REPUBLIC OF KENYA

GOVERNMENT OF
MAKUENI COUNTY

DEPARTMENT OF HEALTH SERVICES

COUNTY NUTRITION ACTION PLAN (CNAP) 2018/19-2022/23

COUNTY NUTRITION ACTION PLAN (CNAP) 2018/19-2022/23

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYNMS

ANC	Antenatal Care
CIDP	County Integrated Development Plans
BFCI	Baby Friendly Community Initiative
BMS	Breast Milk Substitute
BOM	Board of Management
CDOH	County Department of Health
CHV	Community Health Volunteers
CNAP	County Nutrition Action Plan
CNTF	County Nutrition Technical Forum
CRAF	Common Results and Accountability Framework
CSG	County Steering Group
DHIS	District Health Information Software
DRNCDs	Diet Related Non-Communicable Diseases
EBF	Exclusive Breastfeeding
FBO	Faith Based Organization
GBD	Global Burden of Disease
GOK	Government of Kenya
IFAS	Iron Folic Acid Supplementation
IHRIS	Integrated Human Resource Information System
IMAM	Integrated Management of Acute Malnutrition
KCDMS	Kenya Crops and Dairy Market Systems
KDHS	Kenya Demographic Health Survey
KHIS	Kenya Health Information System
KNBS	Kenya National Bureau of Statistics
MAD	Minimum Acceptable Diets
MEAL	Monitoring Evaluation Accountability and Learning
MOH	Ministry of Health
NCDs	Non-Communicable Diseases
NGO	Non-Governmental Organizations
OJT	On Job Training
PLW	Pregnant and Lactating Women
SDGs	Sustainable Development Goals
SMART	Standardized Monitoring Assessment for Relief and Transition
SOP	Standard Operating Procedure
ToC	Theory of Change
UNICEF	United Nations Children's Fund
UHC	Universal Health Care
URTI	Upper Respiratory Tract Infection
VAS	Vitamin A Supplementation
WIFs	Weekly Iron Folate Supplementation

FOREWORD

The Constitution of Kenya article 43 (1) (a) and (c) states that every person has the right to the highest attainable standard of health, which includes the right to healthcare services including reproductive health care as well as freedom from hunger and to have adequate food of acceptable quality.

The Constitution of Kenya article 43 (1) (a) and (c) states that every person has the right to the highest attainable standard of health, which includes the right to healthcare services including reproductive health care as well as freedom from hunger and to have adequate food of acceptable quality.

The government is committed to creating an enabling environment for citizens to realize these rights as evidenced in the Vision 2030, Kenya Health Policy (2014–2030) and the National Food and Nutrition Security Policy, 2012.

The Makueni nutrition vision promotes positive nutrition practices through evidence-based programming, policies and research to enable access to nutritious and safe food, encouraging wise use of resources, and fosters food secure communitieswhere men, women across all ages and diversities are provided with equal opportunities and enabling environment to meaningfully contribute to, and equally benefit from theNutrition development agenda, as an essential ingredient to social economic development.

According to the Kenya Demographic Health Survey (KDHS) 2014,the prevalence of stunting, wasting and underweight in Makueni County were 25.1%,2.1% and 10.2% respectively. Despite these figures being slightly lower than the national level, this means that 3 out of 10 children below 5 years in the county may never exploit their full potential in life and thus need for action.Beyond early exposure to adverse conditions such as illness and/or inappropriate diets and feeding practices, poor diets as the immediate causes of malnutrition, underlies the socio-cultural, political and economic factors contributing to malnutrition.

The United Nations Children Fund(UNICEF) conceptual framework for causes of malnutrition stipulates the causes of malnutrition to be multifaceted, therefore a need for a multisectoral approach in alleviating malnutrition.

The Makueni County Nutrition Action Plan (CNAP)2018/19-2022/23, is cognizant of lessons learnt in the planning and implementation of health and nutrition interventions in the county, and further is anchored in the KNAP 2018/19-2022/23.

The main objective of the Makueni CNAP is to accelerate and scale up efforts towards the elimination of malnutrition as a problem of public health significance, focusing on specific achievements by 2022/23. The CNAP focuses on three areas of intervention, namely nutrition-specific; nutrition-sensitive; and enabling environment, putting emphasis on the need for strengthening multisectoral collaboration in addressing malnutrition. This planwill assist the county in meeting its vision on developmental agenda while contributing to the national goal of a healthy nation.

Dr Andrew M Mulwa,
CECM-Health Services
Government of Makueni County

PREFACE

The double burden of under nutrition and obesity is one of the leading causes of death and disability globally according to WHO and Non-Communicable Disease (NCD) unit Kenya.

Some children under the age of 5 years are stunted while others are wasted, overweight and or obese. Among adults, obesity and overweight is on increase and women of reproductive age are anaemic.

Childhood malnutrition is the underlying cause of more than one in three deaths among children under the age of 5 years and negatively affects cognitive development, school performance and productivity.

More than 90% of the countries globally, have policies and programmes that cover issues such as under nutrition, obesity and diet-related NCDs, infant and young child nutrition, andprevention, control and management of micronutrients deficiencies. There are existing gaps in the design and content in nutrition governance, policy implementation, maternal nutrition and monitoring and evaluation of nutrition programs.

Improving nutrition is central to achieving the Sustainable Development Goals (SDGs) number one and two according to World Health Organization(WHO). This will lead to vision 2030 attainability and achievement of the big 4 agendas in Kenya. Malnutrition in all its forms is closely linked, either directly or indirectly, to major causes of death and disability worldwide. The causes of malnutrition are directly related to inadequate dietary intake as well as disease, but indirectly to many factors, among others household food insecurity, inadequate maternal and child care, health services and the environment

While most nutrition interventions are delivered through the health sector, non-health interventions can also be critical. Gender equality and good nutrition are mutually reinforcing; improving nutrition is critical to achieving gender equality, and in turn improving gender equality leads to improved nutrition (NI Programme gender equality strategy 2018).

