

A desk review of key determinants of malnutrition in Turkana County, Kenya



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List of abbreviations

ASAL – Arid and semi-arid lands

CotD – Cost of the Diet

EO – Energy only diet

FEG – Food Economy Group

FGD- Focus Group Discussion

FHAB – Food habits nutritious diet

GAM – Global Acute Malnutrition

GIZ – Deutsche Gesellschaft für Internationale Zusammenarbeit

HEA – Household Economy Analysis

HFCS – Household Food Consumption Score

HFIES – Household Food Insecurity Experience Scale

IFAS – Iron and folic acid supplementation

KAP – Knowledge, Attitude and Practices (Survey)

KDHS – Kenya Demographic Health Survey

KFSSG – Kenya Food Security Steering Group

KES – Kenyan Shillings

MDD-W – Minimum Dietary Diversity for Women

MIYCN – Maternal Infant and Young Child Nutrition

NUT – Micronutrient nutritious diet

SCNC – Sub-County Nutrition Coordinators

SMART – Standardized Monitoring and Assessment of Relief and Transitions

SRAF – Situation & Response Analysis Framework

WHO – World Health Organization

WRA – Women of reproductive age

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Introduction

Background to this review

Turkana is one of Kenya's 47 county governments and is located in North-Western part of the country. The county shares its borders with Ethiopia, Sudan and Uganda, and, within Kenya, shares its borders with Baringo, West Pokot and Samburu Counties. The county is home to an estimated 855,399 people and it is sub-divided into seven sub-counties: Turkana Central, Loima, Turkana South, Turkana East, Turkana North, Kibish and Turkana West.¹

Turkana is classified among the arid and semi-arid lands (ASAL). The region is therefore a drought prone area, experiencing cyclical and prolonged droughts, affecting the largely pastoralist community (60%), causing livestock death and rustling of cattle. The rest of the population, also affected by the droughts, are classified as agro-pastoral (20%), fishermen (12%) and peri-urban/urban formal and informal employment (8%).²

The harsh environment, combined with the remoteness of the County and lack of infrastructure contributes to the high poverty index – 94% – ranking 47th out of all counties in Kenya.³ Thus, Turkana County is one of the poorest regions of Kenya and has been affected by fluctuating, yet persistently high, rates of malnutrition among children under five years of age. Therefore, tackling chronic and acute malnutrition effectively, and in particular improving the diet of children during the critical period up to the age of two years, remains a major challenge in this County.

The most recent nutrition SMART survey published in January 2017 revealed worsening wasting trends with Turkana North recording very high Global Acute Malnutrition (GAM) rates – 30.7% – far exceeding WHO thresholds (see *Table 1*). Despite the increase from 2016 to 2017, no statistical difference between these rates of malnutrition was found between the surveys (overlap in confidence intervals).

Table 1. Prevalence of Wasting in Turkana County (January 2017) Nutrition Survey Results (arrows indicate increase or decrease in prevalence from previous year).

¹ Turkana County Government (2015). *Turkana County Action Plan 2015 – 2018*.

² Turkana County Government (2015). *Turkana County Action Plan 2015 – 2018*.

³ Turkana County Government (2015). *Turkana County Action Plan 2015 – 2018*; FEG (2016). *Livelihood Profiles Baseline Update: Six Livelihood Zones in Turkana County, Kenya*. Save

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	Turkana Central January 2017	Turkana South January 2017	Turkana North January 2017	Turkana West January 2017	Weighted County June 2016	Weighted County January 2017	Difference between 2016 and 2017 (%)
Global Acute Malnutrition (GAM)	25.9% (21.7- 30.6) ↑	22.9 % (18.4- 28.0) ↓	30.7% (26.6- 35.1) ↑	15.3% (11.5- 20.2) ↑	23.3% (21.1- 25.5)	24.7% (22.7- 26.8)	+1.4% ↑
Severe Acute Malnutrition (SAM)	6.4% (4.4- 9.2) ↑	5.7% (3.7- 8.7) ↓	8.1% (6.0- 10.7) ↑	3.1% (1.6- 5.9) ↑	5.3% (4.5- 6.3)	6.1% (5.1- 7.4)	+0.8% ↑

A trend analysis indicates that the malnutrition rates have remained persistently high, with slight variations from what was observed in 2011⁴, raising questions as to what the determinants of malnutrition are in Turkana.

To understand the food security and nutrition situation in Turkana County, a number of assessments have been conducted -the determinants to malnutrition study and the Household Economy Assessment (HEA). Additional assessments have been planned for early 2017 – a SMART nutrition survey and the Cost of the Diet (CotD) assessment. All these studies together are hoped to help identify the key issues/gaps that need to be addressed to tackle acute malnutrition in Turkana County.

Aim

The aim of this desk review was to examine of all the relevant secondary data that is currently available in order to shed light on the possible drivers of malnutrition in Turkana County.

Among the documents reviewed: SMART survey (2016, 2017), 2016 Short Rains Assessment Report (KFSSG, 2017), Nutrition Baseline survey (GIZ, 2016), Household Economy Analysis (FEG, 2016), MYICN KAP survey (Mbugua, 2014), KDHS (2014), as well as the recently completed Cost of the Diet assessment in the central pastoral livelihood zone in Turkana.

