization through advocacy at all levels
- Strengthening community based family protection structures for children

3.2.3 Agro Pastoral Cluster

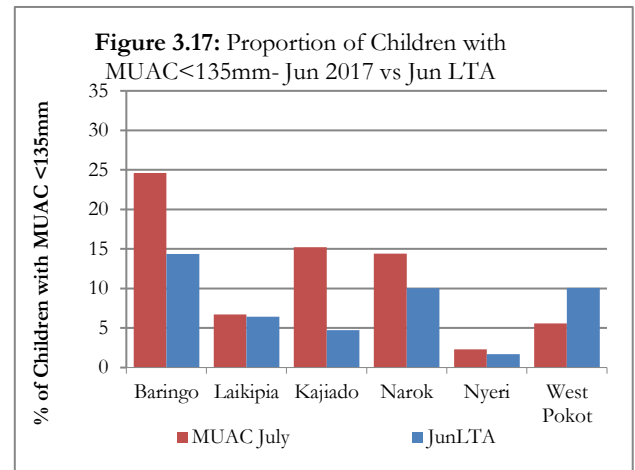
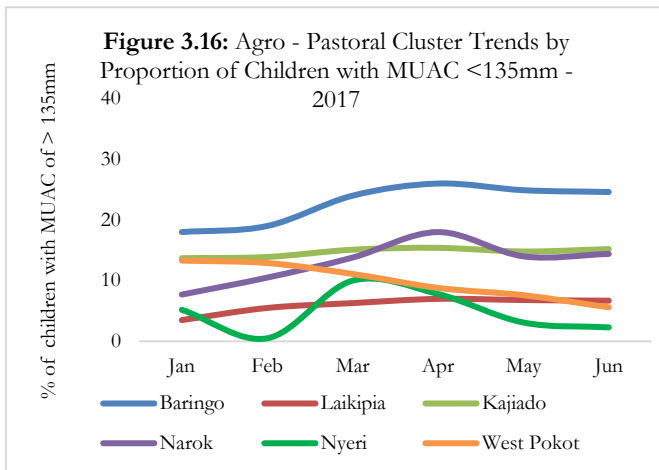
(West Pokot, Narok, Kajiado, East Pokot, Kieni (Nyeri), Laikipia)

Nutrition status and dietary diversity

Global Acute Malnutrition (GAM)

In the agro pastoral cluster, only two counties; West Pokot and Laikipia conducted a SMART Survey during the analysis period. From the survey results, West Pokot GAM by WHZ was 20.4 percent (Phase 4) while Laikipia GAM by WHZ was 11.4 percent (Phase 3). Narok and Kajiado had a GAM by MUAC of 0.9 percent and 0.27 respectively (phase 1). The situation is likely to deteriorate in the projected period though phase change is not expected. Kieni did not have sufficient data for IPC for acute malnutrition classification.

Agro pastoral counties had low Minimum dietary diversity: 36.5 percent in Narok, 36.9 percent in West pokot, 42.7 percent in Laikipia and 56.9 percent in Kieni. The minimum acceptable diet was 25 percent for West Pokot and 81.2 percent for Laikipia. Minimum dietary diversity for women (MDD-W) was 22.2 percent in West Pokot and 28.4 percent in Laikipia.



Morbidity

The prevalence of diarrhoea in 2016 was generally stable from May up to October, but dropped sequentially in Nov and December 2016 (figure 3.18). Malaria cases for the months of January to April appear to be stable approximately 8,000 cases per month. The numbers of cases are lower compared to 2016. Data for May and June 2017 might have been under-reported due to the nurses strike in the Month of May-June 2017. Acute respiratory infections range between 60,000 to 80,000 cases which is comparable to 2016. Measles cases were comparable to 2015 and 2016. The number of cases ranged between 20 and 40 per month. On the other hand, dysentery was highest (300-400 cases per month) in comparison to 2015 and 2016 for March up to May. Ideally, there should be 200-300 cases which remain stable in the remaining part of the year.

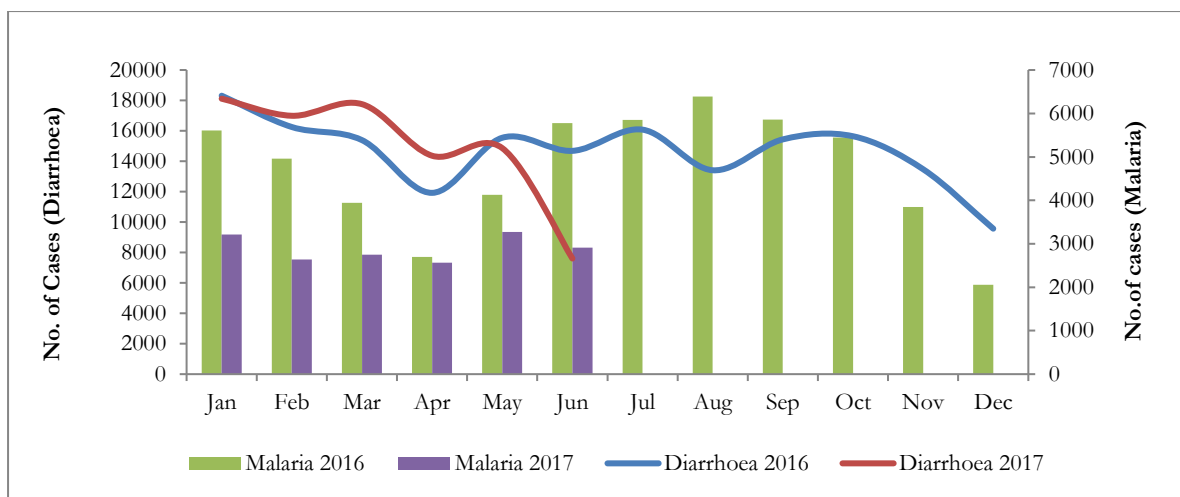


Figure 3.18: Trends of malaria and diarrhoea, 2016 and 2017, Agro-pastoral cluster

Water Sanitation and Hygiene (WASH)

Latrine coverage across the agro pastoral ranged from 2 percent in East Pokot to 97.7 percent in Kieni (Nyeri County). Access to improved source of drinking water was very poor due to low coverage of piped water in the cluster. The lowest was East Pokot at 6 percent and highest in Laikipia County at 28.9 percent. There was limited data on water treatment and hand washing at four critical times in the cluster. Eleven percent of households in West Pokot were treating water while only 2.6 percent mentioned washing hands should be done after visiting the toilet.