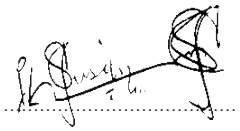
To ensure effective and sustainable nutrition outcomes and health related outcomes, the action plan has integrated gender responsive interventions to address the underlying and deep-rooted gender inequalities, socio-cultural and economic differences closely affecting improved food and nutrition security and wellbeing of men and women across different ages and diversities in the county.

This is in line with the several conventions targeted to achieve gender equality, women and girl's empowerment and sustainable elimination of hunger and malnutrition of which the government of Kenya is a signatory and has committed to achieve. These include but not limited to the sustainable development goal 5, the Convention of the Rights of the Child, Convention on Elimination of all forms of Discrimination Against Women and the Declaration of the Human Rights.

At the national level the government has a gender policy which was created in 2008, a national food and nutrition security policy, the Constitution of Kenya (2010) which recognizes the rights of every person to be free from hunger and have adequate food of acceptable quality.

The process of development of CNAP 2018/19–2022/23 was driven by the Makueni County Government, through a sector-wide approach that involved broad-ranging consultations within and across the sector. Critical to note is the engagement of line ministries/sectors in the development and anticipated adoption of the CNAP to their respective sectoral plans. A series of dedicated meetings were held at the county level with spearheaded by the department of health leadership during the entire development process. Further, the process brought together a broad range of actors that included the United Nations (UN) agencies,NGOs, line ministries and the civil society organizations involved in nutrition programming in Makueni.

The CNAP will provide a critical catalyst for enhancing accountability, multisectoral collaboration and coordination, linking national and county actions, and tracking progress of the CNAPs' results. Key priorities to be implemented during the five years from 2018/19 to 2022/23 have been identified. It is my expectation that in working together, the overall objectives of the CNAP will be achieved.



Dr.Kibwana M.P,
Chief Officer-Health Services,
Government of Makueni County

ACKNOWLEDGEMENT

The Department of Health would like to thank everyone who participated in the development of the County Nutrition Action Plan (CNAP 2018/22)

The CNAP could not have been finalized without the valuable contributions and full commitment of the technical committee members of different government departments and partners. The support of the Government of Makueni County is highly appreciated.

This CNAP was developed with support from Nutrition International under the Technical Assistance for Nutrition (TAN) project, funded with UK aid from the UK government.

We express our sincere gratitude and indebtedness to Nutrition International (NI) staff lead by Joy Kiruntimi, SarahKihianyu, Nina Hodonouand Martin Koomefor the immense technical leadership in the entire process of developing the (CNAP 2018/22).In addition, we acknowledge the technical contribution from the following partners, Kenya Red Cross Society (KRCS), Food and Agricultural Organization (FAO), World Food Programme (WFP),Kenya Crops and Dairy Market Systems(KCDMS) and United Nations Children's Fund (UNICEF).

We acknowledge Division of Nutrition and Dietetics which has played a critical role in the development by providing guidance to linking the CNAP to an umbrella framework and guidance for nutrition in Kenya,specifically Betty Samburu for her support throughout the process. The contributions of the following ministries and Departments in providing overall leadership and technical inputs to the CNAP is also appreciated:

Ministry of Health-Nutrition and Dietetics Division, Departments of Health, Education, Agriculture, Gender and Social economic planning in the Government of Makueni county and State Ministry of Education-County director of education Makueni.

Lastly, County department of health greatly appreciates the technical support of Betty Samburu and the consulting team; Dr. Daniel Mwai, lead consultant (Health Financing and Universal Health Coverage Expert, Strategic planning, Resource mobilization, Costing, and Resource Tracking); Njuguna David (Health systems strengthening expert, Health policy, Costing, Resource Tracking, Strategy Development); Dr. Elizabeth Wangia (Clinical Nutrition, accountability plan, Monitoring and evaluation of health Programs) Clementine Ngina (Nutrition technical specialist and M&E); and Agatha Muthoni (Gender specialist); for providing the technical support throughout the whole development process.

Dr. Kiio S. Ndolo
Director of Medical services

1 INTRODUCTION

1.1 General social demographic information for Makueni County

1.1.1 Location and size

Makueni County is one of the forty-seven counties in Kenya. It is situated in South Eastern part of the Country and lies between Latitude 1 º 35′ and 3° 00′ at the South and Longitude 37 º 10′ and 38 º 30′ to the east. It borders Machakos County to the North, Kitui County to the East, Taita Taveta County to the South and Kajiado County to the West.

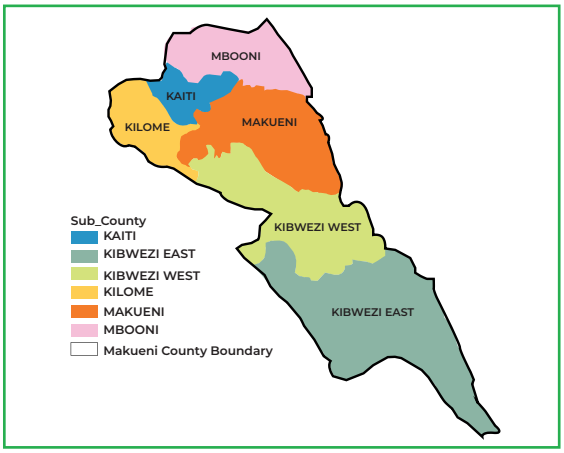


Figure 1.1: Map for Makueni County

The county covers an area of 8034 km², out of which 474.1km² is occupied by the Tsavo West National Park and 724.3 km² by the Chyulu Game Reserve. Climatic conditions are generally arid and semi-arid region, with distinctive highlands of Kilungu and Mbooni and the rest of the regions are dry lowlands.