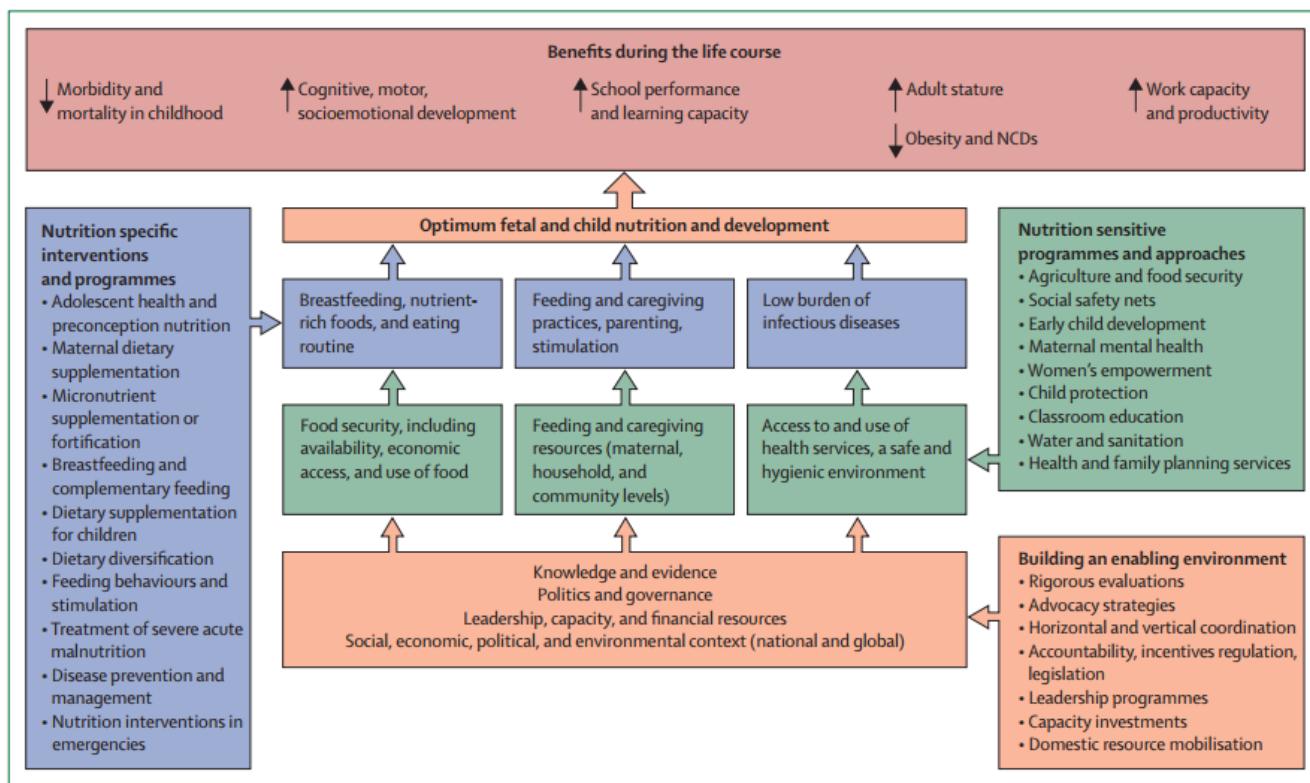
Methods

The literature reviewed in this paper was sourced from the nutrition staff at Save the Children Kenya, as well as open access internet resources. To guide the analysis and discussion of the results, the framework proposed in the 2013 Lancet Series-Maternal and Child Nutrition (*Figure 2*, below) was used as guidance. The framework highlights the behavioral, dietary, and health determinants of optimum growth, nutrition and development. It also shows how these are in turn influenced by underlying food security and environmental conditions, which are shaped by economic and social conditions, as well as national and global contexts, resources, and governance.

⁴ Turkana County Government (2017). *Turkana SMART Nutrition Survey*.

The review focused on the following themes: food security, economic access and dietary diversity; prevalence of malnutrition in children; early initiation of breastfeeding and exclusive breastfeeding; iron and folate supplementation; vitamin A supplementation; child morbidity and health seeking behaviour; treatment and community based management of acute malnutrition (CMAM); complementary feeding; water, sanitation and hygiene; and policy, infrastructure and environmental factors. The framework was used to assess the results, likely key determinants and to identify crucial areas for nutrition sensitive and specific interventions and programmes.

Figure 1. Framework for actions to achieve optimum fetal and child nutrition and development, taken from The Lancet Series-Maternal and Child Nutrition (Black *et al.*, 2013)⁵.



Discussion

Prevalence of malnutrition in children

The latest SMART survey (2017)⁶ findings in Turkana County once again revealed high rates of acute malnutrition in Turkana, indicating a critical nutrition situation. GAM rates have increased from 21.2% to 24.7% between 2015 and 2017, although the difference was not statistically significant. Turkana North has the highest GAM rates at 30.7%, followed by Turkana Central at 25.9%, Turkana South at