Immunization and Vitamin A supplementation

Vitamin A supplementation was highest (59.5 percent) in Laikipia County. Vitamin A coverage was below the national target of 80 percent for all counties. According to integrated SMART survey, measles vaccine coverage was 47.8 percent in West Pokot and 90.1 percent in Laikipia. However, routine coverage data was ranging from 54.7 percent in Kieni to 90.8 percent in Kajiado. OPV3 coverage was at 51.9 percent in West Pokot and 89.4 percent in Laikipia according to the SMART survey. However, from routine data OPV3 coverage was ranging from 54.7 percent in Kieni to 87.5 percent in Kajiado

3.2.4 South Eastern Marginal Agriculture Cluster

(Kitui, Tharaka nithi, Mbeere, Meru North and Makueni)

Morbidity and mortality patterns

Trends in cases of diarrhoea have been fluctuating depending on seasonality. March and May reported the highest cases due to the long rains. June had the lowest cases, however this is attributed limited reporting due to the health workers strike rather than improvement of health. Trends in cases of malaria have declined significantly since 2016 due to applied interventions in prevention of malaria (Figure 3.19). Cases of measles have been on decreasing trend from January to May 2017 with slight increase in June 2017, however, compared to 2016, measles trends for 2017 were lower.

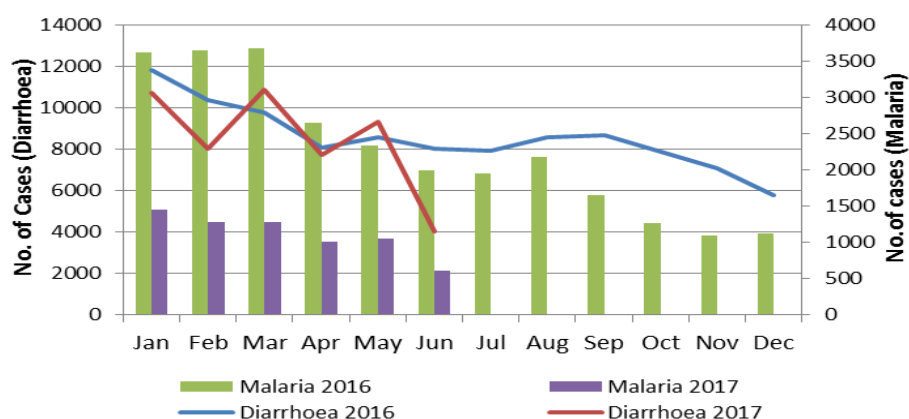


Figure 3.19: South Eastern Marginal Agriculture morbidity pattern

Nutrition status and dietary diversity

The nutrition situation according to Integrated Phase Classification (IPC) for acute malnutrition was acceptable (Phase 1) for Mbeere Sub County and Makueni County as of July 2017. Data was not sufficient to make phase classification for Kitui, Tharaka nithi and Meru North. Trends in proportion of children with MUAC <135mm were highest in Meru North and lowest in Mbeere while Tharaka nithi remained stable over the period under review (Figure 3.20). The lowest proportion of children with MUAC of <135mm was recorded in Mbeere at 3.9 percent in March 2017 while highest proportion was recorded in Meru North at 27percent in the month of April 2017 (Figure 3.21). MUAC data from sentinel sites indicated Global Acute Malnutrition (GAM) prevalence of 0.15 percent in Mbeere and 1.1 percent in Makueni. It is projected that the IPC phase for acute malnutrition will be acceptable (phase 1) for Tharaka nithi, Makueni and Kitui and alert (phase 2) for Meru North, for the period between July and September 2017. It is expected that the nutrition situation will deteriorate with onset of the lean season but not significant to change IPC nutrition phase.

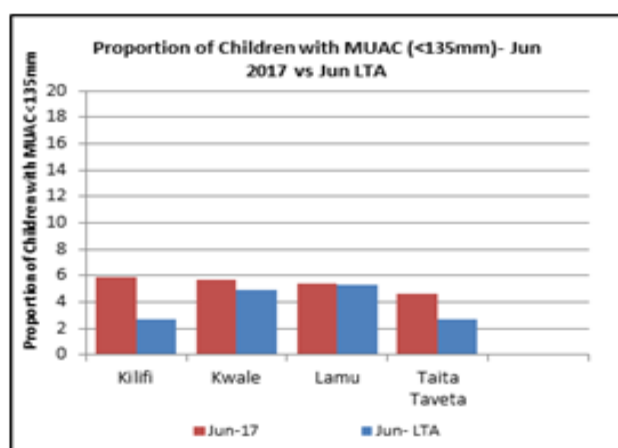


Figure 3.20: Proportion of children with MUAC <135mm June 2017 versus June LTA

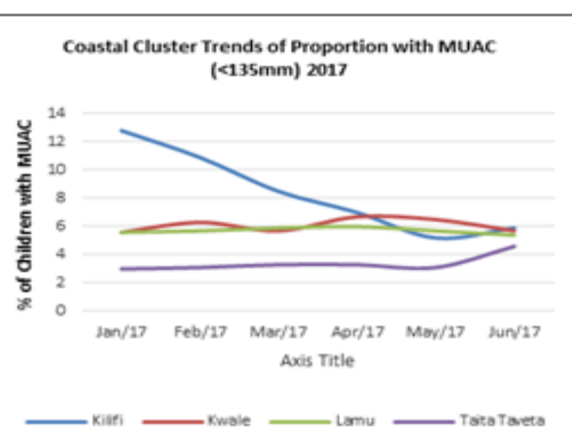


Figure 3.21: Trends of proportion of children with MUAC <135mm

Meal frequency and dietary diversity deteriorated across the cluster and is likely to worsen with the deteriorating food security situation. The number of meals consumed by children (6-59 months) reduced from 4 – 3 to 2 – 3 per day in Mbeere and from 2 – 3 to 1 – 2 per day in Meru North. The household food consumption score is also expected to deteriorate as the dry spell progresses and as the food prices escalate.

Immunization and vitamin A supplementation

In reference to child survival through immunization of the basic vaccines the percentage of fully immunized children (FIC) for the cluster was 70.5 percent; Tharaka had the lowest number of FIC and Makueni had the highest with 47.4 percent and 79.4 percent respectively. The percentage of children who received Oral Polio Vaccine3 (OPV3) for the cluster is 69.8 percent with Meru and Kitui having the highest and lowest number of children who received OPV3 at 82.8 percent and 61 percent respectively. Routine Vitamin A and immunization coverage as per DHIS was generally poor across the cluster, with no zones within the county achieving the national target of 80 percent. The poor coverage was attributed to poor data quality, health workers strike for the better part of 2017 and inadequate support for integrated outreaches activities in the hard to reach areas.

Water, Hygiene and Sanitation

The other underlying factors that affect acute malnutrition within the cluster include inadequate maternal and child care practices, insufficient health care services, poor access to safe drinking water due to the ongoing dry spell and poor hygiene and sanitation practices with most of the areas having low latrine coverage and poor application of hygiene practices such as hand washing. Maternal and child care practices are compromised due to long walking distances to water sources which reduces time allocated for child care.