1.1.2 Population description per Sub County

The County is divided into six Sub-Counties namely; Kibwezi East, Kibwezi West,Kilome,Kaiti, Makueni andMbooni. The six Sub- Counties are further subdivided into 30 electoral wards and 60 sub wards. The projected population for 2019 based on 2009 census is 989,124 out of which 481,641 are male and 507,483 females. The population density in the county is 123.5 persons per Km².

Table 1.1: Distribution of Population by Sub County

SUB-COUNTY	MALE	FEMALE	TOTAL
Kaiti	63,937	70,383	134,320
Makueni	107,742	108,973	216,715
Kibwezi West	91,963	93,588	185,550
Kibwezi East	73,402	74,426	147,828
Mbooni	98,558	107,898	206,456
Kilome	48,455	49,799	98,254
TOTAL	**484,058**	**505,066**	**989,124**

Source: (KNBS, 2009)

1.1.3 Health facility distribution per Sub County

There is a total of 13 level 4 facilities, 44 level 3 and 185 level 2 facilities totaling to 242 public health facilities. There are also private, faith based and non-governmental organization (NGO) facilities.

Table 1.1: Health facility distribution per Sub County

No. of Facilities Ownership and as Per level of Care						
Sub County	Public Facilities as per level of care			Private	FBO	NGO
Level of Care	4	3	2	0	0	0
Kaiti	2	6	26	3	2	0
Kibwezi east	3	7	16	9	6	1
Kibwezi West	1	8	34	10	3	6
Kilome	1	5	17	3	6	1
Makueni	3	11	48	13	5	1
Mbooni	3	7	34	0	3	0

Source: (CIDP) County Integrated Development Plan2018-2022

Table 1.2: Distribution of population among sub groups

	Description	Population segment estimates (%)	County projected population (2018)
1	Total population in county	100	978,932
2	Total number of households	20	195786
3	Males	48	469887
4	Females	52	509044
5	Children under 1 year (12 months)	2.76	27,018
6	Children under 5 years (60 months)	14.2	139,008
7	Under 15 years	44	430,730
8	Women of child bearing age (15-49 Years)	23	225,154
9	Estimated number of pregnant women	3.2	31,326
10	Estimated number of deliveries	2.9	28,389
11	Estimated live births	2.8	27,410
12	Total number of adolescents (15-24 Years)	17	166,418
13	Adults (25-59 Years)	31	303,469
14	Above 60 Years	6.9	67,546
15	Elderly (Above 65)	4.8	46,988

Source: County Integrated Development Plan(CIDP)**2018 - 2022**

1.2 National nutrition situation

Malnutrition in childhood and pregnancy has many adverse consequences for child survival and long-term well-being. It also has far-reaching consequences for human capital, economic productivity, and overall national development. The consequences of malnutrition should be a significant concern for policymakers both at the national and county level. According to the recent global nutrition report, Kenya is clustered among 41 countries (29 percent) of countries experiencing the triple burden of malnutrition (GOK, MOH, 2018). This is characterized by the co-existence of undernutrition as manifested by stunting, wasting, underweight, micronutrient deficiencies, overweight and obesity including diet related non communicable diseases.

Over the past years, Kenya has witnessed an improvement in the nutritional status of children: stunting declined from 35% in 2008-9 to 26% in 2014, wasting from 7% to 4% and underweight from 16% to 11% (KDHS, 2014). Despite the reduced child under nutrition, there are regional disparities where some counties with lowest stunting are at 15% while those with highest are at 45%. 9 (19%) of the counties have a prevalence of stunting of above 30%, a level categorized as very high in public health significance.

A total of 28 per cent of adults aged 18–69 years are either overweight or obese, with the prevalence in women being 38.5 per cent and men 17.5 per cent. Similar trends are seen when comparing the 2008–2014 KDHS. The proportion of women who were overweight or obese increased from 25 per cent to 33 per cent and those who were obese increased from 7 per cent to 10 per cent.

In terms of micronutrient deficiencies, Zinc deficiency is the highest. Anaemia prevalence was highest in pregnant women 41.6% and among children 28.3% while among school going children, it was 16.5% (MOH, 2011).The 2011 National Micronutrient Survey established that pre-school children had the highest prevalence of zinc deficiency (83.3 percent) among all the population subgroups. This was followed by non-pregnant women with a prevalence of 82.3 percent, school age children (80.2 percent), men (74.8 percent) and finally pregnant women (68.3 percent) with the lowest prevalence (MOH, 2011)

Nationally, 61% of mothers are exclusively breastfeeding for the first six months and 62 percent are initiated to the breast within one hour after birth. Only 22% of children aged 6-23 months are fed according to the Minimum Acceptable Diet (MAD).

