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# Policy Brief: Kakamega County

## Demonstrating the Value of Multi-Sectoral Nutrition Investments in Kakamega County

### Introduction

Since 2014, Kenya has made substantial efforts in addressing undernutrition. Nationwide, the stunting rates for children under the age of five improved from 26% to 18%. The decline was attributed to national campaigns to enhance good nutrition at every stage of life. The program is tagged *Malezi bora* in Swahili, and includes deworming, immunization, vitamin A supplementation to boost immunity, enhancing partner collaboration to leverage resources for nutrition interventions, and the implementation of nutrition action plans and policies.

The Kakamega County stunting level stands at 11.5%, wasting at 1.5%, and underweight at 6.4% (KDHS, 2022).<sup>1</sup> However, the county government demonstrates political commitment for preventing malnutrition by investing in the scale-up of selected high-impact MSN interventions. Kakamega County leadership and MSN stakeholders with the support of USAID Advancing Nutrition developed the County MSN approach, which sets priority targets for the scale-up of MSN interventions over the next five years. The MSN approach identifies priority MSN actions for each sector. The county developed an MSN scorecard that defines targets for each intervention and provides a monitoring and accountability framework as well as costing of interventions, which the county plans to adopt and implement in subsequent planning and budgeting cycles.

### Methodology

The County Nutrition Investment Cases advocate for increased investment in nutrition interventions. Each Investment Case consists of three modules: (i) cost of hunger—the economic cost of malnutrition, through its burden on the health, education, and productivity sectors in the county; (ii) summary of the county MSN plan; and (iii) scale-up analysis—health impact and economic analysis for the proposed nutrition interventions.

### Key Messages

- Increase funding of multi-sectoral nutrition (MSN) interventions to achieve nutrition.
- Strengthen partnership and coordination frameworks for MSN.
- Support the generation of critical nutrition evidence to guide planning and budgeting for nutrition in the county.
- Invest in nutrition for guaranteed value for money and an essential path to reaching national and county aspirations.
- Strengthen and integrate MSN across all key sectors and program.

<sup>1</sup> Government of Kenya, Kenya National Bureau of Statistics – The Kenya Demographic Health Survey Report, 2022.

## The Cost of Malnutrition

### Health Impacts

The Cost of Hunger in Africa (COHA) study in Kenya<sup>2</sup> and the National Nutrition Action Plan<sup>3</sup> highlighted the high levels of child undernutrition and its lasting health and human capital consequences for the country. USAID Advancing Nutrition applied the COHA model during the development of this county Investment Case to estimate additional cases of morbidity, mortality, school repetitions, school dropouts, and reduced physical capacity that can be directly associated with undernutrition in children under the age of 5 for the baseline year 2022. Estimates are that 11.5% of children under the age of 5 (KDHS, 2022), which is



Multi-sectoral nutrition benefits Kakamega County residents. Photo Credit: Fridah Bwari/USAID Advancing Nutrition

equivalent to 28,652 children in Kakamega County, were stunted. Furthermore, malnutrition causes an estimated 3,737 cases of low birthweight and 15,945 children are underweight annually. Overall, undernutrition in Kakamega County costs the health system approximately KSh 99 million per year (US\$ 0.95 million). The COHA model was customized with the new KDHS data 2022 to generate the results reported in this section.

### Human Capital and Economic Impacts

In addition to the impact of stunting on the health of individuals, it also affects cognitive development in children, and in turn, reduces a child's educational performance, resulting in increased grade repetition and dropouts. Estimates show 777 cases of grade repetition in Kakamega County annually due to stunting, which costs the education system and families an estimated KSh 9.56 million (US\$ 0.92 million) annually.<sup>4</sup>

In addition, stunting affects future economic productivity due to increased mortality (i.e., loss of workforce) and lowered labor productivity across the key sectors in the county such as manufacturing; infrastructure; water, sanitation, and hygiene (WASH); forestry; and agriculture. From the analysis, estimates show that the annual losses in economic productivity due to malnutrition in Kakamega County are KSh 215 million (US\$ 2.1 million). Broken down, the estimates include KSh 29.5 million (US\$ 0.28 million) for agriculture sector costs, KSh 1.8 million (US\$ 0.17 million) for WASH sector costs, and KSh 1.4 million (US\$ 0.13 million) for social protection costs. Overall, the annual cost of malnutrition in the county is equal to KSh 322.8 million (US\$ 3.1 million), which represents 0.19% of its gross county product.