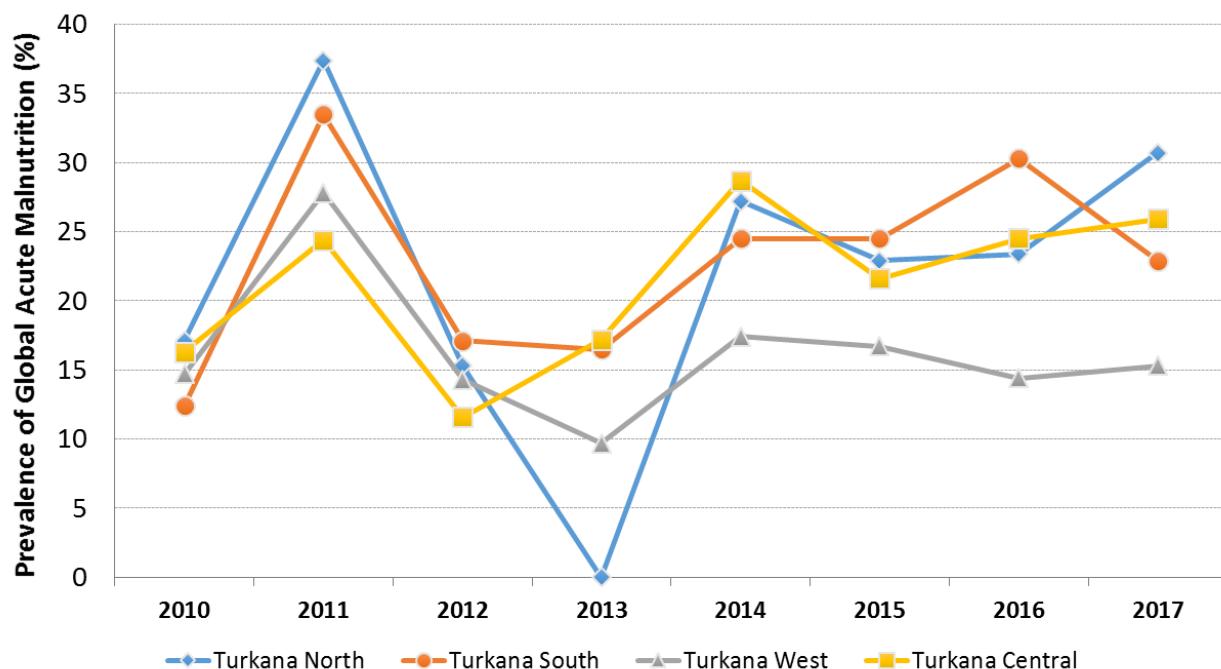
⁵ The Lancet Series-Maternal and Child Nutrition (2013). <http://www.thelancet.com/series/maternal-and-child-nutrition>.

⁶ Turkana County Government (2017). *Turkana SMART Nutrition Survey*.

22.9%, and Turkana West at 15.3%. A trend analysis of acute malnutrition over the course of almost 7 years (2010 –2017) shows how GAM rates have fluctuated, yet persistently exceeded WHO's emergency threshold of 15% (*figure 1*).⁷

The prevalence of underweight (weight-for-age) has also increased across Turkana County, from 31.1% in 2015 to 32.0% in 2017, although the difference was no statistically significant. From 2015 to 2016, the prevalence of stunting increased from 25.3% to 28.2%, although in the latest SMART survey (2017) the reported prevalence was lower than in 2015, at 23.2%, although these differences are not statistically significant.⁸ Across the sub-counties, the highest prevalence of underweight was recorded in Turkana North (35.0%), followed by Turkana South (34.8%), Turkana Central (33.1%), and Turkana West (23.3%). The prevalence of stunting, an indicator for chronic malnutrition, also decreased from 2016 to 2017, from 28.2% to 23.2%, which is below 2015 levels, yet still significantly higher than 2013 and 2014 levels.⁹

Figure 2. Global Acute Malnutrition trends in Turkana County 2010-2017 (%) based on SMART survey reported prevalence rates (2010 – 2017).



Early initiation of breastfeeding and exclusive breastfeeding

⁷ Ibid.

⁸ Turkana County Government (2017). *Turkana SMART Nutrition Survey*.

⁹ Ibid.

The most recent MIYCN and KAP survey¹⁰, conducted in 2014, reported sub-optimal breastfeeding practices. The survey showed that over two thirds of respondents (70%) reported initiating breastfeeding immediately after birth or within an hour. In Turkana, early initiation of breastfeeding is challenged by the practice of delaying breastfeeding until the child has been named. Furthermore, 27% of children were fed foods other than breastmilk within the first three days of life. Almost all children (99%) were reported to have been breastfed at some point.

Approximately a third of women reported feeding their child exclusively (32%), also revealing a decrease from 2011 figures (35%). Nearly one in five women felt it is necessary to feed a child foods or drinks other than maternal milk: 67% gave the child milk (other than their own), 20.5% plain water and 20% used a sugar and glucose solution. Some reported the custom of feeding the child goat fat or goat milk before maternal milk has also been reported. Continued breastfeeding after one year was reported by 18% of the mothers, and 16% continued breastfeeding after two years.¹¹

Complementary feeding

According to the MIYCN KAP survey¹², the majority of women (86%) introduced solid and semi-solid foods when the baby reaches 6 months. Beyond the age of 6 months, 17% delayed the introduction of foods (other than breastmilk). Only 52% of children aged 6 to 23 months receive an appropriate complementary diet, with only 9.5% of children consuming a sufficiently diverse diet. The survey also found that 45% of children aged 6 to 8 months achieved the minimum meal frequency for breastfeeding and only 31% of children aged 9 to 23 months. The minimum acceptable diet for these same age group was also very poor: 6% in children 6 to 8 months and 7% in children aged 9 to 23 months.¹³

Inadequate feeding of sick child is prevalent in Turkana, with 74% of mothers giving the child less milk during illness. The same is true with regards to feeding the child complementary foods, as 77% of mothers reported decreasing the amount of food given to the child. One third of mothers reported storing food prepared to feed the child at a later time during the day, leading to an increase in the chances of food-borne diseases.¹⁴

Iron and folate supplementation

In Turkana, just over half of the women of reproductive age reported taking iron and folic acid supplementation. According to the SMART surveys over the last two years, the proportion of women with children under 2 years taking iron and folate supplementation has increased: from 77.9% in 2015 to 82.0% in 2017. However, the proportion of women of reproductive age consuming a diversified

¹⁰ Ministry of Health, International Rescue Committee, Save the Children, World Vision (2014). *Knowledge Attitudes and Practices (KAP) and Communication for Development (C4D) Assessment in Turkana County*.