According to the 2015 Stepwise Survey conducted in Kenya, 95 per cent of adults aged 18–69 years did not consume the WHO daily recommended five servings of fruits and/or vegetables; fruits were consumed on average about 2.4 days in a week, and vegetables were consumed five days in a week. Approximately 20 per cent of adults in this group add salt or salty sauce to their food before eating; 3.7 per cent consume processed foods high in salt; 83.5 per cent often add

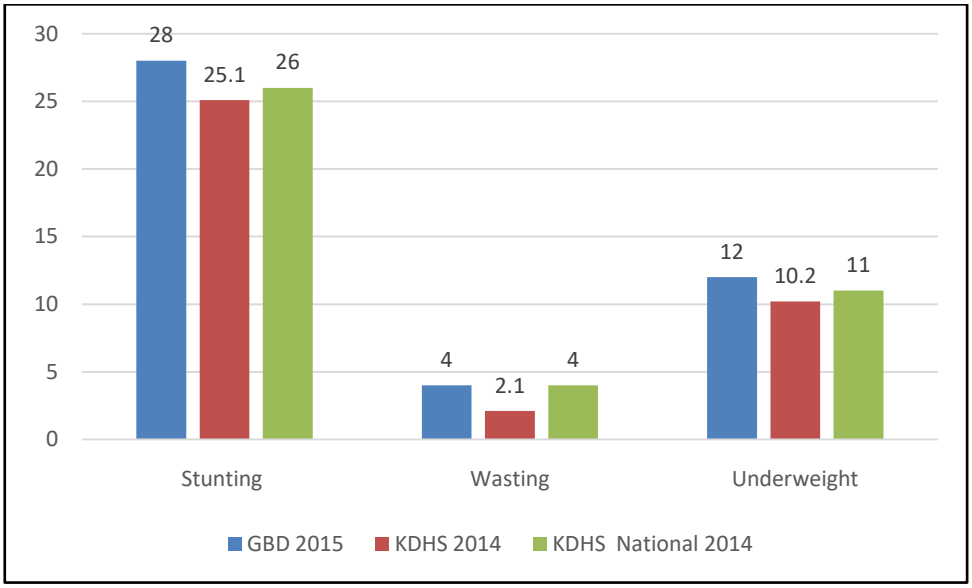
sugar when cooking or preparing beverages at home; and 28 per cent always add sugar to beverages.

1.3 County health and nutrition situation

1.3.1 Undernutrition

Undernutrition is manifested by stunting, wasting and underweight in children while in adults it's manifested by underweight. Beyond poor diets and morbidity which are the immediate causes of malnutrition, underlies the socio-cultural, political and economic factors. These include but not limited to family food insecurity; inadequate care of vulnerable household members including cultural norms and practices influencing food sharing and uptake; poor access to clean water, hygiene and sanitation; Inadequate health services; poor health seeking behaviors and care practices among men and women across all ages and diversities; low community and male support in relieving women of overburdening maternal workload; inadequate and inequitable access to nutrition and health education, unequal access, use and control of benefits from productive assets disproportionately affecting women and girls including their discrimination in decision making on issues pertaining their nutrition and wellbeing, which must be addressed as part of effective and sustainable ways in addressing malnutrition. The data below shows that different forms of malnutrition coexist and overlap with each other in various ways, therefore, requiring integrated multisectoral approaches and cohesive work to address them.

FIGURE 1.2: STUNTING, WASTING AND UNDERWEIGHT IN MAKUENI



Source: *(KDHS, 2014)*

According to the GBD data for 2015 stunting in Makueni was at 28% while the Kenya demographic health survey (KDHS) 2014, stunting was at 25.1 % for under-five 5 years.(Kenya National Bureau of Statistics (KNBS); ICF Macro, 2016). The huge burden of chronic under nutrition (stunting) is affecting the growth and development of children in the county. Stunting has a lot of huge burden on health, education, social and labour sector due to economic impact and related costs.

1.3.2 Overweight, Obesity and diet related non-communicable diseases (DRNCDs)

The burden of non-communicable diseases is relatively high. This may be due to life style, socio-economic and behavior related problems such as smoking, high calorie intake, high dietary fat intake and sedentary life style. Adolescents and adults are eating too many refined grains and sugary foods and drinks, and not enough foods that promote health such as fruits, vegetables, legumes and whole grains. These are some of the factors contributing to the increased trends in NCDs.

There is currently no population-based data on non-communicable diseases (NCD) for Makueni County. However, the Kenya Health Information System (KHIS) shows increasing number of diet related non-communicable diseases as per the cases reported in the county facilities.

Table 1.3: Top five non-communicable diseases

Disease	Cases	% out of Total cases
Arthritis, Joint pains etc.	84,675	5.1
Hypertension	78,572	4.7
Diabetes	21,426	1.3
Asthma	15,269	0.9
Anaemia cases	5,397	0.3

Source: (KHIS, 2019)

1.3.3 Micronutrient deficiencies

Micronutrient deficiency forms an important global health issue and is defined as lack of essential vitamins and minerals required in small amounts by the body for proper growth and development. It affects key development outcomes including poor physical and mental development in children, vulnerability or exacerbation of disease, mental retardation, blindness and general losses in productivity and potential.

The county has good immunization and vitamin A coverage. The number of children below 1 year who were fully immunized in 2017/18 was at 9 in every 10 while 67 % of children 6-59 months were supplemented with 2 doses of Vitamin A in the same period. Iron folic acid supplementation (IFAS) coverage is at 90% as per KHIS 2018/2019.

1.3.4 Infant and Young Child Feeding practices among children under five years

Infant and young child feeding is a key area to improve child survival and promote healthy growth and development. The first 2 years of a child's life are particularly important, as optimal nutrition during this period lowers morbidity and mortality, reduces the risk of chronic disease, and fosters better overall growth and development

Optimal breastfeeding is so critical that it could save the lives of over 820 000 children under the age of 5 years each year. In Makueni County, the prevalence of exclusive breastfeeding (EBF) in children 0-6 months is at 36%. Socio- cultural and economic factors in the county such as gender roles and responsibilities between men and women resulting to overburdening maternal workload for women and girls, with limited community and male support lead to limited time for women and girls of reproductive age especially Pregnant and Lactating Women (PLW)to practice optimal care and feeding practices for themselves and their young children. For example, drought vulnerability leading to food insecurity and water scarcity, aggravated by unequal social systems and deep rooted gender inequalities that have a wide range influence to unequal access to, ownership of and control over benefits from productive resources and decision making disproportionately affecting women and girls in the county, has a great impact on maternal and infant and young children care and feeding practices.