Recommendations for the Cluster

Short term recommendations

- Ensure availability of health care staff to enhance access to health care services and strengthen routine facility data collection
- Sustain/scale up IMAM services (integrated outreaches and mass screening) in hard to reach areas
- Sustain/scale up social protection programs that can cushion under-fives from malnutrition
- Provision of water treatment chemicals
- Increase coverage of health services such as vitamin A coverage and immunization and the HINI package as a whole
- Ensure dietary supplementation programs are scaled up such as MNP supplementation in the school feeding program
- Initiate early commercial livestock off-take campaigns
- Management of fall army worm
- Promote conflict and peace building initiatives along the border and among the locals.
- Strengthen surveillance, prevention and management of communicable diseases
- Conduct regular surveys to assess the nutrition situation
- Provide nutrition education to promote dietary diversity

Medium to longer term recommendations

- Strengthen/expand IYCF/MIYCN education to promote healthier maternal and child care practices
- Invest in resilience building programs for youth
- Invest in nutrition sensitive agriculture taking into consideration drought resistant crop varieties
- Create sustainable water sources for residents
- Develop a Social Behavior Change Communication (SBCC) campaign for WASH to improve hygiene practices
- Health education focusing on skilled delivery
- Promoting income generating activities

- Promotion of food preservation and utilization of preserved foods
- Advocacy, Communication and Social Mobilization to increase uptake of health services

3.2.5 Coastal Marginal Cluster Nutrition Report

(Kwale, Kilifi, Lamu and Taita Taveta Counties)

Morbidity and Mortality:

The most common diseases reported in the cluster were Upper Respiratory Tract Infections, Malaria and diarrhea. Malaria, URTI increased in Kwale County while a decline was reported in Kilifi and Lamu for URTI and diarrhea (Figure 3.22). Across the cluster, there was a notable decline of cases across the cluster attributed to nurses strike who man most of the primary health care facilities. There were no disease outbreak across the cluster. However, there is need to monitor dengue outbreak reported in the neighboring Mombasa county. Mortality across the cluster was within the normal ranges (below 1 persons/10,000/day).

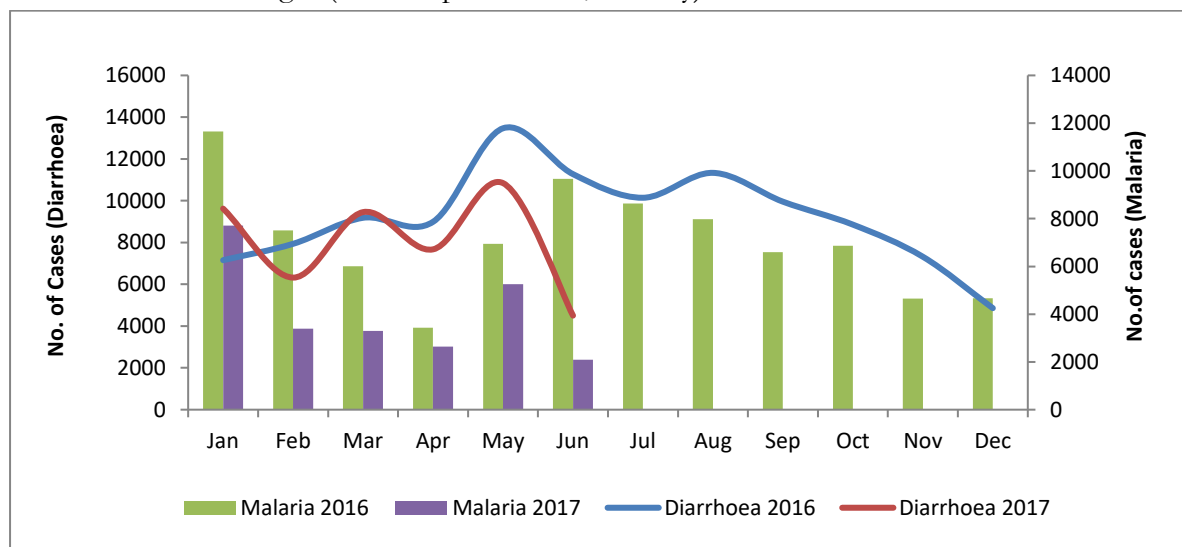


Figure 3.22: Morbidity trends

Immunization and Vitamin A supplementation

The proportion of the fully immunized children across the cluster was below the national target of 80 percent with the highest recorded in Lamu (75.1 percent) and the lowest in Kwale (62.5 percent). Vitamin A coverage for children aged 6-59 month was low in all the Counties. The highest was recorded in Kilifi County (61.4 percent) while the lowest was recorded in Lamu (14.2 percent).

Nutrition Status and Dietary Diversity

The proportion of children with MUAC less than 135 mm remained stable in Kwale, Lamu and Taita Taveta Counties (Figure 3.23). Gradual improvement was realized in Kilifi County a trend that was noted from January 2017 to June 2016. This could be attributed to scaling up of response plan which included mass screening and outreaches as well as cash transfer program targeting 12,200 households going on in the County. As shown in (Figure 3.24), the proportion of children with MUAC below 135 mm in June 2017 was above the LTA in all the Counties.

The food Consumption score based on FSOM Report for Coastal cluster indicated that the proportion of households in poor, borderline and acceptable were 17.3 percent, 42.1 percent and 40.6 percent respectively. Food consumption gaps was attributed to increased food commodity prices, reduced income and reduced milk consumption in pastoral communities. The meal

frequency ranged from 2- 3 meals per day in Lamu to 1-2 meals per day in Kinango Kwale County. The coping strategy index (CSI) was low in Taita Taveta (7.8) and highest in Kwale at 16.63.

