

## Kenya: Situation analysis for Transform Nutrition

### 1. Nutrition outcomes

#### 1.1 Trends

Kenya is home to more than 40 million people, 80% of whom live in rural areas and rely almost entirely on agriculture. More than 10 million (almost a third of the population) are chronically food insecure (Republic of Kenya 2011; FAO 2011; Republic of Kenya 2008). The country's food and nutrition insecurity is often attributed to the performance of the agricultural sector, which while growing at 4.9% in 1986 had nearly stagnated at 0.4% by 1992. Although agriculture reached a growth peak in 2006 of 6.5%, the sector's strategies have not led to full food security for the country and micronutrient-rich foods have been insufficiently promoted (Republic of Kenya 2008; Ibid 2010). Kenya's 2011 National Food and Nutrition Security Policy (NFNSP) indicates that in the past 30 years, per capita food availability<sup>1</sup> has in fact declined by more than 10% (Republic of Kenya 2011). Moreover, Kenya's food security and nutrition needs are further complicated by an unstable economic environment, a recent rise in food and fuel prices, adverse weather conditions, insufficient budgetary allocations and weak sector coordination.

Malnutrition exists in various forms, including acute and chronic undernutrition, micronutrient deficiencies, as well as overweight and obesity. These conditions primarily affect pregnant and lactating women and children under five years of age (u5s) and significantly contribute to their morbidity and mortality (MoPHS & SCUK 2011). The main causes of u5 deaths are diarrheal diseases, pneumonia, malaria, and other infections<sup>2</sup> (Black et al 2008). Although the Kenya u5 mortality rate declined significantly between 2003 and 2009, it has increased in recent years, and undernutrition remains a significant contributing factor. The Kenya Demographic and Health Survey (KDHS) for 2008-09 indicated that 7% of u5s are wasted and 16% are underweight. While the prevalence rates for wasting and underweight have declined over the past three decades (though remaining stable over the past 10 years), the stunting rate has increased to an astounding 35% (measured using the new WHO Growth Standards of 2006) (Republic of Kenya 2010). Figure 1 shows the trends of undernutrition in Kenya from 1993 to 2008 according to the KDHS.

**Figure 1 Trends in stunting, underweight and wasting**



Source: UNICEF (2011)

<sup>1</sup> Generally, availability combines domestic food stocks and food production, as well as food imports and food aid. In Kenya, availability is understood in terms of cereal supply, whereas food security is understood in terms of consumption of maize (which has increased by 3% per annum) (Republic of Kenya 2011).

<sup>2</sup> See Black et al (2008), where the definition 'other infections' includes some deaths due to preterm birth complications, birth asphyxia, and other perinatal causes.

Stunting rates are highest in 18-23 month olds (46%) and lowest in children younger than 6 months (11%). A slightly higher percentage of male children are stunted (37%) than female children (33%). Mothers with a low Body Mass Index (BMI)<sup>3</sup> tend to have children with higher stunting levels (KNBS and ICF Macro 2010), while mothers with longer birth intervals reduce the likelihood of their children being stunted. Rural areas are disproportionately affected, with arid and semi-arid lands worst affected (Save the Children 2012); a medium severity problem in Nairobi Province (28%), stunting rates are extremely high in Eastern Province (42%) (KNBS and ICF Macro 2010). For children below two years, prevalence of malnutrition - especially stunting - seems to rise with age in Kenya.

Wasting stands at a national average of 7%, with extremely high rates of 20% in North Eastern province. Wasting is higher in 6-8 month olds (11%) than in 36-47 month olds (4%). Underweight (at a national average of 16%) is highest in those between 24 and 35 months and 48 and 59 months (19%) and lowest among those younger than 6 months (6%). Again, rates are higher in rural areas; from 25% in North Eastern province to 8% in Nairobi province (KNBS and ICF Macro 2010). Wasting and underweight are negatively correlated to the wealth, education, and nutritional status of the mother. Table 1 demonstrates the changes in prevalence rates for stunting, wasting, and underweight for u5s as well as changes in u5 and maternal mortality rates between 1993 and 2010.

**Table 1: Malnutrition indicators for women and u5s<sup>4</sup> (all data from KDHS unless indicated otherwise)**

	1993 KDHS	1998 KDHS	2003 KDHS	2008-09 KDHS	2010 (Unicef)
<b>U5 mortality rate*</b>	96	112	115	74	85
<b>Maternal mortality rate**</b>	?	590	414	488	490
<b>Stunting (u5s)<sup>5</sup></b>	33%	33%	30.3%	35.3%	35%
<b>Wasting (u5s)</b>	6.1%	6%	5.6%	6.7%	7%
<b>Underweight (u5s)</b>	22%	22%	19.9%	16.1%	16%

\*per 1,000 live births; \*\* per 100,000 live births

Sources: KDHS surveys for 1993, 1998, 2003, 2008-09; Republic of Kenya 2008; UNICEF 2010; UNICEF et al 2010

Major micronutrient deficiencies include iodine deficiency disorder, iron deficiency anemia, and vitamin A and zinc deficiency, with high rates among young children. Approximately 25% of children are iodine deficient, although rates of goitre have significantly reduced from 16% (1994) to 6% (2004) due to the near universal household consumption of iodized salt (MoPHS & SCUUK 2011). Nearly three quarters of u5s experience iron-deficiency anemia; for infants under 6 months old this percentage is 99.5% and for children between 6 and 72 months it is 69% (MoPHS & SCUUK 2011). Approximately 85% of u5s are vitamin A deficient, 34.3% among those under 6 months old compared to 27.7% of those between 37 and 48 months old. A little over half of u5s are zinc deficient, and significant correlation exists here with histories of perceived malaria, hookworm distribution, and current fever (Republic of Kenya 2011; Mwaniki et al 2002; MoPHS & SCUUK 2011).