Further cultural norms, beliefs and practices such as food sharing and uptake related stereotypes and practices, effects maternal, infant and young children optimal dietary diversity through locally available and affordable nutritious foods. Levels of knowledge on nutrition among men and women across different ages and diversities, further greatly determines the level of support especially by men and other key influencers within communities, which is key in prompting increased uptake of optimal nutrition and health care and practices by women and children in the county. There is currently no existing data for children on minimum meal frequency, minimum dietary diversity and minimum acceptable diet as well as for women dietary diversity. Generating sex and age disaggregated nutrition data depicting the gender dimensions and socio-cultural, economic determinants of nutrition would be a priority to inform a gender transformative programming towards achieving effective and sustainable nutrition and related health outcomes.

1.3.5 Morbidity and mortality trends

Morbidity is the condition of being ill, diseased, or unhealthy. Mortality, on the other hand, is the condition of being dead. Ending preventable child deaths can be achieved by providing immediate and exclusive breastfeeding, improving access to skilled health professionals for antenatal, birth, and postnatal care, improving access to nutrition and micronutrients,

promoting knowledge of danger signs among family members, improving access to water, sanitation, and hygiene and providing immunizations.

The top most communicable disease condition is Upper Respiratory Tract Infections (URTI). According to the Lancet series, there is proven scientific evidence that poor early infant feeding practices are related to the increased risk of morbidity for under-fives related to diarrhea and URTI (Rollins et al., 2016; Victora et al., 2016). For example, suboptimal breastfeeding would lead to 7-fold and 5-fold increased hospitalization for diarrhea and respiratory tract infectious disease respectively for under-fives. Nutrition is key in averting admission as a result of poor feeding habits.

Other than the above-mentioned communicable diseases, Tuberculosis poses a challenge to the department because it has continued to rise over years. Its prevalence was 233/100000 population in 2012 while in 2017 it was 558/100000.HIV is also a disease with high concern with a prevalence estimated at 5.2% among the general population which is higher than the national rate of 5.0%. The prevalence considerably varies across gender and different areas in the County. The corridor along Nairobi-Mombasa highway exhibit high prevalence rates compared to the other areas. The prevalence among women is higher (6.9%) compared to men (3%) indicating vulnerability of women to HIV infection. Poverty is one of the major reasons for the high prevalence of the scourge among women and girls, where they seek other means of earning an income through prostitution. The most affected age group in the County is between 15 to 49 years, which is the economically active population. This poses a threat to productivity level in the county with a ripple effect on the economy increased poverty levels.

Latrine coverage has also been improved from 83 to 91% from 2013 to 2018.The number of pregnant women attending 4 ANC visits were 53% while those delivering under skilled birth attendants were 62% (KHIS, 2019).

In terms of morbidity patterns, the tables below illustrate the morbidity patterns for the general population;

Table 1.4: Top five communicable diseases in Makueni County

Disease	**Cases**	**% out of Total cases**
Upper Respiratory Tract Infections	562,768	34.0
Disease of the skin	187,926	11.3
Urinary Tract Infection	99,952	6.0
Other Diseases Of Respiratory System	97,788	5.9
Diarrhea	71,069	4.3

Source: (KHIS, 2019)

1.3.6 Community economic empowerment

The unemployment level in the county is high among employable youth. As a result of the high unemployment, among other factors, the county experiences relatively high levels of poverty at 34.8 per cent (KIHBS 2015/2016)[1]. The poor in the county have limited access to basic needs such as food, shelter, clothing, health, water and education. Most of the poor are women, children and persons with disabilities. Poverty is most severe amongst the women due to inequality, limited access to and ownership of land, lack of income generating opportunities, isolation in essential economic services and decision making.

1.3.7 Agriculture and access to food

The county government aims to make the county food secure by the year 2022/23. The potential for trade and commercialization of the agriculture produce, given the location of the county in line with major food consumption cities (Nairobi and Mombasa) is huge, yet remains unexploited. Population growth has put pressure on land available for agricultural use leading to subdivision of land to uneconomical sizes. The resultant pieces of land are small to hardly support commercialized agriculture. The average farm size is 1.2 Ha. The world is urbanizing with people moving to urban areas for various reasons. The current urbanization rate in the county stands at 11.9% which is expected to double in the plan period. This will lead to population pressure in the towns and increased demand for social services.

Existence of social systems, cultural norms and beliefs which are discriminative against women and girls forms part of the major detrimental factors to improved food and nutrition security in the county. For example, women, girls and the youth have limited autonomy and unequal participation in major decision-making processes as strong agents for improved food and nutrition security. In as much as women contribute to close to 80% labour in crop production, they have unequal access to, use and control over benefits from productive assets such as land and livestock, unequal access and inclusion in use of new food production systems and technologies as well as inadequate access to affordable credit and farm inputs. This further complicated by climate change are some of the contributing factors for the low agricultural productivity leading to food and nutrition insecurity in the county.

1.4 Human resource for nutrition

Makueni health sector has increased its health services by constructing a modern hospital with renal and ICU units. There is currently inadequate nutrition staffs to be deployed in these sections of the hospital which requires clinical nutrition services. Additionally, there is need for training clinical nutrition specialities to offer services in these units as well as public health nutrition services including community nutrition as per the human resource norms and standards for the Ministry of health (MOH, 2014). As part of efforts towards health system

strengthening, the department will collaborate with the county department for gender and other gender partners in the county to help build capacity of health care workers across all cadres to effectively mainstream gender for improved provision and implementation of gender transformative nutrition and health care services and programming.