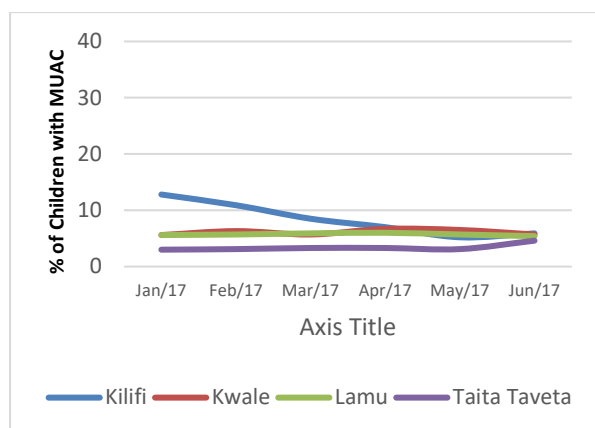


Figure 3.23: Proportion of children with MUAC <135mm

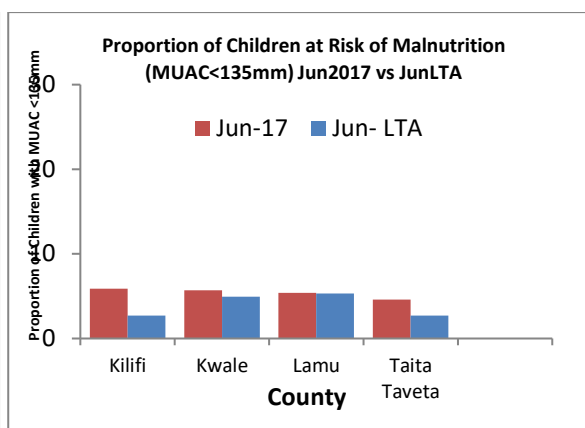


Figure 3.24: Proportion of children with MUAC <135mm June 2017 versus June LTA

Water Sanitation and Hygiene

No serious water shortage was reported in the cluster. However, the cost of water was relatively higher than normal in most of the livelihood zones in the cluster. Normal costs were noted in mixed farming zones of Taita Taveta, Kilifi, Kwale and Lamu. In areas that experienced water shortage, there was notable increase in water borne diseases as reported in Kwale and Taita Taveta Counties. Latrine Coverage in most of the Counties is still of concern; Kilifi County recorded an average of 60 percent, in some livelihood zones namely ranching and livestock keeping, marginal mixed farming it was as low as 43.0 percent. Lamu recorded 70 percent while Kwale recording 52.5 percent with higher coverage reported in Matuga at 71 percent and lowest in Kinango sub county with a coverage of as low as 10.0 percent.

Ongoing Interventions

- Vitamin A supplementation in Kwale County
- Zinc supplementation in diarrhea management at the health facilities
- Management of acute malnutrition at the health facilities
- MIYCN Intervention through promotion of exclusive breastfeeding and appropriate complementary feeding
- Iron and folic acid supplementation to pregnant women at the health facilities
- Cash transfer supported by Kenya Red Cross and County government Department of Social Development in Lamu County, WFP in Kilifi County, Taita Taveta and Kwale Counties
- Distribution of RUTF and RUSF in Taita Taveta County

Recommended Interventions

Short term:

- Carry out integrated mass screening and integrated mass screening and integrated outreaches in the identified hot spots
- Conduct integrated SMART surveys in Taita Taveta and Kwale Counties in order to establish the current nutrition status of children under five and women of reproductive age through a representative survey
- Scale up HiNi intervention in all the Counties
- Train health workers on CLTS

- Procure and distribute water treatment chemicals
- Scale up sensitization to the CHVs on community screening and referral of malnourished children
- Strengthen and scale up SFP and OTP programs for treatment of acute malnutrition
- Procurement and repositioning of RUTF and RUSF

Medium and Long Term Interventions:

- Establishment of more IMAM treatment sites in Kwale and Lamu Counties
- Strengthen multi sectoral coordination which will include health, agriculture, Education and other sector to address nutrition issues
- Conduct MIYCN Knowledge, attitude and Practice Survey in order to establish the current MIYCN KAP status

APPENDICES

Appendix 1: Nutrition Smart Survey Results May to July 2017

| Survey Area (County or Sub County) | Survey date | GAM WHZ CHILDREN 6 TO 59 MONTHS (%, 95% CI) | SAM WHZ CHILDREN 6 TO 59 MONTHS (%, 95% CI) | GAM MUAC CHILDREN 6 TO 59 MONTHS (%, 95% CI) | SAM MUAC CHILDREN 6 TO 59 MONTHS (%, 95% CI) | Under-five Mortality Rate | Crude Mortality Rate | Plausibility Score |
|--|-------------------|---|---|---|--|------------------------------|-------------------------|-----------------------|
| Laikipia | June/July 2017 | 11.4 (8.8-14.7) | 2.2 (1.1-4.6) | 5.2 (3.3-8.0) | 0.6 (0.2-1.8) | not done | not done | 7% |
| Garissa | July 17 | 16.3 (13.2-20.0) | 1.5 (0.9-2.5) | 3.5 (2.2-5.7) | 0.4 (0.1-1.2) | 0.239 | 0.854 | 4% |
| Mandera | Jul-17 | 24.6 (21.6-27.8) | 5.2(3.8-7.0) | 7.4 (5.7-9.5) | 0.8 (0.4-1.7) | not done | not done | 1% |
| Turkana Central | Jun-17 | 31.4 (27.5-35.6) | 8.0 (5.8-10.8) | 12.3 (9.4-16.1) | 1.7 (0.9-3.2) | 0.6 (0.18-1.95) | 0.48 (0.28-0.84) | 5% |
| Turkana South | Jun-17 | 37.0 (32.3-41.9) | 12.0 (9.6-14.9) | 13.2 (10.4-16.5) | 1.9 (1.2-3.2) | 0.17 (0.02-1.23) | 0.45 (0.24-0.85) | 10% |
| Turkana North | Jun-17 | 34.1 (30.1-38.3) | 8.6 (6.4-11.5) | 15.1 (12.0-18.9) | 2.5 (1.5-4.2) | 0.42 (0.10-1.79) | 1.18 (0.72-1.92) | 4% |
| Turkana West | Jun-17 | 23.4 (18.4-28.9) | 6.4 (4.4-9.4) | 12.2 (9.0-16.5) | 3.4 (2.0-5.8) | 0.39 (0.10-1.55) | 0.73 (0.38-1.41) | 7% |
| Samburu | Jun-17 | 18.3 (14.6-22.7) | 3.8 (2.4-6.1) | 5.1 (3.5-7.4) | 0.6 (0.2-1.8) | not done | not done | 6% |
| West Pokot | Jun-17 | 20.4 (16.5-24.9) | 3.2 (1.9-5.5) | 5.7 (3.9-8.4) | 0.6 (0.2-1.7) | not done | not done | 5% |




| Survey Area (County or Sub County) | Survey date | GAM WHZ CHILDREN 6 TO 59 MONTHS (%, 95% CI) | SAM WHZ CHILDREN 6 TO 59 MONTHS (%, 95% CI) | GAM MUAC CHILDREN 6 TO 59 MONTHS (%, 95% CI) | SAM MUAC CHILDREN 6 TO 59 MONTHS (%, 95% CI) | Under-five Mortality Rate | Crude Mortality Rate | Plausibility Score |
|--|-------------|---|---|---|--|------------------------------|-------------------------|-----------------------|
| Marsabit - Laisamis | Jul-17 | 24.8 (20.3-29.9) | 5.3 (3.4-8.1) | 8.3 (5.1-13.2) | 2.0 (0.7-5.1) | not done | not done | 0% |
| Marsabit North Horr | Jul-17 | 31.0 (25.4-37.1) | 5.0 (3.4-7.5) | 7.4 (5.0-10.7) | 1.5 (0.5-4.6) | not done | not done | 4% |
| Marsabit – Moyale | Jul-17 | 5.4 (3.2-9.0) | 0.3 (0.0-2.1) | 2.5 (1.2-5.1) | 0.3 (0.0-2.1) | not done | not done | 7% |
| Marsabit – Saku | Jul-17 | 7.5 (4.5-12.4) | 0.0 (0.0-0.0) | 2.7 (1.4-5.4) | 0.8 (0.2-3.1) | not done | not done | 3% |
| Wajir pastoral | Jul-17 | 16.4 (12.8-20.7) | 2.5 (1.4-4.5) | | | not done | not done | 8% |
| Wajir agropastoral | Jul-17 | 16.8 (13.4-20.9) | 2.5 (1.3-4.6) | | | not done | not done | 3% |
| Nairobi | May-17 | 4.6 (3.4-6.3) | 0.1 (0.0-0.9) | 2.6 (1.5-4.3) | 0.3 (0.1 -1.1) | not done | not done | 10% |
| Baringo (East Pokot) Rapid SMART | Jul-17 | 25.2 (19.7 - 31.7) | 5.8 (3.4 - 9.7) | 10.8 (6.9 - 16.5) | 2.7 (1.4 - 5.3) | Not done | Not done | 0% |



