¹¹ Ministry of Health, International Rescue Committee, Save the Children, World Vision (2014). *Knowledge Attitudes and Practices (KAP) and Communication for Development (C4D) Assessment in Turkana County*.

¹² Ministry of Health, International Rescue Committee, Save the Children, World Vision (2014). *Knowledge Attitudes and Practices (KAP) and Communication for Development (C4D) Assessment in Turkana County*.

¹³ *Ibid.*

¹⁴ *Ibid.*

diet (5 food groups and above) is currently 12.2%, thus exposing them to micro-nutrient deficiencies.¹⁵

Consumption of iron rich foods in children aged 6 to 23 months was low in Turkana, with only 24.2% of children consuming iron rich foods or supplement.

Vitamin A supplementation

Deficiencies in micronutrients such as vitamin A have adverse effect on the survival and development of a child, and contribute towards children not reaching their full developmental potential.¹⁶

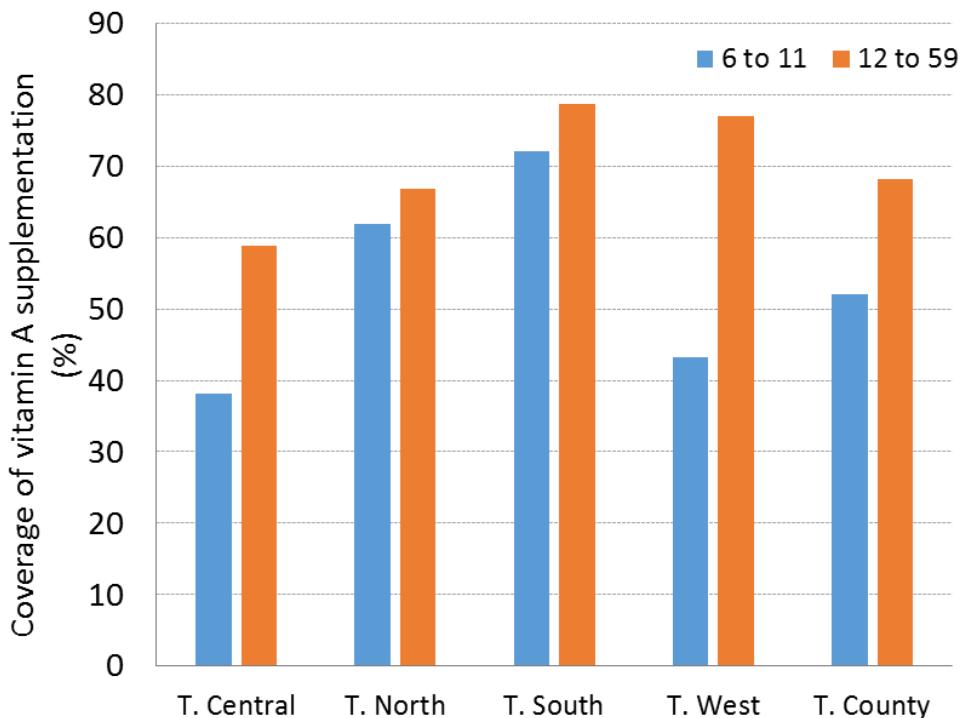
According to the recent SMART survey (2017), 52% of children aged 6 to 11, 68% of children 12 to 59 months, and 40.5% of children aged 12 to 59 months had been supplemented with vitamin A at least once. These coverage rates are far below the 80% target set by the Ministry of Health. These rates have decreased since 2016 in children aged 6 to 11 months, as the coverage has decreased from 97.5% to 52.0%. In children 12 to 59, the opposite trend transpires, as the coverage has increased, from 53.4% to 68.2%. Across all age groups under 5 years (6 to 59 months), coverage rates have increased from 51.2% in 2016 to 66.1% in 2017. Figure 3 illustrates how coverage varies across age groups and county, although are lowest in Turkana Central and highest in Turkana South. These prevalence rates are not currently in line with Kenya's 2013 – 2017 aim to achieve 90% coverage under one year.¹⁷

Figure 3. Coverage of vitamin A supplementation across sub-counties and in Turkana County (%), based on SMART survey (2017) results.

¹⁵ Turkana County Government (2017). *Turkana SMART Nutrition Survey*.

¹⁶ The Lancet Series-Maternal and Child Nutrition (2013). <http://www.thelancet.com/series/maternal-and-child-nutrition>.

¹⁷ Turkana County Government (2017). *Turkana SMART Nutrition Survey*.