<sup>3</sup> BMI stands for Body Mass Index and is a way to calculate weight status in adults.

<sup>4</sup> Prevalence rates among young children here represent the national average, and can vary significantly in relation to maternal nutritional status and education level, birth interval, birth weight, sex of the child, age of the child, region (rural/urban; province), and wealth quintile.

<sup>5</sup> Stunting is an indicator of chronic malnutrition, due to poor growth before as well as after birth. The first 1000 days of a child's life are particularly important with regards to reducing stunting. Stunting is only believed to be chronic once a child is past two years of age, and the process can be addressed and prevented relatively quickly before two years of age. But if it is not, it can lead to poor physical and cognitive capabilities, lower educational attainment and reduced immunity levels. Low birth weight (under 2.5kg) due to maternal undernutrition is considered an important contributor to stunting.

Pregnant and lactating women also experience significant micronutrient deficiencies. Just over half of pregnant women experience iron-deficiency anemia compared to 47.9% of non-pregnant women and 16% of adult men. About 52% of mothers experience zinc deficiency. Approximately 40% of women experience vitamin A deficiency, ranging from severe (10% of women) to marginal (51% of women) (Republic of Kenya 2011; MoPHS & SCUUK 2011). The percentage of underweight women (BMI < 18.5) ranges from 3% (Nairobi Province) to 25% (North Eastern Province). The nutritional status, education levels, and wealth of mothers are generally negatively correlated with rates of child wasting, stunting, and underweight. Those prevalence rates are usually also higher for those born within lower wealth quintiles and those living in rural/remote areas. Women who are undernourished and have multiple micronutrient deficiencies are also at higher risk of infection, pregnancy and labor complications, and recover more slowly from illnesses (KNBS and ICF Macro 2010), posing heightened morbidity and mortality risks for their children.

On the other hand, overweight and obesity are also on the rise, primarily in urban areas. About 25% of women and 18% of pre-school children are overweight, heightening risks of non-communicable diseases later in life (MoPHS & SCUUK 2011).

### *1.2 Availability of nutrition data*

Routine data on nutrition is collected through the District Health Information System 2 (DHIS), a web based integrated information management system that is facility based (launched on 13<sup>th</sup> February 2012, but operational since 2011). The DHIS collects 3 main categories of nutrition data on a routine basis. These include:

- Data on age, height, weight, exclusive breastfeeding, as well as vitamin A, deworming, and Zinc supplementation - collected by the Child Health and Nutrition Information System (CHANIS)<sup>6</sup>
- Micronutrient supplementation, which includes Vitamin A supplementation for children 6 to 59 months of age, vitamin A supplementation for lactating women within 4 weeks postpartum, iron and folate supplementation for pregnant women, and zinc supplementation for management of diarrhea
- Integrated Management of Acute Malnutrition (IMAM) program data

This data is collected at district level and reported up to national level. However, due to human, financial and time constraints, the required district recommendations in relation to tackling underweight and growth faltering are rarely followed up by the Ministry. Overall there have been challenges with proper reporting due to a lack of tools and insufficient training, although this is gradually being improved.

Nutrition outcome/impact indicators are monitored through the Kenya Household Income and Budget Survey (KHIBS), the National Kenya Demographic and Health Survey (KDHS) and the Multiple Indicator Cluster Survey (MICS)<sup>7</sup> (implemented by the Kenya National Bureau of Statistics with support from USAID and UNICEF respectively). The KDHS is carried out every five years and collects information on maternal and child mortality, health and nutritional status, breastfeeding practices, awareness and

---

<sup>6</sup> CHANIS was set up in the late 1970s to improve growth in young children and prevent malnutrition.

<sup>7</sup> The MICS were developed by UNICEF and collect information on the situation of women and children. MICS are very comparable to DHS. There have been four MICS since 1995.

behavior change regarding HIV/AIDS and use of family planning methods, fertility levels and preferences, marriage, sexual activity, as well as women's empowerment. The country is currently preparing for the 2013 KDHS.

Since 2000, UNICEF also coordinates small scale health and nutrition surveys, both for non-emergency and emergency interventions<sup>8</sup> (Smith 2006). A variety of NGOs contribute to these smaller scale surveys and use the Kenya Nutrition Sector standardized methodology and measurements. These studies are validated by the Nutrition Information Technical Working Group and are then uploaded to the Kenya nutrition website ([www.nutritionhealth.or.ke](http://www.nutritionhealth.or.ke)). The surveys are required to report on the minimum reporting indicators, which include Global Acute Malnutrition (<-2 Z score), Severe Acute Malnutrition (<-3 Z score), edema, Mid-Upper Arm Circumference (MUAC), age, wasting, stunting, vitamin A coverage, as well as questions relating to mortality, morbidity and food security. In addition, a household iodized salt survey is carried out annually in schools to determine levels of iodine consumption coverage.