Appendix 2: Nutrition Smart Survey Results January – February 2017 2017




| SURVEY AREA | SURVEY DATE | GAM WHZ CHILDREN 6 TO 59 MONTHS (%, 95% CI) | SAM WHZ CHILDREN 6 TO 59 MONTHS (%, 95% CI) | GAM MUAC CHILDREN 6 TO 59 MONTHS (%, 95% CI) | SAM MUAC CHILDREN 6 TO 59 MONTHS (%, 95% CI) | Under five Mortality Rate | Crude Mortality Rate | Plausibility Score |
|-----------------------------|--------------------|---|---|--|--|----------------------------------|-----------------------------|---------------------------|
| Mandera | Feb-17 | 32.8 (26.3-40.0) | 8.7 (5.3-14.1) | 11.3 (7.4 - 16.9) | 2.4 (1.2-4.9) | not done | not done | 8% |
| Turkana Central | Feb-17 | 25.9 (21.7- 30.6) | 6.4 (4.4-9.2) | 7.1 (4.6-10.8) | 0.9 (0.3-2.1) | not done | not done | 10% |
| Turkana North | Feb-17 | 30.7 (26.6-35.1) | 8.1 (6.0-10.7) | 10.3 (7.2-14.6) | 1.1 (0.5-2.5) | not done | not done | 18% |
| Turkana South | Feb-17 | 22.9 (18.4-28.0) | 5.7 (3.7-8.7) | 8.8 (5.9-13.1) | 1.9 (0.9-3.8) | not done | not done | 12% |
| Turkana West | Feb-17 | 15.3 (11.5-20.2) | 3.1 (1.6-5.9) | 5.5 (3.4-8.7) | 0.6 (0.2-1.9) | not done | not done | 19% |
| Baringo (East Pokot) | Jan-17 | 23.3 (19.2- 28.1) | 4.0 (2.4- 6.5) | 3.9 (2.4-6.4) | 0.2 (0.0-1.6) | not done | not done | |
| Isiolo | Jan-17 | 18.2 (14.6- 22.5) | 3.3 (2.1- 5.3) | 7.7 (5.6- 10.6) | 1.3 (0.6-3.0) | not done | not done | 4% |
| Tana River | Jan-17 | 13.7 (10.1- 18.2) | 3.0 (1.3 – 6.4) | 4.0 (2.3- 7.1) | 0.6 (0.2-1.5) | not done | not done | 10% |




| SURVEY AREA | SURVEY DATE | GAM WHZ CHILDREN 6 TO 59 MONTHS (%, 95% CI) | SAM WHZ CHILDREN 6 TO 59 MONTHS (%, 95% CI) | GAM MUAC CHILDREN 6 TO 59 MONTHS (%, 95% CI) | SAM MUAC CHILDREN 6 TO 59 MONTHS (%, 95% CI) | Under five Mortality Rate | Crude Mortality Rate | Plausibility Score |
|------------------------------------|-------------|--|--|---|---|---------------------------|----------------------|--------------------|
| Marsabit Loiyangalani/ Laisamis | Jan-17 | 24.7 (19.3- 31.0) | 5.5 (3.5- 8.5) | 7.1 (3.8- 12.9) | 1.2 (0.4 -3.2) | not done | not done | 5% |
| Marsabit North Horr | Jan-17 | 31.5 (25.3- 38.5) | 9.8 (6.6- 14.3) | 10.1 (6.7- 14.9) | 0.9 (0.3-3.0) | not done | not done | |
| Lamu | Feb-17 | 4.8 (3.1-7.3) | 0.9 (0.3-2.4) | 2.8 (1.6-4.8) | 0.6 (0.2-1.9) | not done | not done | 5% |

Appendix 3: Summary of Contributing Factors
Coastal Marginal (Kwale, Kilifi, Lamu and Taita Taveta Counties)




| SUMMARY CONTRIBUTING FACTORS BY AREA | | KILIFI | T/TAVETA | KWALE | LAMU |
|---|---|--------|----------|-------|------|
|  Major contributing factor  Minor contributing factor  Not a contributing factor | | | | | |
| Inadequate dietary intake | Minimum Dietary Diversity (MDD) | | | | |
| | Minimum Meal Frequency (MMF) | | | | |
| | Minimum Acceptable Diet (MAD) | | | | |
| | Minimum Dietary Diversity – Women (MDD-W) | | | | |
| | Others | | | | |
| Diseases | Diarrhoea | | | | |
| | Dysentery | | | | |
| | Malaria | | | | |
| | HIV/AIDS prevalence | | | | |
| | Acute Respiratory Infection | | | | |
| | Disease outbreak | | | | |
| | Others | | | | |
| Inadequate access to food | Outcome of the IPC for Acute Food Insecurity analysis | | | | |
| Inadequate care for children | Exclusive breastfeeding under 6 months | | | | |
| | Continued breastfeeding at 1 year | | | | |
| | Continued breastfeeding at 2 years | | | | |
| | Introduction of solid, semi-solid or soft foods | | | | |
| | Others | | | | |
| Insufficient health services & unhealthy environment | Measles vaccination | | | | |
| | Polo vaccination | | | | |
| | Vitamin A supplementation | | | | |
| | Skilled birth attendance | | | | |
| | Health seeking behaviour | | | | |
| | Coverage of outreach programmes – CMAM programme coverage (SAM, MAM, or both) | | | | |
| | Access to a sufficient quantity of water | | | | |
| | Access to sanitation facilities | | | | |
| | Access to a source of safe drinking water | | | | |
| | Others | | | | |
| Basic causes | Human capital | | | | |
| | Physical capital | | | | |
| | Financial capital | | | | |
| | Natural capital | | | | |
| | Social capital | | | | |
| | Policies, Institutions and Processes | | | | |
| | Usual/Normal Shocks | | | | |
| | Recurrent Crises due to Unusual Shocks | | | | |