<sup>2</sup> Government of Kenya 2019, Cost of Hunger in Africa (COHA) study in Kenya.

<sup>3</sup> Government of Kenya, 2018, Ministry of Health, National Nutrition Action Plan (2017-2022).

<sup>4</sup> County COHA County Estimates, 2022.

## Kakamega County MSN

The total public investment required to deliver the Kakamega MSN approach is based on selected interventions across the five government sectors to drive the nutrition agenda. The total investment required to deliver the Kakamega nutrition-sensitive and nutrition-specific interventions will cost an estimated KSh 2.15 billion (US\$ 20.62 million) between 2023 and 2027. The MSN investments will be allocated by sector based on selected interventions with 45% of the resources allocated to WASH interventions, 25% to education interventions, and 23% to nutrition-specific interventions. The average annual cost of the MSN is KSh 430 million (US\$ 4.1 million) per year.

### Cost of High-Impact MSN Interventions

Within the package of evidence-based high-impact MSN interventions included in the Kakamega MSN, the costs are: Total costs for nutrition-specific are KSh 0.5 billion (US\$ 4.72 million), enabling environment KSh 0.01 billion (US\$ 0.08 million), nutrition-sensitive agriculture KSh 0.14 billion (US\$ 1.33 million), nutrition-sensitive education KSh 0.53 billion (US\$ 5.09 million), nutrition-sensitive social protection KSh 0.01 billion (US\$ 0.08 million), nutrition-sensitive WASH KSh 0.96 billion (US\$ 9.22 million), and other high-impact (fortification) KSh 0.01 billion (US\$ 0.08 million).

## The Health and Economic Benefits of Investing in Nutrition

### Intervention Reach

The preventative high-impact nutrition interventions captured in the MSN will reach an average of 531,898 newborns, children, adolescent girls, and pregnant women, annually. The interventions with the highest reach over 5 years will move nutrition indicators relating to severe acute malnutrition (SAM), vitamin A supplementation (VAS), infant and young child feeding (IYCF), and iron-folic acid supplementation (IFAS) in pregnancy.

### Health Impacts

USAID Advancing Nutrition projects that nutrition interventions within the Kakamega MSN will have a significant impact on the health of newborns, children, adolescent girls, and pregnant women. The anticipated health impact is 4,536 additional live, non-stunted children and 2,411 cases of anemia averted in pregnant women, and 1,923 cases of wasting averted. Overall, the projected results are 579 child deaths averted. The sum of these health impacts results in a potential 47,121 disability-adjusted life years (DALYs)<sup>5</sup> averted over the 5-year period.

The estimated cost per case of stunting in children is KSh 45,518 (US\$ 437.60). Additionally, the estimated cost per case of anemia averted in pregnancy is KSh 14,143.89 (US\$ 135.79) through IFAS in pregnancy.

By translating this level of health impact into DALYs averted, we estimate that investing in the high-impact nutrition interventions will cost KSh 45,581 (US\$ 437.61) per DALY averted. Using a Value of Statistical Life-Year for Kenya,<sup>6</sup> we estimate that the Kakamega MSN will yield a benefit-cost ratio of 8:1 based on 5-year investments. This demonstrates that every shilling invested in MSN in Kakamega can generate up to eight times more in terms of economic returns for the county.

## Recommendations

### Increase Funding of MSN Interventions to Achieve Nutrition Outcomes

Considering the positive and strong return on investment associated with investments in MSN, Kakamega County should work toward fully funding MSN interventions to achieve desired nutritional

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<sup>5</sup> A DALY averted can be thought as one lost year of “healthy” life.

<sup>6</sup> Vicusi and Masterman, 2017.

outcomes. The economic beneficial returns of investing in MSN (as demonstrated by the estimated benefits) as well as the short-term, indirect, and broad benefits of MSN provide a strong justification for funding MSN in Kakamega. The nutrition stakeholders (including the nutrition champions) in Kakamega County are encouraged to promote continued advocacy and meaningful communication with key persons in leadership positions previously not familiar with nutrition issues to rally them to support nutrition initiatives. Sustained funding commitment will be required to address the complex and long-term challenges in the actual implementation of scale-up plans.