In terms of data collection on food security risks, actors include the Kenya Food Security Steering Group (KFSSG), the Kenya Food Security Meeting (KFSM), which coordinates information mainly on the long and short rains and how these impact on food security; the Arid Lands Resource Management Program (ALRMP), focused on early warning, mainly in Kenya's arid and semi-arid regions; the USAID-funded Famine and Early Warning Systems Network (FEWSNET), an early warning and monitoring system on food security; the World Food Program's Vulnerability Assessment Mapping Program (VAM), aimed at improving disaster preparedness, mapping, and supporting WFP programs; and the Food Insecurity and Vulnerability Information Mapping System (FIVIMS), focused on collecting, analyzing and raising awareness on food security.

### *1.3 Determinants of undernutrition in Kenya*

Kenya's high rates of undernutrition are particularly due to poor maternal micronutrient status and consequent low birth weight (LBW), poor infant feeding practices, lack of access to adequate water and sanitation and safe hygiene practices, as well as malaria and HIV/AIDS (Shrimpton and Saldanha 2011; KNBS & ICF Macro 2010). Insufficient "awareness and knowledge on nutritionally adequate diets and limited resource allocation and capacity to support the implementation of comprehensive nutrition programs" (Republic of Kenya 2008, 11) are additional factors.

Immediate causes of malnutrition include inappropriate dietary intake - primarily among young children - and a high disease burden. Most Kenyans still rely on diets composed primarily of staple foods that are not sufficiently diverse in micronutrients, compromising growth and development. Furthermore, the disease burden is high for children, which further contributes to and is worsened by undernutrition. Improving the micronutrient status of mothers can improve infant birth weight and growth after birth, and contribute to the reduction of stunting at two years of age, providing children with improved physical and cognitive capabilities as well as stronger immune systems. While half of Kenyan mothers are deficient in at least one micronutrient and many mothers have multiple micronutrient deficiencies, low birth weight and maternal underweight currently stand at 11% and 12% respectively, not high enough to be considered significant public health concerns.

---

<sup>8</sup> Non-emergency interventions include micronutrient supplementation, integrated early childhood development, and infant and young child feeding. Emergency interventions include situation analysis and early warning for vulnerable populations.

Underlying causes of undernutrition include household food insecurity, inadequate caring and feeding practices, and unsafe water, sanitation and hygiene services. As mentioned, most of Kenya's households rely on diets that lack nutritional diversity, nearly a third of Kenyans are chronically food insecure and up to 4 million people require food assistance at any given time. This compromises many families' required daily caloric and nutritional intake. Recent food prices hikes further restrict food availability.

Furthermore, only about a third of Kenyan mothers exclusively breastfeed children up to six months old, although this number has increased from 11% in 2003, and one third of children are bottle fed, up from 12% in 2003 (UNICEF 2010). This correlates to levels of maternal education, as 50% of secondary school educated women conform to Infant and Young Child Feeding interventions but only 18% of those without an education conform.

Investment is often also lacking in terms of providing equitable and sustainable water, sanitation and hygiene (WASH) services.<sup>9</sup> Lack of adequate WASH services and hygiene practices means a heightened risk of contracting diarrhea, diminishing the body's ability to absorb micronutrients. Malaria and HIV/AIDS are also contributors to low birth weight and stunting, although infection rates are declining. Lastly, issues related to the intergenerational cycle of growth faltering are rarely explored (Shrimpton and Saldanha 2011).

## 2. Nutrition-relevant programs

### 2.1 Direct nutrition interventions

*The Lancet* published a five-part series on nutrition in 2008, drawing international attention to the impact of undernutrition on health, growth and development. The series reviewed a range of nutrition interventions that affect maternal and child undernutrition. The Scaling Up Nutrition (SUN) movement subsequently adopted 13 of these "High Impact Nutrition Interventions" (HINIs), 12 of which were adopted by Kenya's Ministry of Public Health and Sanitation (MoPHS), UNICEF and others and approved by Kenya's Nutrition Inter-ministerial Coordination Committee in 2010. These include:

1. Promotion of exclusive breastfeeding in the first six months of a child's life
2. Promotion of complementary feeding for infants after the age of six months
3. Promotion of improved hygiene practices such as hand washing with soap
4. Vitamin A supplementation
5. Zinc supplementation for diarrhea management
6. Deworming for children
7. Iron-folic acid supplementation for pregnant women
8. Iron fortification of staple foods
9. Salt iodization
10. Multiple Micronutrient Supplementation for u5s
11. Prevention or treatment of moderate acute undernutrition
12. Prevention or treatment of severe acute malnutrition (Division of Nutrition 2010; UNICEF 2011).