| SUMMARY CONTRIBUTING FACTORS BY AREA | | KILIFI | T/TAVETA | KWALE | LAMU |
|---|---|---|---|---|---|
|  Major contributing factor  Minor contributing factor  Not a contributing factor | | | | | |
| | Other basic causes | | | |  |
| Other nutrition issues | Anaemia among children 6-59 months |  |  |  |  |
| | Anaemia among pregnant women |  |  |  |  |
| | Anaemia among non-pregnant women |  |  |  |  |
| | Vitamin A deficiency among children 6-59 months |  | |  |  |
| | Low birth weight |  | |  |  |
| | Fertility rate |  | |  |  |
| | Others | | | |  |

| SUMMARY OF CONTRIBUTING FACTORS | | | | | | | | | | | | |
|---------------------------------|---|---|---|--------|------------|------|----------|---------------|-----------------|--------------|---------------|---------|
| |  |  |  | | | | | | | | | |
| | Major contributing Factor | Minor Contributing Factor | Not a contributing Factor | Moyale | North Horr | SAKU | LAISAMIS | Turkana North | Turkana Central | Turkana West | Turkana South | Samburu |
| | Others | | | | | | | | | | | |
| Basic causes | Human capital | | | | | | | | | | | |
| | Physical capital | | | | | | | | | | | |
| | Financial capital | | | | | | | | | | | |
| | Natural capital | | | | | | | | | | | |
| | Social capital | | | | | | | | | | | |
| | Policies, Institutions and Processes | | | | | | | | | | | |
| | Usual/Normal Shocks | | | | | | | | | | | |
| | Recurrent Crises due to Unusual Shocks | | | | | | | | | | | |
| | Other basic causes | | | | | | | | | | | |
| Other nutrition issues | Anaemia among children 6-59 months | | | | | | | | | | | |
| | Anaemia among pregnant women | | | | | | | | | | | |
| | Anaemia among non-pregnant women | | | | | | | | | | | |
| | Vitamin A deficiency among children 6-59 months | | | | | | | | | | | |
| | Low birth weight | | | | | | | | | | | |
| | Fertility rate | | | | | | | | | | | |
| | Others | | | | | | | | | | | |

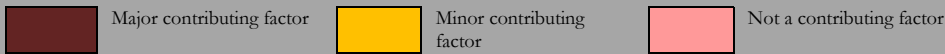
| SUMMARY CONTRIBUTING FACTORS BY AREA | | MBEER | ITHARAKA | KITUI | MAKUENI | MERU/N |
|--|---|-------|----------|-------|---------|--------|
|  Major contributing factor  Minor contributing factor  Not a contributing factor | | | | | | |
| Inadequate dietary intake | Minimum Dietary Diversity (MDD) | | | | | |
| | Minimum Meal Frequency (MMF) | | | | | |
| | Minimum Acceptable Diet (MAD) | | | | | |
| | Minimum Dietary Diversity – Women (MDD-W) | | | | | |
| | Others | | | | | |
| Diseases | Diarrhoea | | | | | |
| | Dysentery | | | | | |
| | Malaria | | | | | |
| | HIV/AIDS prevalence | | | | | |
| | Acute Respiratory Infection | | | | | |
| | Disease outbreak | | | | | |
| Others | | | | | | |
| Inadequate access to food | Outcome of the IPC for Acute Food Insecurity analysis | | | | | |
| Inadequate care for children | Exclusive breastfeeding under 6 months | | | | | |
| | Continued breastfeeding at 1 year | | | | | |
| | Continued breastfeeding at 2 years | | | | | |
| | Introduction of solid, semi-solid or soft foods | | | | | |
| | Others | | | | | |
| Insufficient health services & unhealthy environment | Measles vaccination | | | | | |
| | Polo vaccination | | | | | |
| | Vitamin A supplementation | | | | | |
| | Skilled birth attendance | | | | | |
| | Health seeking behaviour | | | | | |
| | Coverage of outreach programmes – CMAM programme coverage (SAM, MAM, or both) | | | | | |
| | Access to a sufficient quantity of water | | | | | |
| | Access to sanitation facilities | | | | | |
| | Access to a source of safe drinking water | | | | | |
| | Others | | | | | |
| Basic causes | Human capital | | | | | |
| | Physical capital | | | | | |
| | Financial capital | | | | | |
| | Natural capital | | | | | |
| | Social capital | | | | | |
| | Policies, Institutions and Processes | | | | | |
| | Usual/Normal Shocks | | | | | |
| | Recurrent Crises due to Unusual Shocks | | | | | |
| | Other basic causes | | | | | |
| Other nutrition issues | Anaemia among children 6-59 months | | | | | |
| | Anaemia among pregnant women | | | | | |
| | Anaemia among non-pregnant women | | | | | |
| | Vitamin A deficiency among children 6-59 months | | | | | |
| | Low birth weight | | | | | |
| | Fertility rate | | | | | |
| | Others | | | | | |














Pastoral North East (Tana River, Garissa, Wajir, Mandera and Isiolo)

| SUMMARY CONTRIBUTING FACTORS BY AREA | | WAJIR EAST | WAJIR NORTH | MANDERA | GARISSA | ISIOLO | T/RIVER |
|---|---|---|---------------------------|---|---------------------------|--------|---------|
|  | Major contributing factor |  | Minor contributing factor |  | Not a contributing factor | | |
| Inadequate dietary intake | Minimum Dietary Diversity (MDD) | | | | | | |
| | Minimum Meal Frequency (MMF) | | | | | | |
| | Minimum Acceptable Diet (MAD) | | | | | | |
| | Minimum Dietary Diversity – Women (MDD-W) | | | | | | |
| | Others | | | | | | |
| Diseases | Diarrhoea | | | | | | |
| | Dysentery | | | | | | |
| | Malaria | | | | | | |
| | HIV/AIDS prevalence | | | | | | |
| | Acute Respiratory Infection | | | | | | |
| | Disease outbreak | | | | | | |
| | Others | | | | | | |
| Inadequate access to food | Outcome of the IPC for Acute Food Insecurity analysis | | | | | | |
| Inadequate care for children | Exclusive breastfeeding under 6 months | | | | | | |
| | Continued breastfeeding at 1 year | | | | | | |
| | Continued breastfeeding at 2 years | | | | | | |
| | Introduction of solid, semi-solid or soft foods | | | | | | |
| | Others | | | | | | |
| Insufficient health services & unhealthy environment | Measles vaccination | | | | | | |
| | Polo vaccination | | | | | | |
| | Vitamin A supplementation | | | | | | |
| | Skilled birth attendance | | | | | | |
| | Health seeking behaviour | | | | | | |
| | Coverage of outreach programmes – CMAM programme coverage (SAM, MAM, or both) | | | | | | |
| | Access to a sufficient quantity of water | | | | | | |
| | Access to sanitation facilities | | | | | | |
| | Access to a source of safe drinking water | | | | | | |
| | Others | | | | | | |
| Basic causes | Human capital | | | | | | |
| | Physical capital | | | | | | |
| | Financial capital | | | | | | |
| | Natural capital | | | | | | |
| | Social capital | | | | | | |
| | Policies, Institutions and Processes | | | | | | |
| | Usual/Normal Shocks | | | | | | |
| | Recurrent Crises due to Unusual Shocks | | | | | | |

| SUMMARY CONTRIBUTING FACTORS BY AREA | | WAJIR EAST | WAJIR NORTH | MANDERA | GARISSA | ISIOLO | T/RIVER |
|--------------------------------------|--|------------|-------------|---------|---------|--------|---------|
| | <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  Major contributing factor </div> <div style="text-align: center;">  Minor contributing factor </div> <div style="text-align: center;">  Not a contributing factor </div> </div> | | | | | | |
| | Other basic causes | | | | | | |
| Other nutrition issues | Anaemia among children 6-59 months | | | | | | |
| | Anaemia among pregnant women | | | | | | |
| | Anaemia among non-pregnant women | | | | | | |
| | Vitamin A deficiency among children 6-59 months | | | | | | |
| | Low birth weight | | | | | | |
| | Fertility rate | | | | | | |
| | Others | | | | | | |