### **Strengthen Partnership and Coordination Frameworks for MSN**

Evidence gathered during the development of this investment case points toward significant gaps in the capacity of county governments to coordinate stakeholders working on MSN. This resulted in multiple and often redundant activities by different stakeholders within the same sub-counties. Therefore, county governments need to empower MSN managers across sectors to uphold their roles and responsibilities in coordinating stakeholders working in MSN within the county. In many instances, stakeholders fund and implement activities with no regard to MSN work plans in the county governments. MSN managers at specific sectors admit to inability to influence the work of stakeholders to put substantial funds toward MSN activities. A greater focus on the linkage and interaction between nutrition-sensitive and nutrition-specific agendas to reduce stunting is required.

### **Support the Generation and Use of Critical Nutrition Data to Guide Planning and Budgeting for Nutrition in the County**

The MSN defines a common results measurement and accountability framework for county actions as captured by the MSN scorecard. Nutrition data (specific and sensitive) need to be routinely collected and collated from various sectors to inform planning and budgeting and provide clarity on interventions' equity and efficiency. To improve data management and its use for decision-making, Kakamega County should facilitate regular nutrition data/information review during coordination meetings and generation/dissemination of knowledge products. This should include data that provide a clear understanding of the nutrition financing landscape in the county.

### **Invest in MSN for Guaranteed Value for Money and an Essential Path to Reaching National and County Aspirations**

To accelerate and scale up efforts toward the elimination of malnutrition as a public health problem, the county government must make adequate budget allocations to nutrition-specific and nutrition-sensitive interventions. The resources needed to implement prioritized interventions as reflected in the Kakamega County MSN Action Plan require consistent allocation by the government over the next 5 years. Prioritization of investments in nutrition-sensitive interventions across the main sectors of agriculture, WASH, education, health, and social protection are critical to showing the county's direct investment in MSN programming. Therefore, there is a strong case for a call to harness both domestic and external resources and to direct them to high-impact MSN interventions.

### **Strengthen and Integrate MSN Across All Key Sectors and Programs**

Increased county leadership involvement in MSN meetings to ensure that MSN programs and interventions (sensitive and specific) strategically integrate or embed across sectors is essential. Integration would also mean that the MSN technical working group provides stronger and clearer guidelines on the MSN strategy, framework, and implementation. This will also shed light on how to optimize MSN investments for cost effectiveness, while at the same time delivering resounding results on common nutrition indicators as agreed upon in the scorecard. One way to achieve this is to build a strong horizontal MSN platform in the county which existing sector programs can plug in their MSN-related activities under the technical advice of nutrition experts. This would be a more cost-effective approach to deliver MSN services than building a disjointed effort across the sectors.

## 5 Year Resource Requirements (KSh)

### High-Impact Multi-Sectoral Intervention

Health	Year 1	Year 2	Year 3	Year 4	Year 5	Total cost
Vitamin A supplementation	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	100,000,000
Infant and young child feeding	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	75,000,000
Integrated management of acute malnutrition	44,000,000	44,000,000	44,000,000	44,000,000	44,000,000	220,000,000
Iron folic acid supplement	16,000,000	16,000,000	16,000,000	16,000,000	16,000,000	80,000,000
Zinc/oral rehydration solution	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	20,000,000
Fortification	1,300,000	1,443,000	1,601,730	1,777,920	1,973,492	8,096,142
<b>Sub Total - Health</b>	<b>100,300,000</b>	<b>100,443,000</b>	<b>100,601,730</b>	<b>100,777,920</b>	<b>100,973,492</b>	<b>503,096,142</b>
Agriculture, Livestock, Fisheries, and Co-Operatives	Year 1	Year 2	Year 3	Year 4	Year 5	Total Cost
Kitchen gardening-households	10,860,000	10,860,000	10,460,000	10,460,000	10,460,000	53,100,000
Kitchen gardening-schools	4,740,000	6,404,400	8,668,528	10,756,351	13,094,714	43,663,993
Biofortified food bulking and upscaling-OFSP	150,000	150,000	150,000	150,000	150,000	750,000
Biofortified food bulking and upscaling-AIVs	160,000	160,000	160,000	160,000	160,000	800,000
Biofortified food bulking and upscaling-iron-rich beans	150,000	150,000	150,000	150,000	150,000	750,000
Small stock rearing	60,000	60,000	60,000	60,000	60,000	300,000