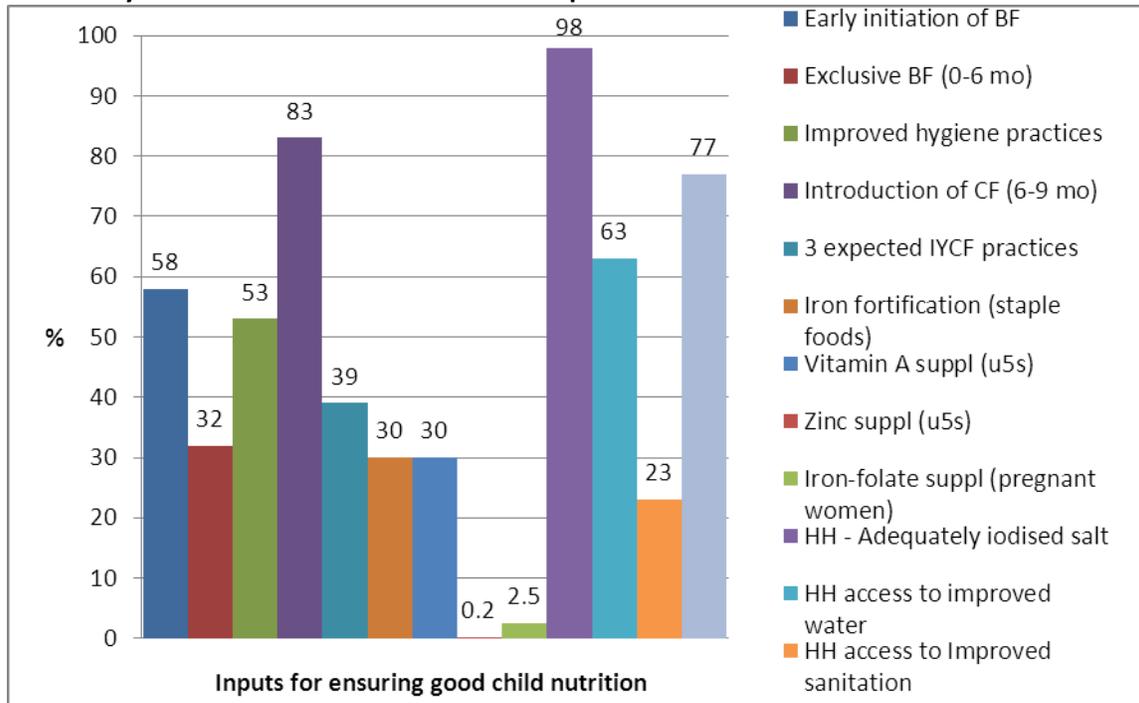
The Nutrition Division within the MoPHS is developing systems to scale up these HINIs further, together with UN agencies and NGOs, as well as integrating nutrition indicators into the DHIS (Shrimpton and

---

<sup>9</sup> According to the WHO/UNICEF Joint Monitoring Programme (JMP), only 30% of Kenyans have access to improved sanitation.

Saldanha 2011). Monitoring is mainly focused on the HINI indicators. Figure 2 demonstrates the current status of key inputs for ensuring good child nutrition. These are not a direct reflection of the HINIs but demonstrate progress on key micronutrient indicators, infant and young child feeding, and the status of water, sanitation and hygiene services and practices.

**Figure 2 - Kenya: Status of critical child nutrition inputs**



Source: Constructed by IFPRI. Data from KNBS and ICF Macro 2010.

## 2.2 Indirect nutrition interventions

Kenya is party to the Livingston Declarations of 2006, which commit governments to implement Social Protection Programs. Kenya’s Ministry of Gender, Children and Social Development subsequently formed a National Social Protection Steering Committee, which oversaw the drafting of a National Social Protection Policy that currently awaits the approval of cabinet. The mission of the policy is to support the vulnerable and poor and “build their productive capacity, thereby facilitating their movement out of poverty and reducing the vulnerability of falling into deeper poverty” (GoK 2012). The Ministry already coordinates the Cash Transfer Program for Orphans and Vulnerable Children, which reportedly has gained “positive results with an improvement in school attendance, retention, acquisition of ID cards and birth certificate registration for caregivers and OVCs” (GoK 2012), the Hunger Safety Net Program, and the Older Persons Cash Transfer Program, with supporting Information Education and Communication strategies. Nutrition is not systematically measured as part of these programs.

The Government also developed a Strategy for Revitalizing Agriculture (SRA) in 2004, and now has a new Agricultural Sector Development Strategy (2010-2020), which aims to “[ensure] food and nutritional security for all Kenyans” as well as ensure higher incomes and employment, especially in rural areas

(Republic of Kenya 2010, vii). The strategy focuses mostly on agriculture's contribution to economic growth and does not extensively discuss the role of nutrition, although it does briefly mention that improving food security and nutrition is one of the strategic issues that need to be addressed in order to increase growth of the agricultural sector. It also recognizes the contribution women make to agriculture, their inequitable access to and control over productive inputs and resources, and the importance for agricultural strategies to take this into account. The Government of Kenya (GoK) also plans to develop a gender policy for the agricultural sector "to ensure women's empowerment and mainstream the needs and concerns of women, men, girls and boys in all sectors so that they can participate and benefit equally from development initiatives" (Republic of Kenya 2010, 81).