Child morbidity and health seeking behaviour

According to the 2017 SMART survey, approximately 31% of children under 5 years were reported to have been ill in the two weeks prior to the survey. The prevalence of illness was reportedly higher in Turkana West (43%), followed by Turkana South (33%), Turkana Central (31%), and Turkana North (21%). Of these, the majority (62%) had been affected by acute respiratory infection, 51% by fever (with chill like malaria), and only 16% affected by watery diarrhea.¹⁸ The figure has decreased from 2016 figures, when the overall prevalence of diarrhea in children aged 6 to 23 months was 44%. 73% of children that had been affected by diarrhea had been given therapeutic zinc supplementation.¹⁹ Of the children that had experienced illness, 82% of caregivers sought assistance. Over 90% of these sought for assistance at service delivery points such as hospitals (83%) and mobile or private clinic (8%). Only 2% sought assistance from traditional healers, family or friends, at a shop, or used local herbs.²⁰

Treatment and community based management of acute malnutrition (CMAM)

According to the Turkana County Nutrition Coverage report (March – April 2015), there are 108 health facilities across the county, 155 outreach facilities and 5 stabilization centres, serving an estimated population of approximately 855,000. Point coverage estimates of outpatient therapeutic programmes (OTP) in the County ranged between 52% and 57% (Turkana West and Turkana South,

¹⁸ Turkana County Government (2017). *Turkana SMART Nutrition Survey*.

¹⁹ Turkana County Government (2016). *Turkana SMART Nutrition Survey*.

²⁰ Turkana County Government (2017). *Turkana SMART Nutrition Survey*.

respectively), and between 50% and 57% (Turkana North and Turkana South, respectively) for supplementary feeding programmes (SPF).²¹

Program monitoring indicators for both OTP and SPF were generally above the SPHERE standards (cure: 75%, default: 15%, and death: 10%). Early defaulting was largely attributed to migration in search of water and pasture for livestock and insecurity associated with cattle raids. Other barriers included high illiteracy levels among caretakers, as well as distance to the facilities, seasonal flooding and impeded access, stock-outs of RUTF. The pastoralist nature of the Turkana people is an underlying factor that contributes to these barriers.²²

Water, Sanitation and Hygiene

According to the SMART nutrition survey (2017), only 60.3% of households in Turkana access their water through safe sources, such as piped water, borehole or protected shallow wells. The remaining 39% of households obtain their water from sources that would normally require treatment prior to drinking, such as rivers or springs (6.3%), unprotected wells (17.3%), shallow wells (10.6%), or lake (4.2%). Only 4.1% of households treat their water before drinking. Of these, majority use boiling as a method (80.2%), or chemicals (22.0%). Across Turkana, 67.2% of households store drinking water safely in closed containers. However, the percentage of households is considerably lower in Turkana North (43.9%), compared to Turkana Central (84.2%), Turkana West (70.5%), and Turkana South (69.7%).²³

Just over half of households (57.1%) have access to water within 500 metres from the house, equivalent to less than 15 minutes walking time; 29.5% live between 0.5 and 2 kilometres, and 12.8% walk over 2 kilometres. Just under 50% of households queue for less than one hour for water (45.1%). The proportion of household needing to travel further was highest in Turkana Central, where only 43% had access to water within a 500m distance, followed by Turkana South (50.7%), Turkana North (64.4%), and Turkana West (73.9%). A third of Turkana residents queue between 30 and 60 minutes to fill water containers. At the time of the SMART survey (2017), a mere 29.5% of households used the minimum of 15 litres of water required per person, per day, for drinking, personal hygiene and cooking purposes (based on SPHERE standards). The highest proportion of households that fell below this threshold is in Turkana Central (82.6%), followed by Turkana North (67.2%), Turkana South (63.5%), and Turkana West (63.2%).²⁴ Given the current drought, the situation is likely to have deteriorated since.²⁵

Only 10.2% of households washed their hands at four critical times (after visiting a latrine; after accompanying a child to the latrine; before cooking; and before eating). Furthermore, 60.8% of

²¹ Ministry of Health, UNICEF, World Vision Kenya, International Rescue Committee, Save the Children International (2015). *Turkana County Nutrition Coverage*.

²² Ministry of Health, UNICEF, World Vision Kenya, International Rescue Committee, Save the Children International (2015). *Turkana County Nutrition Coverage*.

²³ Turkana County Government (2017). *Turkana SMART Nutrition Survey*.

²⁴ *Ibid.*

²⁵ *Ibid.*

households did not use soap when washing hands, only utilizing water. Open defecation is a widespread issue in Turkana and little progress has been seen in reducing the prevalence. The survey recorded a prevalence of 84.9% of open defecation; the remaining households either used latrines, either shared, belonging to the neighbor or on own property. Open defecation is most prevalent in Turkana North, with 93.4% of households practicing open defecation, 88.8% in Turkana West, 80% in Turkana Central, and 80.0% in Turkana South.²⁶

Food security, economic access and dietary diversity

The current food security situation across Turkana is very poor. According to a food security assessment and based on FAO's Household Food Insecurity Experience Scale (HFIERS), 89.1% of households in Turkana are severely food insecure, 5.9% moderately food insecure and 2.5% mildly food insecure, meaning that a mere 2.5% of households are food secure.²⁷ The extent to which seasonality affects households' access to food were assessed and found that households experienced 'food stress' almost throughout the year.²⁸ An overall deterioration of food security was predicted in the short rains assessment in February 2017 (KFSSG) due to the ongoing drought that has affected the region.²⁹

Turkana is classified as an ASAL region and therefore has limited potential for growing food activities. It is therefore unsurprising that 94.4% of households do not have access to home gardens. Of the 5.6% that are able to grow vegetables, 86% are able to grow vegetables only during the wet season. Approximately 1 in 4 of households reported growing vegetables on either irrigated or rain-fed land outside of their home gardens. The majority of produce is kept for home consumption (55.9%) or a combination of sale and own consumption (26.5%). 12% of households reported having access to fruit trees. 70.4% of Turkana residents receive food aid, 59.2% participate in school feeding programmes and 30.4% receive cash transfers.³⁰

As a predominantly pastoral area, majority of Turkana households reared animals (71.2%); goats are the most commonly kept animals, followed by sheep, poultry, donkeys, camels and cattle.³¹ According to the HEA³², livestock products, such as dairy and meat, contribute largely to a family's intake of calories. Furthermore, the Cost of the Diet analysis (2017) also revealed that dairy products are critical sources of micronutrient for all individuals.