Table 1.5: Human resource for nutrition

Designation	**Number of Officers**		**No.of officers required**
	Male	Female	
Nutrition and Dietetics Officers	0	2	57
Nutrition and Dietetics Technologists	5	8	70
Nutrition and Dietetics Technicians	0	2	32
TOTALS	**5**	**12**	**159**

Source: (IHRIS, 2019)

1.5 Constraints

An analysis with various county stakeholders revealed various constraints limiting optimal nutrition services. Addressing these gaps is critical to the realization goals and of this CNAP as well as national and global targets thus realizing the vision.

- Inadequate dissemination of policies, guidelines and screening tools.
- Inadequate knowledge and skills amongst health care workers and mothers
- Negative cultural practices, beliefs and misconceptions surrounding nutrition
- Inadequate staffing
- Inadequate IEC material and training aids for CHVs
- Low uptake of growth monitoring
- Anaemia among adolescents,
- Maternal deaths among adolescent mothers due to anaemia
- Teenage pregnancies
- Poor nutritional and lifestyle practices
- Poor access to nutrition information
- Lack of adherence to IFAS consumption
- Poor VAS Documentation
- Low knowledge levels on micronutrients
- Inadequate screening
- Myths and misconception about NCDs
- Overreliance on donor funding
- Stigma
- Inadequate nutrition staff to be deployed in the recently operationalized renal and ICU
- Inadequate knowledge on enteral and parenteral nutrition among health staff
- Lack of specialized clinical nutrition equipment
- Inadequate food demonstration materials
- Lack of SOPs for clinical nutrition
- Flush Floods, Frequent drought and famine, Erratic supply of commodities,
- Inadequate knowledge among health providers on IMAM

- Low community capacity for emergency response,
- Inadequate and erratic funding to school feeding programme.
- Inadequate dissemination of National school meals programme strategy
- Absenteeism and poor concentration due to hunger and childhood illnesses
- Unequal access, use and control of benefits from productive assets by women and girls.
- Lack of autonomy in decision making among women and girls as strong agents for improved food and nutrition security.
- Socio- economic vulnerabilities disproportionately affecting women, girls and youth.
- Low male engagement in support of improved uptake of optimal nutrition and health related services and practices.
- School dropout due to famine
- Lack of school feeding programme
- Inadequate food production due to unreliable rainfall,
- Poor farming practices
- Poor access to adequate quality food
- Inadequate water supply for domestic and agricultural use, Food safety and hygiene, Low Hand washing, Open Defecation, Environmental pollution and poor waste management.
- Poor Social protection structures
- Poor health seeking behaviour
- Poor access to health care by vulnerable groups
- Weak multisectoral coordination, weak enforcement of regulatory framework
- Inadequate funds for research
- Inadequate anthropometric equipment
- Inadequate monitoring and reporting tools
- Lack of disaggregated data and reporting tools.
  Poor sharing and utilization of information among sectors
- Lack of sex and age disaggregated nutrition and health related data depictingthe gender and age specific socio- economic, cultural and environmental determinants and dimensions in nutritionfor decision making

Various strengths, weaknesses and opportunities were also analysed which can be tapped for nutrition department.

Table 1.6: SWOT analysis for Makueni County

Strengths	Weaknesses
• Good governance and political goodwill. • Availability of county health bills • Established governance structures up to grassroots level • Rolled out Makueni Universal Health Care Programme • Presence of strategic documents that guide development • Robust public participation • Existence of coordination structures at the county level -CSG & CNTF • Availability of both technical and unskilled labour • Infrastructure and equipment • Partnerships with other stakeholders • Weekly surveillance system	• Inadequate policies • Poor adoption of modern technologies • Negative cultural practices • Weak synergy between departments and non-state actors • Understaffing • Inadequate funding • Poor integration of gender responsive approaches in nutrition programming informed by context-based gender integrated nutrition analysis.
Opportunities	**Threats**
• Good relations with neighbouring counties • Good co-existence between national & county government • Existence of permanent river (Athi river) and upcoming Thwake dam • Availability of arable land • Availability of strategic documents • Agro processing plants and cottage industry • Existence of community based structures including local women support groups	• Unfavourable climatic conditions-prolonged drought • Pollution of some existing water sources • High incidences of Road Traffic Accidents along Mombasa road • Human wild life conflicts • Deep rooted gender inequalities as a result of biased social systems, cultural norms, beliefs and practices.