Lastly, a Gender Policy was developed in 2000, which outlines the government's commitment to advancing the status of women. It recognizes poor maternal nutritional status and low birth weight and the fact that nutritional status of women and young children can be negatively affected by certain food allocation or breastfeeding practices. It also recognizes women's role in the agricultural sector and their role in ensuring household food security and nutrition, and recommends that "causes of inadequate nutritional-status of children, pregnant and lactating mothers [are addressed] and [...] awareness on negative implications to their health" is created (GoK 2000, 30).

### **3. Nutrition-relevant policies and institutional arrangements**

#### *3.1 Nutrition-relevant policies*

Kenya's first Food Policy was developed in 1981 and reviewed in 1994, with the objective of "supporting self-sufficiency in major foodstuffs while ensuring equitable distribution of food of good nutritional value to the population" (MoPHS & SCUK 2011, 18). The Nutritionists and Dieticians Act was subsequently passed in 2007, requiring all dieticians and nutritionists to be registered with the Kenya Nutritionists and Dieticians Institute (KNDI) in order to legally practice.<sup>10</sup> In 2008, the National Food and Nutrition Security Policy (NFSNP) and National Food Security and Nutrition Strategy (FSNS) were developed. The objectives of the NFSNP are to achieve good nutrition for all Kenyans, increase the quality and quantity of food that is affordable, accessible, and available at all times, and protect vulnerable populations using cost-effective and innovative safety nets linked to long-term development (Republic of Kenya 2011, vi). The policy was developed in line with already existing and related strategies such as Kenya Vision 2030<sup>11</sup>, Kenya's Economic Recovery Strategy (ERS) for Wealth and Employment Creation (2003-2007)<sup>12</sup>, Agriculture Sector Development Strategy ASDS (2010-2020), Public Health Act, Breast milk Substitutes Control Bill (2009), and the new Constitution (2010) which recognizes that every person has the right to food of sufficient quantity and quality (Republic of Kenya 2011; MoPHS & SCUK 2011).

The National Food and Nutrition Security Policy (NFNSP) is in line with several international agreements to which Kenya is party that aim to reduce hunger and malnutrition, such as the UN Convention of the

---

<sup>10</sup> As per the 2011 situational analysis carried out by the MoPHS and SCUK, there are "1290 registered nutritionists with varying levels of qualifications thus indicating that not all trained nutritionists are registered by Kenya Nutritionist and Dieticians Institute (KNDI). This makes it difficult to know the number of qualified nutritionists in the whole country" (MoPHS & SCUK 2011, 19).

<sup>11</sup> Kenya's Vision 2030 (2008-30) is an economic development plan that promotes agriculture, education, research and health. Stunting not included as an indicator (MOPHS & SCUK 2011).

<sup>12</sup> The ERS aims to decrease poverty by providing people with income earning opportunities (MoPHS & SCUK 2011).

Rights of the Child, the Convention of the Elimination of All Forms of Discrimination against Women, the Universal Declaration of Human Rights, the Comprehensive African Agriculture Development Program of the New Partnership for African Development (NEPAD), and the Millennium Development Goals.

A National Nutrition Plan of Action (2011-2017) is also under development and identifies 9 strategic objectives including: improving the nutritional status of children under five; improving the nutritional status of women of reproductive age; improving knowledge, attitudes and practices on optimal nutrition; strengthening nutrition surveillance, monitoring and evaluation systems; improving nutrition in schools and other institutions; strengthening coordination and partnerships; enhancing evidence-based decision making; reducing the prevalence of micronutrient deficiencies in the population, and improving the nutritional status of ASAL populations (Republic of Kenya 2011).

### *3.2 Nutrition-relevant institutional arrangements*

Currently, the mandate for nutrition in Kenya lies with both the Ministry of Medical Services (MOMS) and the Ministry of Public Health and Sanitation (MoPHS).<sup>13</sup> While the MOMS deals with curative issues, the MoPHS deals with preventative measures, although confusion exists over responsibility for and reporting of interventions that are neither preventive nor curative, as well as coordination with other ministries (MoPHS & SCUK 2011). The MoPHS' Nutrition Division falls under its Family Health Services Department, and coordination and technical capacity within the MoPHS on nutrition are considered strong (IFPRI 2012; Shrimpton and Saldanha 2011). A Nutrition Intersectoral Coordinating Committee (NICC) was established within the Ministry to ensure regular communication and coordination on nutrition activities and strategies. Furthermore, the Nutrition Technical Forum – chaired by MoPHS and UNICEF - sits within MoPHS and develops technical standards and targets. It is considered an important body for shaping program decisions, advocacy, and standardizing tools (IFPRI 2012). In addition, there are a number of working groups on nutrition including the Micronutrient Deficiency Control Council and the National Infant and Young Child Feeding Steering Group (Shrimpton and Saldanha 2011; MoPHS & SCUK 2011). The 2011 National Food and Nutrition Security Policy (NFNSP) has outlined plans to reorganize the four main national coordinating institutions on nutrition (Kenya Food Security Meeting - KFSM, Inter-ministerial Coordinating Committee on Food and Nutrition - ICCFN, Agricultural Sector Coordination Unit – ASCU, and the National Food Safety Coordinating Committee - NFSCC) to form a national Food and Nutrition Security Secretariat (NFNSP 2011).