Agro pastoral livelihood Zone (West Pokot, East Pokot, Laikipia, Kajiado and Narok)



| SUMMARY CONTRIBUTING FACTORS BY AREA | | NYERI /N | LAIKIPIA | BARINGO | W/POKOT | KAJIADO | NAROK |
|--|---|---------------|----------|---------|---------|---------|-------|
|  | | | | | | | |
| Inadequate dietary intake | Minimum Dietary Diversity (MDD) | | | | | | |
| | Minimum Meal Frequency (MMF) | | | | | | |
| | Minimum Acceptable Diet (MAD) | | | | | | |
| | Minimum Dietary Diversity – Women (MDD-W) | | | | | | |
| | Others | | | | | | |
| Diseases | Diarrhoea | | | | | | |
| | Dysentery | | | | | | |
| | Malaria | | | | | | |
| | HIV/AIDS prevalence | | | | | | |
| | Acute Respiratory Infection | | | | | | |
| | Disease outbreak | | | | | | |
| Inadequate access to food | Outcome of the IPC for Acute Food Insecurity analysis | | | | | | |
| | Others | | | | | | |
| Inadequate care for children | Exclusive breastfeeding under 6 months | | | | | | |
| | Continued breastfeeding at 1 year | | | | | | |
| | Continued breastfeeding at 2 years | | | | | | |
| | Introduction of solid, semi-solid or soft foods | | | | | | |
| | Others | | | | | | |
| Insufficient health services & unhealthy environment | Measles vaccination | | | | | | |
| | Polo vaccination | | | | | | |
| | Vitamin A supplementation | | | | | | |
| | Skilled birth attendance | | | | | | |
| | Health seeking behaviour | | | | | | |
| | Coverage of outreach programmes – CMAM programme coverage (SAM, MAM, or both) | | | | | | |
| | Access to a sufficient quantity of water | | | | | | |
| | Access to sanitation facilities | | | | | | |
| | Access to a source of safe drinking water | | | | | | |
| | Others | | | | | | |
| | Basic causes | Human capital | | | | | |
| Physical capital | | | | | | | |
| Financial capital | | | | | | | |
| Natural capital | | | | | | | |
| Social capital | | | | | | | |
| Policies, Institutions and Processes | | | | | | | |
| Usual/Normal Shocks | | | | | | | |
| Recurrent Crises due to Unusual Shocks | | | | | | | |
| Other basic causes | | | | | | | |
| Other nutrition issues | | | | | | | |
| | Anaemia among children 6-59 months | | | | | | |

| SUMMARY CONTRIBUTING FACTORS BY AREA | | NYERI /N | LAIKIPIA | BARINGO | W/POKOT | AKAJIADO | NAROK |
|---|---|---|----------|---------|---|---|---|
|  | Major contributing factor | | | | | | |
|  | Minor contributing factor | | | | | | |
|  | Not a contributing factor | | | | | | |
| | Anaemia among pregnant women | | | | |  | |
| | Anaemia among non-pregnant women | | | | |  | |
| | Vitamin A deficiency among children 6-59 months |  | | | |  |  |
| | Low birth weight |  | | |  |  | |
| | Fertility rate | | | |  |  | |
| | Others | | | | | | |





Appendix 4: LRA 2017 Workshop Agenda



INTEGRATED PHASE CLASSIFICATION (IPC) - NUTRITION ANALYSIS MEETING: Long Rains Assessment 17th to 26th July 2017, – Eagle Palace Hotel, Nakuru

| Time | Topic | Facilitator |
|---|---------------------------------------|---|
| Sunday 16 th July 2017 | Arrival of all participants at Nakuru | Travel date |
| Day 1 : Monday 17 th July 2017 | | |
| Moderator: Samuel Murage | | |
| 8.00-8.15 | Arrival and Registration | All Participants |
| 8.15-8.25 | Introductions and climate setting | Lucy K |
| 8.25-8.40 | Opening Remarks | Head of Nutrition |
| 8.40-8.50 | Objectives |  1. Introductions Objectives June 2017 Lucy K |
| 8.50-10.00 | Overview of the IPC Nutrition Process |  2. IPC for Acute Malnutrition Overview Lucy G |

| | | |
|--------------|---|--|
| 10.00-10.40 | Purpose, tools and procedures | Hellen  3. Function1 Purpose Tools and F |
| 10.40- 11.00 | Break | |
| 11.00-11.40 | Purpose, overview of tools and analytical approach, | Mark Gathii  4. Function2 Purpose Tools Appr |
| 11.40-12.30 | IPC for Acute Malnutrition Analytical Framework, Reference Table, and Analysis Worksheet | Lucy G  5. Function2 Analytical Framewor |
| 12.30-100 | Key parameters | Kibet Chirchir  6. Function2 Key Parameters June 201 |
| 1.00-2.00 | Lunch | |
| 2.00-2.40 | Overview of the analysis Worksheets Review steps 1 to 11 | Nahashon  7. Function2 Overview Steps 1-11 |
| 2.40-4.00 | Step 1: Define analysis area and season of analysis Step 2: Document evidence in repository Step 3-4 – Analyse evidence on outcome indicators and make Phase classification (current) | Kibet  8. Function2 Step1-2 June 2017.p  10. Function2 Step3-4 June 2017.p |
| 4.00-5.00 | Step 5&6 - Analyse evidence on contributing factors and other issues and identify major contributing factors and other issues – part 1 | Lucy G  11. Function2 Steps 5-6 June 2017.pptx |
| 5.00-5.30 | Take stock of Progress for Day one | Lucy Kinyua |