Source: Multisectoral consultations 2019

2 COUNTY NUTRITION ACTION PLAN (CNAP) FRAMEWORK

2.1 Introduction

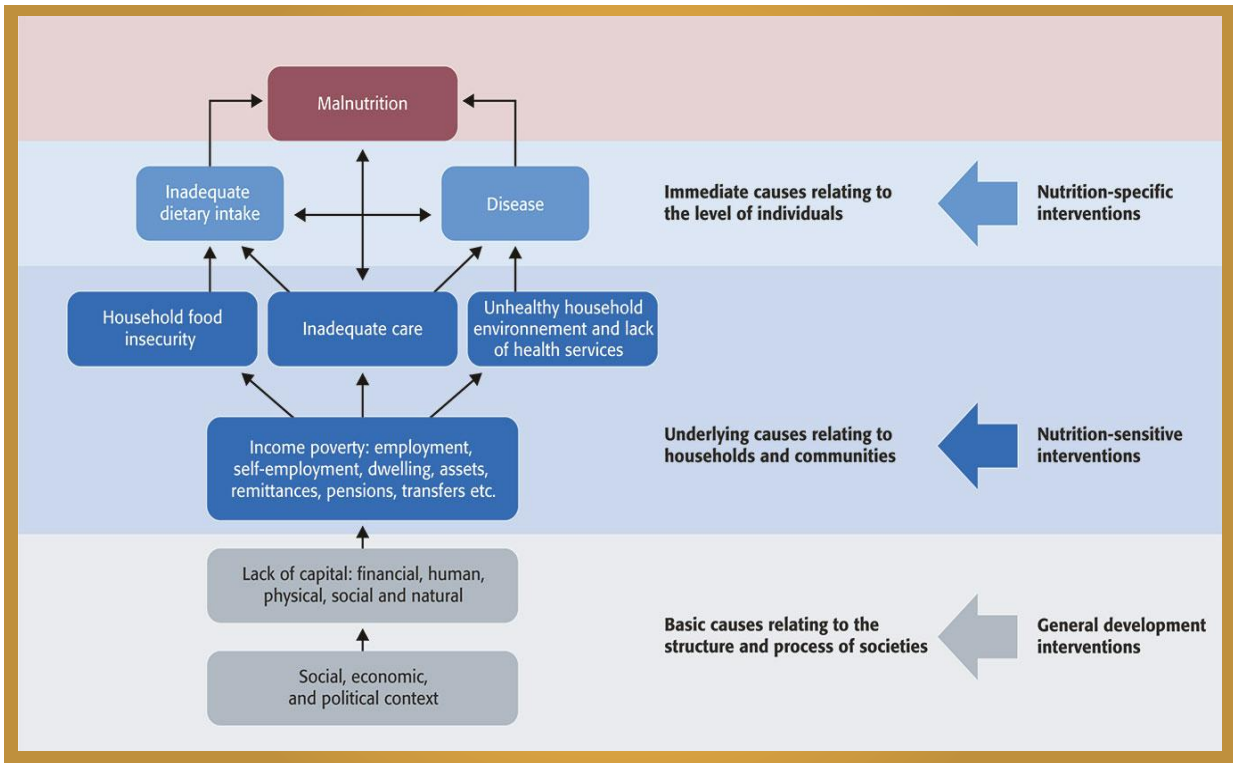
Malnutrition is caused by factors which are broadly categorized as immediate, underlying and basic. Immediate causes of malnutrition include disease and inadequate food intake; this means that disease can affect nutrient intake and absorption, leading to malnutrition, while not taking sufficient quantities and the right quality of food can also lead to malnutrition.

The underlying causes are food insecurity-including availability, economic access and use of food; feeding and care practices-at maternal, household and community level; and environment and access to and use of health services (World Health Organization, and The World Bank, 2012). Household food insecurity implies that there is lack of access to enough, safe, nutritious food to support a healthy and active life. The level of nutrition awareness among mothers or caregivers and other influencers affects the child feeding and care practices, consequently impacting on their nutrition. Similarly, poor access to and utilization of health services as well as environmental contaminants brought about by inadequate water, poor sanitation and hygiene practices, influence the nutrition of households.

Lastly, the basic causes of malnutrition which act at the enabling environment on macro level include issues such as knowledge and evidence, politics and governance, leadership, infrastructure and financial resources in general nutrition specific interventions address the manifestation and immediate causes; nutrition sensitive interventions the underlying causes and enabling environment interventions the basic or root causes of malnutrition.

Nutrition is neither a sector nor a domain of one ministry or discipline but a Multisectoral and multi-disciplinary issue that has many ramifications from the individual, household, community national to global levels. Addressing all forms of malnutrition at all three levels of causation (immediate, underlying and basic) requires Triple-duty actions that have the potential to improve nutrition outcomes across the spectrum of malnutrition, through integrated initiatives, policies and programmes. The potential for triple-duty actions emerges from the shared drivers behind different forms of malnutrition, and from shared platforms that can be used to address these various forms. Examples of shared platforms for delivering triple-duty actions include health systems, agriculture and food security systems, education systems, social protection systems, WASH systems and nutrition sensitive policies, strategies and programs. Strategies for integration of nutrition specific interventions and sensitive interventions have been tested and proven to work.

FIGURE 2.1: CONCEPTUAL FRAMEWORK FOR MALNUTRITION



Conceptual framework for malnutrition, UNICEF

2.2 Vision and mission for Nutrition in Makueni County

2.2.1 Vision

A County free from Malnutrition.

2.2.2 Mission

To reduce all forms of malnutrition through coordinated multi-sectoral and community centered approaches for optimal health of the Makueni people enhancing economic growth and development.

2.3 National policy and legal framework for CNAP

The Constitution of Kenya gives every child the right to basic nutrition (Article 43 c) and all individuals the right to free from hunger and food of acceptable quality (art 53c). The country has a huge responsibility of ensuring the communities have access to good quality health care and live a healthy life. To achieve the aspirations of the Constitution and Vision 2030, Kenya has given legislative force to some key aspects of nutrition interventions.

These include legislation on the following

1. Prevention and control of iodine deficiency disorders through mandatory salt iodization,
2. Mandatory food fortification of cooking fats and oils and cereal flours, through the Food Drugs and Chemical Substances Act.
3. The benefits of breastfeeding are protected through the Breast Milk Substitutes (Regulation and Control Act) 2012.
4. Mandatory establishment of lactation stations at workplaces (Health act art 71 & 72
5. The Food, Drugs and Chemical Substances Act (food labelling, additives, and standard (amendment) regulation 2015 on Trans fats) is also key legislation central to the control of DRNCDs.
6. The Nutritionists and Dieticians Act 2007 (Cap 253b) which determine and set up a framework for the professional practice of nutritionists and dieticians;

Further in line with the SDGs and in addition to the nutrition specific legal and policy framework, the CNAP has integrated other cross cutting and nutrition sensitive sector based legislations, policy, plans and guidelines in support of an enabling environment through addressing poverty alleviation, gender equality and empowerment of women, child and maternal health, reducing HIV/AIDS and communicable diseases and environmental sustainability. This is with a major aim to achieving effective and sustainable food and nutrition security leading to improved nutrition and health related outcomes.