Of the NGOs that focus on nutrition, some engage with the national government<sup>14</sup> and others implement programs at the local level but do not engage as much on national policy<sup>15</sup>. Others like the European Union (EU), KEMRI (the national public health research body), the World Bank, various UN bodies, the Food and Agricultural Organization (FAO), the International Fund for Agricultural Development (IFAD), the African Union, and several aid agencies are involved in nutrition in different ways at the policy level, as well as ministries such as those of Education, Gender, Livestock, Health, Agriculture, and Northern Kenya. Relevant private sector actors include Unilever, Nestle, salt manufacturers, and manufacturers of therapeutic and fortified foods (IFPRI 2012).

---

<sup>13</sup> There are a number of relevant strategies in the health sector that are relevant for nutrition but that are beyond the scope of this paper to discuss. MoPHS & SCUK (2011) discuss these in detail.

<sup>14</sup> Such as Concern, Save the Children, CARE, World Vision, GAIN, Freedom from Hunger, Catholic Relief Services (CRS), PATH, Food for the Hungry Kenya (FHK), Millennium Development Villages, and the Red Cross.

<sup>15</sup> Such as Médecine Sans Frontières (MSF), International Rescue Committee (IRC), and various faith-based organizations.

In terms of research and capacity building, the African Medical and Research Foundation (AMREF) is involved in operational research and program implementation. The University of Nairobi chairs the Kenyan Inter-University Nutrition Taskforce, which consist of 10 universities engaged in nutrition-relevant research and capacity building, with strong links to UNICEF and to other African countries through ITANA (IT-Advancement in Nutrition in Africa), HENNA (the ACP-EU Higher Education Network for Applied Human Nutrition between Eastern Africa and Europe), the African Graduate Students Network (AGSNet) and the UNU Programme on Food and Nutrition for Human and Social Development (IFPRI 2010).

#### **4. Nutrition-relevant capacities**

##### *Research*

Although research is carried out on nutrition in Kenya, uptake of findings within the policy environment is limited and sharing of information occurs on an ad hoc basis (IFPRI 2012). Currently, there is some improvement in the use of nutrition information for decision making purposes, especially in response to emergency nutrition situations. Nutrition studies conducted in the Arid and Semi-Arid Lands (ASAL) regions inform the early warning systems for timely response and these studies are coordinated by the Division of Nutrition. Other studies such as the KDHS and the Census are used to inform policy in Kenya.

##### *Implementation*

The numerous actors involved in collecting data on nutrition leads to difficulties in finding and comparing information on nutrition because of variations in collection, monitoring and archiving approaches. Substantial weaknesses still exist within the DHIS system in relation to monitoring and reporting nutrition-relevant data, although the MoPHS has started to address this by incorporating HINIs into the DHIS system. Monitoring indicators linked to stunting will need to be improved, specifically with regards to exclusive breastfeeding of under 6 month olds, complementary feeding of 6-9 month olds, pregnant women who receive 90+ days of iron, % of pregnant women with Hb<11, and the proportion of infants born with low birth weight (Shrimpton and Saldanha 2011). There is also insufficient integration of data on nutrition into other data collection systems such as those on food security, health, WASH, and poverty.

Furthermore, while significant capacity has been built with regards to delivering nutrition services in emergency settings due to integration of emergency nutrition interventions into health services, it also means that nutrition programs tend to be short term and controlled by donors. Capacity challenges exist in terms of scaling up interventions beyond emergency contexts to long-term “development” nutrition programs, focusing programs more on the first 1,000 days, as well as maternal undernutrition (Save the Children 2011).

##### *Policy Advocacy*

While the mandate for nutrition lies with the Ministry of Public Health and Sanitation (MoPHS) and coordination, decision-making, and technical know-how on nutrition is strong within the Ministry, the limited profile of the Nutrition Division means that at a national level it is not visible and powerful enough (IFPRI 2012). Similarly, Shrimpton and Saldanha argue that the Division “is disproportionately low in the central MoPHS hierarchy considering that half of the top ten risk factors for premature

mortality and disease burden among under-five children in Kenya are nutrition related conditions” (Shrimpton and Saldanha 2011, 6). Furthermore, although coordination on nutrition within the MoPHS is effective, challenges exist with regards to coordination on nutrition between ministries, and in relation to effectively coordinating nutrition efforts with food security or emergency relief activities (Shrimpton and Saldanha 2011), although the structure proposed by the 2011 National Food and Nutrition Security Policy seeks to improve this.