Household dietary diversity was unsurprisingly poor across the County. Based on the household food consumption score (HFCS), 51.5% of households reported borderline (31.5%) or poor (22.0%) food consumption scores.³³ Dietary diversity among women is poor across Turkana, where 80% of women

²⁶ *Ibid.*

²⁷ GIZ (2016). *Nutrition Survey Kenya. For the Global Programme Food and Nutrition Security, Enhanced Resilience.*

²⁸ GAIN, USAID, Adesa (2016). *Kenya Policy Brief: Feeding Infants and Young Children in Turkana County.*

²⁹ KFSSG (2017). *The 2016 Short Rains Season Assessment Report.*

³⁰ GIZ (2016). *Nutrition Survey Kenya. For the Global Programme Food and Nutrition Security, Enhanced Resilience.*

³¹ GIZ (2016). *Nutrition Survey Kenya. For the Global Programme Food and Nutrition Security, Enhanced Resilience.*

³² FEG (2016). *Livelihood Profiles Baseline Update: Six Livelihood Zones in Turkana County, Kenya. Save*

³³ Turkana County Government (2017). *Turkana SMART Nutrition Survey.*

of reproductive age (15–49 years) are consuming less than the minimum of 5 food groups out of 10 (MDD-W score).³⁴

The Cost of the Diet assessment conducted in Turkana earlier this year revealed that households in the central pastoral livelihood zone are unable to afford a nutritiously adequate diet.³⁵ Although these results are representative of the central pastoral zone only, the chosen area covers parts of Turkana West, Turkana Central, Turkana North, Turkana South and Loima. Although the extent of the affordability gap is likely to vary across the six livelihood zones³⁶, economic constraints to accessing a nutritious diet are likely to be a common problem. The issue of affordability is further corroborated by other studies that found that caregivers' knowledge and understanding of food from a nutritional prospective is relatively good, yet they cannot access nutritious foods because they are too expensive, and their primary concern is to manage hunger.³⁷ Nonetheless, other studies (GIZ, 2016) found that children could benefit from improved complementary feeding practices.³⁸

Policy, infrastructure and environmental factors

Turkana is the poorest of the 47 counties in Kenya and with its poorly developed infrastructure, the Turkana people lack access to essential services. The current repairs of the A1 road will hopefully facilitate movement across the county and in turn easier transportation of fresh food and water. Turkana is also affected by poor access to safe drinking water, which severely limits the potential for food production and adhering to sanitary practices (such as drinking safe water and general hygienic practices). As mentioned in earlier sections, Turkana is classified as an arid and semi-arid land, and can reach temperatures around 40° Celsius during the dry season. Harsh environmental conditions and cyclical droughts and floods have devastating on livestock as the lead to a rise in prices and outbreaks of diseases, in turn increasing general insecurity.³⁹

Currently, the Turkana Government has a Nutrition Action Plan (2015 – 2018) bringing together government, NGOs and UN agencies together with the purpose of tackling, above all, the chronic issue of malnutrition. The plan's objectives are, among others, to improve the nutritional status of children under five years and women of reproductive age, and to reduce the prevalence of micronutrient deficiencies across the whole population.

There are currently a number of international organizations implementing health and nutrition programmes in Turkana; among these, Save the Children International, World Vision Kenya, International Rescue Committee and USAID. UNICEF currently provides Nutrition, Health, WASH for development and child protection programmes; the World Food Programme (WFP) provides food for assets and general food distributions, with Child Fund, OXFAM and Turkana Relied as implementing partners. The Kenyan Red Cross is also involved in the emergency response including nutrition, WASH

³⁴ GIZ (2016). *Nutrition Survey Kenya. For the Global Programme Food and Nutrition Security, Enhanced Resilience*.

³⁵ Save the Children (2017). *A Cost of the Diet analysis in Turkana County, Kenya: Central Pastoral Livelihood Zone*.

³⁶ FEG (2016). *Livelihood Profiles Baseline Update: Six Livelihood Zones in Turkana County, Kenya*.

³⁷ GAIN, USAID, Adesa (2016). *Kenya Policy Brief: Feeding Infants and Young Children in Turkana County*.

³⁸ GIZ (2016). *Nutrition Survey Kenya. For the Global Programme Food and Nutrition Security, Enhanced Resilience*.

³⁹ Turkana County Government (2015). *Turkana County Action Plan 2015 – 2018*.

and livelihood projects. The Ministry of Health provided quality assurance and coordination of health and nutrition related activities across the County. Other agencies, such as Food and Agriculture Organization (FAO), Adeso and the International Organization for Migration (IOM).⁴⁰

⁴⁰ Ministry of Health, UNICEF, World Vision Kenya, International Rescue Committee, Save the Children International (2015). *Turkana County Nutrition Coverage*.