| | | |
|---|--|--|
| Day 2: Tuesday 18 th July 2017 | | |
| Moderator: Mark Gathii | | |
| 8.30 – 9.00 | Recap of Day One and any arising Issues | Mark Gathii |
| 9.00 – 9.30 | Step 5&6 - Analyse evidence on contributing factors and other issues and identify major contributing factors and other issues – continued |  11. Function2 Steps 5-6 June 2017.pptx Lucy G |
| 9.30 – 10.40 | Step 7 & 9 - Forecast likely changes in the contributing factors and other issues, forecast likely changes in the outcome indicators, and Make Phase classification (projection) |  12. Function2 Steps 7-9 June 2017.pptx Nahashon |
| 10.40-11.00 | Break | |
| 11.00 – 11.40 | 10-11 - Identify limitations of the analysis and suggest priority response objectives |  13. Function2 Steps 10-11 June 2017.ppt Hellen |
| 11.40- 12.30 | Communicating for Action - Purpose, Tools & Procedures |  14. Function 3 Purpose Tools and F Mark Gathii |
| 12.30 – 1.00 | Preparation for the IPC analysis Step One: Defining Analysis Areas Step Two: Collating evidence for analysis and including in document repository | Lucy G and Lucy K |
| 1.00-2.00 | Lunch | |
| 2.00- 5.00 | Step Three: Analyze Evidence on Acute Malnutrition Outcome Indicators Step Four: Make Current Phase Classification | Analysis Teams |

| | | |
|---|--|----------------|
| | Step 5: Analyze evidence on contributing factors and other issues | |
| 5.00- 5.30 | Take stock of Progress for Day one | Mark Gathii |
| Day 3: Wednesday 19 th July 2017 | | |
| Moderator: Hellen Ringera | | |
| 8.30-9.00 | Recap of Day Two and any arising Issues | Hellen Ringera |
| 9.00- 10.30 | Step 5: Analyze evidence on contributing factors and other issues | Analysis Teams |
| 10.30-11.00 | Break | |
| 11.00- 1.00 | Step 5: Analyze evidence on contributing factors and other issues | Analysis Teams |
| 1.0- 2.00 | Lunch | |
| 2.00- 5.00 | Step 5: Analyze evidence on contributing factors and other issues Step 6: Identify major contributing factors and other issues Step 7: Identify Potential changes in the immediate causes, underlying factors, contributing factors and other issues | Analysis teams |
| 5.00- 5.30 | Take stock of Progress for Day Three | Hellen Ringera |
| Day 4: Thursday 20 th July 2017 | | |
| Anthony Mativo | | |
| 8.30-9.00 | Recap of Day Three and any arising Issues | Lucy Kinyua |

| | | |
|--|--|--|
| 9.00 – 10.30 | Step 8 and 9: Identify Potential change for the outcome indicators Step 10: Limitations of the Analysis Step 11: Priority Responses | Analysis Teams |
| 10.30- 1.00 | Special Nutrition Information Technical Working Group – review of SMART survey results (Samburu, West Pokot, Mandera, Wajir, Garissa, Marsabit, Laikipia) | Responsible Chair NITWG and secretariat |
| 1.0- 2.00 | Lunch | Team |
| 2.00 – 3.00 | Special Nutrition Information Technical Working Group – review of SMART survey results (Samburu, West Pokot, Mandera, Wajir, Garissa, Marsabit, Laikipia) | Responsible Chair NITWG and secretariat |
| 3.00- 5.30 | Presentation of County Situation Presenting final analysis for counties to team | Analysis Teams |
| Day 5: Friday 21 st July 2017 | | |
| Nahashon | | |
| 8.30-9.00 | Recap of Day Four and any arising Issues | Rotational Chair |
| 9.00- 10.30 | Presentation of County Situation Presenting final analysis for counties to team | Analysis Teams |
| 10.30-11.00 | Break | |
| 11.00- 1.00 | Presentation of County Situation Presenting final analysis for counties to team | Analysis Teams |

| | | |
|--|---|-------------------------------|
| 1.00- 2.00 | Lunch | |
| 2.00- 5.00 | Finalization of Analysis worksheets and reports | Analysis Team |
| 5.00- 5.30 | Take stock of Progress for Day Three | Lucy Kinyua |
| Day 6: Saturday 22 st July 2017 | | |
| Lucy Gathigi | | |
| 8.00-8.30 | Recap of Day five and any arising Issues | Lucy G |
| 8.30-10.00 | Presentation of Final Nutrition Situation Map Presentation of current and projected map for final endorsement by analysis team | Lucy Kinyua |
| 10.00-10.15 | Break | |
| 10.15- 1.00 | Presentation and Finalization of Estimated Caseloads Final revised caseloads presented and endorsed by analysis team Wrap up, way forward and closing remarks | Kibet Chirchir Lucy Kinyua |
| 1.00-2.00 | Lunch | |
| 2.00 | Departure of most nutrition team members while a smaller team joins the Food Security IPC team | |
| 2.00-4.00 | Work on products | Small nutrition team |
| 23 rd to 26 th July | Follow program as per the SRA food and nutrition combined group | |

Appendix 5: List of participants

| NAME | ORGANIZATION | STATION |
|--------------------|-------------------------|----------------------|
| Lucy Kinyua | Ministry of Health | Nairobi |
| Samuel Murage | Ministry of Health | Nairobi |
| Lucy wangari | Ministry of Health | Nairobi |
| Simon Munene | Ministry of Health | Tharaka Nithi County |
| Hellen Ringera | Ministry of Health | Meru |
| Paul Migwi | Ministry of Health | Nyandarua |
| Khadija | Ministry of Agriculture | Nairobi |
| David Onchonga | WASH | Samburu county |
| Samwel Mbugua | Egerton University | Nakuru |
| Dansel Mulwa | University of Nairobi | Nairobi |
| Judith Munga | Kenyatta University | Nairobi |
| Jane Njenga | University of Nairobi | Nairobi |
| Wycliffe Machani | Ministry of Health | Turkana County |
| Saida Abdi | Ministry of Health | Isiolo County |
| Shale Abdi | Ministry of Health | Garissa County |
| Imran Madey | Ministry of Health | Mandela county |
| Pauline Mugo | Ministry of Health | Taita Taveta County |
| Lucy Maina Gathigi | UNICEF | Nairobi |
| Anthony Mativo | World Vision | Nairobi |
| Nahashon Kipruto | Action Against Hunger | Nairobi |
| Kibet Chirchir | UNICEF | Nairobi |
| Victoria mwenda | UNICEF | Nairobi |
| Shalini gudiri | UNICEF | Nairobi |
| Tom Hongo | UNICEF | Nairobi |
| Mark Gathii | IMC | Nairobi |
| Juda kimanzi | TDH | Nairobi |
| Sarah Ayodi | Food for the Hungry | Nairobi |
| Lydia Ndung'u | Save the Children | Nairobi |
| MOA (Joshua) | Ministry of Agriculture | Nairobi |
| Edward Kuto | UNICEF | Nairobi |
| Joseph waweru | FEWSNET | Nairobi |
| Dina Aburmishan | WFP | Nairobi |
| George | NHPplus | Nairobi |
| Irene Kimani | FAO | Nairobi |
| Francis Wambua | UNICEF | Nairobi |
| Michael | NDMA | Marsabit County |