## **5. Future plans, opportunities, challenges**

### *Plans*

Kenya’s National Food and Nutrition Security Policy (NFNSP) has been completed and is currently scheduled for discussion in parliament. The National Food Security and Nutrition Strategy (2008) forms the implementation framework for the policy and is under review to ensure it is in line with Kenya’s new Constitution. The NFNSP presents a real opportunity for Kenya to improve nutrition, especially among u5s and mothers. The Nutrition Division is in the process of developing a maternal, infant and young child feeding policy and an implementation strategy to address maternal, infant and young child issues. Furthermore, the Kenya National Nutrition Plan of Action (2011-2017) has been drafted and is under review. Its purpose is to operationalize the FSNS and provides a “roadmap for coordinated implementation of nutrition interventions by the government and nutrition stakeholders across development sectors for maximum impact”. It outlines 9 strategic objectives (mentioned previously) with corresponding activities and expected outcomes, a monitoring and evaluation approach, time frames, and estimated costs (Republic of Kenya 2011, 12).

### *Challenges*

Coordination and engagement between ministries on nutrition needs to be improved and would present potential opportunities for moving nutrition higher up the political agenda, improving nutrition-sensitivity of indirect interventions, enhance prospects for data sharing, avoid duplication and synchronize nutrition messages (MoPHS & SCUK 2011). Although the inter-ministerial committee has been set up, it is a new body and there is uncertainty about its usefulness (IFPRI 2012). Furthermore, there are challenges to consolidate data collected through outreach supported by NGOs and for example supplementation through schools.

Moreover, the amount of financial resources committed to nutrition remains limited. While Kenya allocated 11% of its national budget to agriculture in 2011/12, it only allocated 5.5% of its budget to health, a percentage that lies far below the 15% committed to the in the Abuja Declaration (Save the Children 2012). There are also challenges to implement certain HINIs due to the time it takes for behaviors to change, gaps in supply chain management, insufficient number of nutrition professionals, limited availability of multiple micronutrient supplements (MMS) and MMS specific guidelines, lack of health facilities’ capacity to manage acute malnutrition cases, and the incomplete integration of the MoPHS and MOMs system (UNICEF 2011). Furthermore, advocacy and communication strategies on nutrition are relatively weak, and there is insufficient focus on operational research on nutrition, meaning that the malnutrition problem is not as well understood as it could be (MoPHS & SCUK 2011). Lastly, there exists substantial variation in service provision cadres, as doctors, nurses, clinical officers and nutritionists are all recruited to offer nutrition services.

### *Opportunities*

Despite these challenges, significant opportunities also exist. Although the MoPHS and UNICEF are the two actors with the highest levels of influence and support on nutrition, a stakeholder mapping exercise facilitated by IFPRI (Nov 2011) concluded that even though the Ministry of Agriculture is somewhat supportive of and influential in nutrition policy, it could play a key future role in addressing nutrition challenges in the future, through its extension officers. In addition, Kenyan universities can further improve the country's nutrition research capacity. The Kenyan Nutritionists and Dieticians Institute (KNDI) is a new professional association that eventually will set standards for training and examinations for nutritionists (IFPRI 2012). Strengthening policy advocacy and the profile of nutrition on the political agenda will also present opportunities to engage with other ministries important for reducing undernutrition. The 2011 NFNSP proposes a new structure that should streamline nutrition interventions, monitoring and evaluation and data sharing. Ultimately, under the 2010 Constitution every Kenyan has the right to food of sufficient quality and quantity and the Kenyan government is starting to make concrete efforts to realize this right.

### **References**

- Bhutta A. Zulfiqar et al, "What works? Interventions for maternal and child undernutrition and survival", *The Lancet* 371 (2008): 417-40.
- Black et al, "Where and why are 10 million children dying every year?" *The Lancet* 361 (2003): 2226-34.
- Black et al, "Global, regional, and national causes of child mortality in 2008: a systematic analysis," *The Lancet* 375 (2010): 1969-87.
- Central Bureau of Statistics (CBS) [Kenya], Ministry of Health (MOH) [Kenya], and ORC Macro. 2004. *Kenya Demographic and Health Survey 2003*. Calverton, Maryland: CBS, MOH, and ORC Macro.
- Central Bureau of Statistics (CBS) (Kenya), UK Department for International Development (DFID), United States Agency for International Development (USAID), European Union (EU), Danish International Development Agency (DANIDA), World Bank (WB), United Nations Development Programme (UNDP).
- Division of Nutrition, MoPHS. *Kenya Nutrition Bulletin* Vol 4/10, July – September 2010  
<http://mdg.ei.columbia.edu/east/sitefiles/file/Kenya%20Nutrition%20Bulletin%203rd%20Quarter%202010.pdf>
- Division of Nutrition, MoPHS. *Kenya Nutrition Bulletin* Vol 3/11, July – October 2011.

## Kenya situation analysis for Transform Nutrition

Food and Agricultural Organization (FAO). "Nutrition Country Profiles – Republic of Kenya." Accessed March 14, 2012. [http://www.fao.org/ag/agn/nutrition/profiles\\_en.stm](http://www.fao.org/ag/agn/nutrition/profiles_en.stm)

Food and Agricultural Organization (FAO). "Kenya > Economic situation." Accessed March 14, 2012. <http://www.fao.org/countryprofiles/index.asp?subj=3&lang=EN&iso3=ken>

Food and Agricultural Organization (FAO). "Countries – Kenya." Accessed March 14, 2012. <http://www.fao.org/countries/55528/en/ken/>

Government of Kenya (GoK). Ministry of Gender, Children and Social Development, 2012. *Social Protection Policy*.