Aquaculture production	450,000	450,000	450,000	450,000	450,000	<b>2,250,000</b>
Trainings and campaigns-food Production, value add, and utilization (livestock)	550,000	550,000	550,000	550,000	550,000	<b>2,750,000</b>
Trainings and campaigns-food production, value add, and utilization (maize and other food security crops)	750,000	750,000	750,000	750,000	750,000	<b>3,750,000</b>
MSN meetings and strategy development	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	<b>30,000,000</b>
Enabling environment	1,860,000	1,860,000	1,460,000	1,460,000	1,460,000	<b>8,100,000</b>
<b>Sub Total - Agriculture, Livestock, Fisheries, and Co-Operatives</b>	<b>25,730,000</b>	<b>27,394,400</b>	<b>28,858,528</b>	<b>30,946,351</b>	<b>33,284,714</b>	<b>146,213,993</b>
<b>Education</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Total Cost</b>
Promotion of hygiene and sanitation	10,000,000	15,000,000	15,000,000	15,000,000	15,000,000	<b>70,000,000</b>
Provision of safe water	4,000,000	6,000,000	6,000,000	6,000,000	6,000,000	<b>28,000,000</b>
Coordinate feeding program	74,820,000	74,820,000	74,820,000	74,820,000	74,820,000	<b>374,100,000</b>
Coordinate child health promotion	120,000	120,000	120,000	120,000	120,000	<b>600,000</b>
Coordinate child health promotion	120,000	120,000	120,000	120,000	120,000	<b>600,000</b>
Participate in MSN meetings	720,000	720,000	720,000	720,000	720,000	<b>3,600,000</b>
Establish school kitchen gardens	10,750,000	10,750,000	10,750,000	10,750,000	10,750,000	<b>53,750,000</b>



<b>Sub Total - Education</b>	<b>100,530,000</b>	<b>107,530,000</b>	<b>107,530,000</b>	<b>107,530,000</b>	<b>107,530,000</b>	<b>530,650,000</b>
<b>Social Protection</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Total Cost</b>
Participate in the creation of kitchen garden to shelter beneficiaries	480,000	480,000	480,000	480,000	480,000	<b>2,400,000</b>
Awareness on health and nutrition for people living with disability	200,000	200,000	200,000	200,000	200,000	<b>1,000,000</b>
Coordinate provision and distribution of food rations to vulnerable populations	200,000		200,000		200,000	<b>600,000</b>
Participate in social and behavior change regarding nutrition in vulnerable households	300,000	300,000	300,000	300,000	300,000	<b>1,500,000</b>
Participate in child nutrition outreach in the community	200,000	200,000	200,000	200,000	200,000	<b>1,000,000</b>
Participate in caregivers training on nutrition	300,000	300,000	300,000	300,000	300,000	<b>1,500,000</b>
<b>Sub Total - Social Protection</b>	<b>1,680,000</b>	<b>1,480,000</b>	<b>1,680,000</b>	<b>1,480,000</b>	<b>1,680,000</b>	<b>8,000,000</b>
<b>WASH</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Total Cost</b>
Last mile connectivity	90,000,000	90,000,000	90,000,000	90,000,000	90,000,000	<b>450,000,000</b>
Pipeline extension and rehabilitation of existing pipeline	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	<b>25,000,000</b>

Solarization of water projects	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	<b>50,000,000</b>
Supply and installation of water meters	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	<b>100,000,000</b>
Drilling and equipping boreholes	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000	<b>200,000,000</b>
Protection of springs	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	<b>50,000,000</b>
Training of community water projects management committee	2,000,000	3,000,000	4,000,000	5,000,000	6,000,000	<b>20,000,000</b>
Planting of fruit trees in public institutions county wide	3,000,000	4,000,000	5,000,000	6,000,000	7,000,000	<b>25,000,000</b>
Chlorination and random water sampling (water treatment)	6,000,000	7,000,000	8,000,000	9,000,000	10,000,000	<b>40,000,000</b>
<b>Sub Total - WASH</b>	<b>186,000,000</b>	<b>189,000,000</b>	<b>192,000,000</b>	<b>195,000,000</b>	<b>198,000,000</b>	<b>960,000,000</b>
<b>Grand Total</b>	<b>414,240,000</b>	<b>425,847,400</b>	<b>430,670,258</b>	<b>435,734,272</b>	<b>441,468,205</b>	<b>2,147,960,135</b>





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