Key findings

Based on the framework for actions to achieve optimum fetal and child nutrition and development from The Lancet Series-Maternal and Child Nutrition⁴¹, the following key findings are here summarized as potential key contributors to high incidence of malnutrition in Turkana:

- ❖ Rates of malnutrition among children under 5 persists across the county (25%), with especially worrying figures in Turkana North (31%). These figures continue to exceed WHO thresholds.⁴²
- ❖ Prevalence of exclusive breastfeeding remains below optimal levels in Turkana (32%), and local customs (such as the practice of naming the children prior to putting the child to the breast) impede early initiation of breastfeeding.⁴³
- ❖ The prevalence of exclusive breastfeeding is low: only 52% of children aged 6 to 23 months are exclusively breastfed. Moreover, only 6% of children aged 6 to 8 months and 7% of children aged 9 to 23 months consume the minimum acceptable diet.⁴⁴
- ❖ Although the coverage of IFAS in women of reproductive age is currently at 82%, the proportion of these consuming a diversified diet is 12%, exposing this vulnerable group to micronutrient deficiencies.⁴⁵ Deficiencies in calcium and iron contribute to maternal deaths.⁴⁶ Currently there is a lack of data on micronutrient deficiencies in Turkana.
- ❖ Vitamin A supplementation coverage remains at sub-optimal levels of vitamin A: 52% in children aged 6 to 11 and 68% in children 12 to 59 months.⁴⁷
- ❖ Point coverage of estimates of OTP/SPF were above the 50% SPHERE threshold.⁴⁸
- ❖ Only 60% of households have access to safe drinking water and 30% used the minimum of 15 litres of water required per person per day for drinking, cooking and personal hygiene. In addition, only 10% of households washed their hands at four critical times and 85% practiced open defecation.⁴⁹
- ❖ 89% of households in Turkana are severely food insecure and only 2.5% are food secure. The current drought has led to a further deterioration of the food security situation in Turkana.

⁴¹ The Lancet Series-Maternal and Child Nutrition (2013). <http://www.thelancet.com/series/maternal-and-child-nutrition>.

⁴² Turkana County Government (2017). *Turkana SMART Nutrition Survey*.

⁴³ Ministry of Health, International Rescue Committee, Save the Children, World Vision (2014). *Knowledge Attitudes and Practices (KAP) and Communication for Development (C4D) Assessment in Turkana County*.

⁴⁴ Ministry of Health, International Rescue Committee, Save the Children, World Vision (2014). *Knowledge Attitudes and Practices (KAP) and Communication for Development (C4D) Assessment in Turkana County*.

⁴⁵ Turkana County Government (2017). *Turkana SMART Nutrition Survey*.

⁴⁶ The Lancet Series-Maternal and Child Nutrition (2013). <http://www.thelancet.com/series/maternal-and-child-nutrition>.

⁴⁷ Turkana County Government (2017). *Turkana SMART Nutrition Survey*.

⁴⁸ Ministry of Health, UNICEF, World Vision Kenya, International Rescue Committee, Save the Children International (2015). *Turkana County Nutrition Coverage*.

⁴⁹ Turkana County Government (2017). *Turkana SMART Nutrition Survey*.

- ❖ 51% of households reported borderline or poor food consumption scores and 80% of women of reproductive age were consuming below the 5 minimum food groups (out of ten).
- ❖ Large affordability gap identified in the central pastoral zone, indicating inability to access nutritious diet, and therefore could lead to inadequate micronutrient intake in the population. The inability to access a nutritious diet is likely to be reflective across the whole county (although the extent cannot be estimated unless an assessment is undertaken).
- ❖ Harsh environmental conditions, lack of infrastructure and water largely contribute to insecurity across Turkana.

Recommendations

Based on the key findings highlighted in this paper and guided by the The Lancet Series-Maternal and Child Nutrition framework, the information has been summarized in *Figure 4* and the following recommendations devised to tackle the identified factors driving malnutrition rates in Turkana.

Nutrition specific interventions:

- Supplementation of children's diet during critical developmental phases – micronutrient powders (in absence of nutrient rich foods);
- Strengthen vitamin A supplementation coverage;
- Continued emphasis on antenatal care and IFAS;
- Strengthen complementary feeding and exclusive breastfeeding messaging;
- Promote diet diversification based on locally available and affordable foods;
- Strengthen screening of children for CMAM;
- Scale-up food assistance during periods of scarcity (dry seasons).