Government of Kenya. *Kenya National Nutritional Action Plan (2011-2017)*. Latest draft, June 2011.

IFPRI. *The Transform Nutrition Research Programme Consortium - Technical Application*. Final draft, November 2010.

IFPRI. *Transform Nutrition Kenya Stakeholder Mapping Report*. Latest draft, February 22 2012.

Mwaniki, D.L., Omwega, A.M., Muniu, E.M., Mutunga, J.N., Akelola, R., Shako, B.R., Gotink, M.H. and Pertet, A.M. (2002). Anaemia and Status of Iron, Vitamin A and Zinc in Kenya. *The 1999 National Survey*. Ministry of Health, Nairobi.

National Council for Population and Development (NCPD), Central Bureau of Statistics (CBS) (Office of the Vice President and Ministry of Planning and National Development [Kenya]), and Macro International Inc. (MI). 1994. *Kenya Demographic and Health Survey 1993*. Calverton, Maryland: NCPD, CBS, and MI.

National Council for Population and Development (NCPD), Central Bureau of Statistics (CBS) (Office of the Vice President and Ministry of Planning and National Development) [Kenya], and Macro International Inc. (MI). 1999. *Kenya Demographic and Health Survey 1998*. Calverton, Maryland: NDPD, CBS, and MI.

*Kenya Integrated Household Budget Survey 2005-2006*. Nairobi, Kenya: Central Bureau of Statistics (CBS) (Kenya).

Kenya National Bureau of Statistics (KNBS) and ICF Macro. 2010. *Kenya Demographic and Health Survey 2008-09*. Calverton, Maryland: KNBS and ICF Macro.

Ministry of Public Health Services [Kenya] & Save the Children UK. *Report on Nutrition Situation in Kenya*. Latest draft, May 2011.

Republic of Kenya. 2000. *National Gender and Development Policy*.

Republic of Kenya. 2008. *Food Security and Nutrition Strategy (FSNS)*. [http://www.fao.org/righttofood/inaction/countrylist/Kenya/Kenya\\_FSNS\\_finaldraft.pdf](http://www.fao.org/righttofood/inaction/countrylist/Kenya/Kenya_FSNS_finaldraft.pdf)

## Kenya situation analysis for Transform Nutrition

Republic of Kenya. 2010. *Agricultural Sector Development Strategy 2010-2010*  
[http://www.kilimo.go.ke/kilimo\\_docs/pdf/ASDS\\_Final.pdf](http://www.kilimo.go.ke/kilimo_docs/pdf/ASDS_Final.pdf)

Republic of Kenya. *National Food and Nutrition Security Policy*. Latest draft, June 2011.

Save the Children. 2012. *Kenya - Tackling Child Malnutrition*. [http://everyone.org/wp-content/uploads/CB\\_KENYA\\_Lores1.pdf](http://everyone.org/wp-content/uploads/CB_KENYA_Lores1.pdf)

Shrimpton, R. and L. Saldanha. "The Kenya Nutrition Programme Review (KNPR)." Public Nutrition Solutions Limited (PNSL). Latest version, March 2011.

Smith, E. "Nutrition Surveillance Systems in Kenya. A Review and Recommendation Report, supported by UNICEF ESAR." Latest draft, 2006.

The Lancet. "Maternal and Child Undernutrition." Last modified January 16, 2012.  
<http://www.thelancet.com/series/maternal-and-child-undernutrition>

UNICEF. "Kenya – Statistics." Accessed March 13, 2012.  
[http://www.unicef.org/infobycountry/kenya\\_statistics.html#88](http://www.unicef.org/infobycountry/kenya_statistics.html#88)

UNICEF. 2011. *Nutrition strategies and programmes in Kenya*.

UNICEF et al. "Levels & Trends in Child Mortality. Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation", 2010. [http://www.childinfo.org/files/Child\\_Mortality\\_Report\\_2010.pdf](http://www.childinfo.org/files/Child_Mortality_Report_2010.pdf)

USAID. "Famine Early Warning System (FEWS)." Accessed March 13, 2012.  
<http://www.fews.net/pages/country.aspx?gb=ke>

World Health Organization (WHO). "Kenya: Health statistics profile 2010." Accessed March 14, 2012.  
<http://www.afro.who.int/en/kenya/country-health-profile.html>

World Health Organization (WHO). "Nutrition Landscape Information System (NLIS) - Kenya Country Profile." Accessed March 13, 2012.  
<http://apps.who.int/nutrition/landscape/report.aspx?iso=KEN&rid=161&template=nutrition&goButton=Go>

World Health Organization (WHO). "Nutrition for Health and Development." Accessed March 14, 2012.  
[www.who.int/nutrition](http://www.who.int/nutrition)

WHO/UNICEF Joint Monitoring Program (JMP) for Water Supply and Sanitation. "Data Estimates - Kenya." Accessed March 14, 2012. <http://www.wssinfo.org/data-estimates/table/>