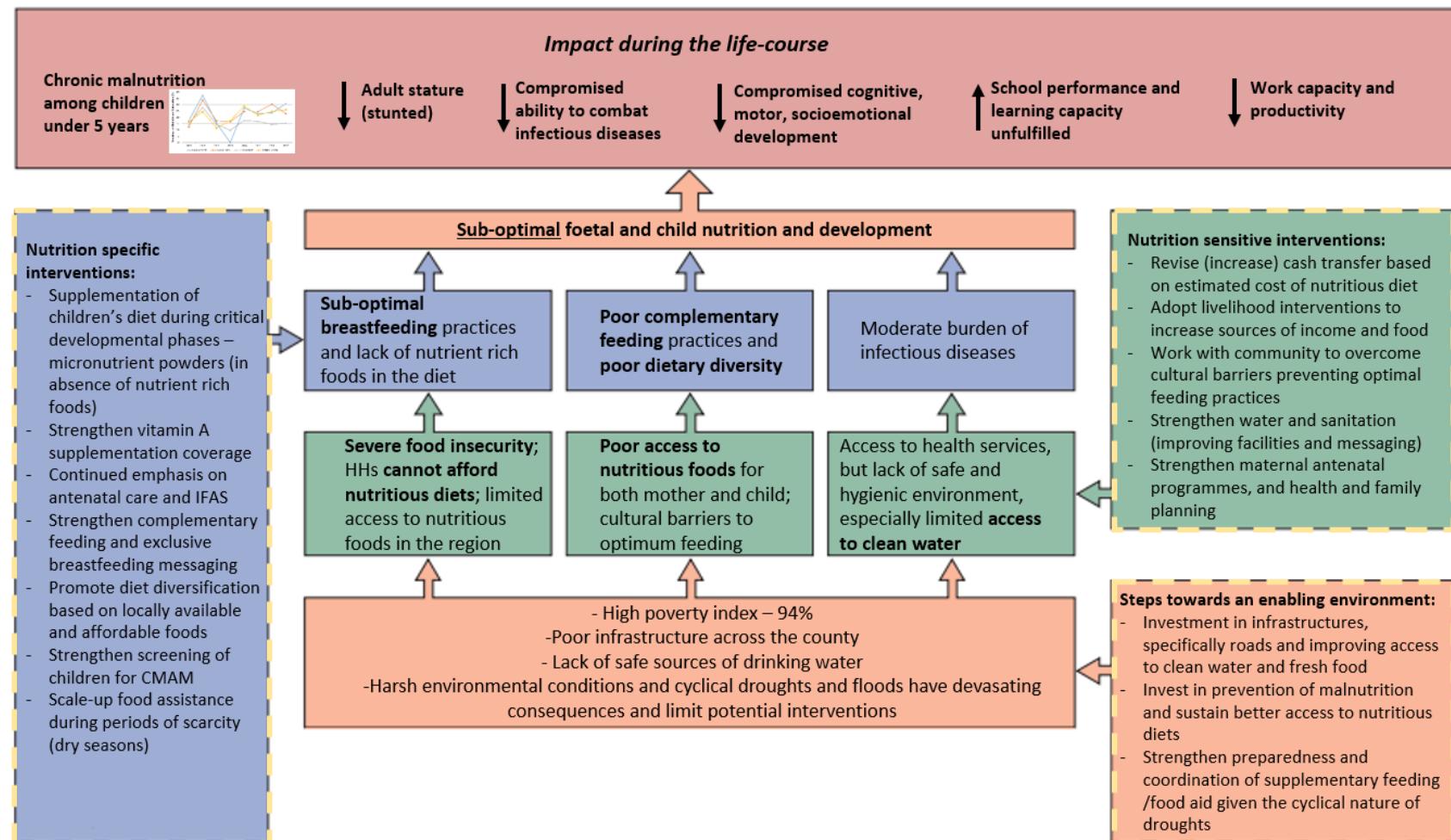
Nutrition sensitive interventions:

- Revise (increase) cash transfer based on estimated cost of nutritious diet;
- Adopt livelihood interventions to increase sources of income and food;
- Work with community to overcome cultural barriers preventing optimal feeding practices;
- Strengthen water and sanitation (improving facilities and messaging) ;
- Strengthen maternal antenatal programmes, and health and family planning.

Steps towards an enabling environment:

- Investment in infrastructures, specifically roads and improving access to clean water and fresh food;
- Invest in prevention of malnutrition and sustain better access to nutritious diets;
- Strengthen preparedness and coordination of supplementary feeding /food aid given the cyclical nature of droughts.

Figure 4. Framework for actions to achieve optimum fetal and child nutrition and development (Black *et al.*, 2013)⁵⁰ adapted to the context of Turkana and summarizing the findings of the desk review and recommended nutrition specific and sensitive interventions, and steps towards building an enabling environment.



⁵⁰ The Lancet Series-Maternal and Child Nutrition (2013). <http://www.thelancet.com/series/maternal-and-child-nutrition>.

Bibliography

GIZ (2016). *Nutrition Baseline Survey Kenya. For the Global Programme Food and Nutrition Security, Enhanced Resilience.* Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

FEG (2016). *Livelihood Profiles Baseline Update: Six Livelihood Zones in Turkana County, Kenya.* Save the Children.

GAIN, USAID, Adesa (2016). *Kenya Policy Brief: Feeding Infants and Young Children in Turkana County.* May, 2016.

KDHS (2014). *Kenya Demographic Health Survey 2014.* Kenya National Bureau of Statistics. December 2015.

KFSSG (2017). *The 2016 Short Rains Season Assessment Report.* Kenya Food Security Steering Group, Government of Kenya.

MoH, UNICEF, World Vision Kenya, International Rescue Committee, Save the Children International (2015). *Turkana County Nutrition Coverage.*

Ministry of Health, International Rescue Committee, Save the Children, World Vision (2014). *Knowledge Attitudes and Practices (KAP) and Communication for Development (C4D) Assessment in Turkana County.*

Save the Children (2017). *A Cost of the Diet analysis in Turkana County, Kenya: Central Pastoral Livelihood Zone.* Nairobi, Kenya.

TCG (2015). *Turkana County Action Plan 2015-2018.* Turkana County Government.

TCG (2016). *Turkana SMART Nutrition Survey.* Family Health Directorate, Turkana County Government.

TCG (2017). *Turkana SMART Nutrition Survey.* Family Health Directorate, Turkana County Government.

A desk review of key determinants of malnutrition in Turkana County, Kenya

Black. R.E. et al. (2013). "Maternal and child undernutrition and overweight in low-income and middle-income countries." The Lancet Series-Maternal and Child Nutrition. *Lancet*. 382, pp. 427–51.
Last accessed 01 July 2017 at: <<http://www.thelancet.com/series/maternal-and-child-nutrition>>