Monitoring compliance is even more critical in the light of devolution. Counties' ability to implement and monitor the regulations is crucial, and hence is considered within the CNAP. The counties will have a key role in implementing, monitoring and enforcement.

2.4 Rationale for CNAP

The CNAP will act as a planning framework for implementation of nutrition activities in the county. This will contribute to the set government priority of the big 4 agenda of Universal Health Coverage, food and nutrition security, expansion of manufacturing and affordable housing.

The CNAP has been developed to accelerate and scale up efforts towards the elimination of malnutrition as a problem of public health significance in Kenya by 2030, The three basic rationales for the action plan are: (a) the health consequences – improved nutrition status leads to a healthier population and enhanced quality of life; (b) economic consequences – improved

nutrition and health is the foundation for rapid economic growth; and (c) the ethical argument – optimal nutrition is a human right.

There is overwhelming evidence that improving nutrition contributes to economic productivity, development and poverty reduction by improving physical work capacity, mental capacity and school performance. Improving nutrition is tremendous value for money as it reduces the costs related to lost productivity and health care expenditures. Globally, it is estimated that each dollar spent on nutrition delivers between USD 8 and USD 138, which is a cost–benefit ratio of around 1:17, like that of infrastructure development like roads, railways and electricity. Table 3 shows the cost–benefit ratios of different nutrition intervention programmes.

Nutrition intervention programs	Cost-benefit (US$)	Cost-benefit ratio
Breastfeeding promotion in health facilities	5 - 67	1:13
Integrated child care programs	9 - 16	1:1.8
Iodine supplementation (women)	15 - 520	1:35
Vitamin A supplementation (children <6 years)	4 - 43	1:11
Iron fortification (per capita)	176 - 200	1:1.4
Iron supplementation (per pregnant woman)	6 - 14	1:2.3

FIGURE 2.2: COST BENEFIT ANALYSIS ON INVESTING IN NUTRITION

Source: (WORLD BANK, 2016)

2.5 CNAP Objectives

The objective of the CNAP is to contribute to the national agenda for KNAP in accelerating and scaling up efforts towards the elimination of malnutrition in Kenya. The county Nutrition Action Plan is geared towards contributing to the national agenda on ending malnutrition in all its forms in line with Kenya's Vision 2030 and sustainable development goals (SDG) focusing on specific achievements by 2022.

The expected result or desired change for the CNAP is that 'The entire population of Makueni county achieve optimal nutrition for a healthier and better quality of life and improved productivity for the county's accelerated social and economic growth. The key strategies that will be adopted in the implementation of CNAP will include;

- Life-course approach to nutrition programming which is a holistic approach to nutrition issues for all population groups
- Gender mainstreamingtowards ensuring consistent application of gender transformative approaches across all interventions in all sectors
- Coordination and partnerships targeting sectoral and multi-sectoral approaches to enhance programming across various levels and sectors,
- Integration which will take into account the various platforms in place to deliver gender transformative nutrition services, e.g., health centres, schools and at the community level.
- Capacity strengthening for implementation of nutrition servicesresponsive to the specific needs of men and women across different ages and diversities targeting service providers and related systems Advocacy, communication and social mobilization thus acknowledging that nutrition improvements require political goodwill for increased investments and raising population-level awareness, their increased support and participation for improved food and nutrition security for all.
- Promoting equity and human rights especially among vulnerable and marginalized populations in effort to ensure that every person is free from hunger and have adequate food of acceptable quality.
- Resilience and risk-informed programming that focus on anticipating, planning and reducing disaster risks to effectively protect persons, communities, livelihoods and health
- Monitoring, Evaluation, Accountability and Learning (MEAL) hence promotion of use of the triple A (assessment, analysis & action) cyclic process to provide feedback, learn lessons and adjust strategy as appropriate
- Empowerment for sustainability of results – the need to ensure predictable flow of resources, develop technical and managerial capacity of implementers, motivate implementers, ensure vertical and horizontal linkages, and gradual exit when exiting an intervention.

2.6 Nutrition through the life course approach

Nutritional needs and concerns vary during different stages of life from childhood to elderly years. Nutritional requirements in the different segments of the population can be classified into the following groups which correspond to different parts of the lifespan, namely; pregnancy and lactation, infancy, childhood, adolescence, adulthood, and old age

The development of this CNAP had been through intensive consultation to in order capture nutritional requirements of individuals or groups across different gender, age and diversities

living in the county. The CNAP has considered the following factors: Physical activity — whether a person is engaged in heavy physical activity; age and sex of the individual or group; body size and composition, Geography; and Physiological states, such as pregnancy and lactation.

From infancy to late life, nutritional needs change. Children must grow and develop, while older adults must counter the effects of aging. The importance of gender, age and diversity-appropriate nutrition during all stages of the life cycle cannot be overlooked. It is against this background that this action plan is developed taking into consideration nutrition needs per specific stages of life to capture and optimize the heterogeneity of nutrition needs with regard to gender, age and other social economic, cultural and physiological determinants and dimensions.

2.7 Gender mainstreaming

Gender and nutrition are inextricable parts of the vicious cycle of poverty and it's an important cross-cutting issue. Gender inequalities are a cause as well as an effect of malnutrition and hunger. Higher levels of gender inequality are associated with higher levels of undernutrition, both acute and chronic undernutrition. Gender equality is firmly linked to enhanced productivity, better and sustainable development outcomes for future generations, and improvements in the functioning of institutions

Drought vulnerabilities, aggravated biased social systems, cultural norms, beliefs and practices greatly influence the socio-economic vulnerability and human development resulting in malnutrition in Makueni County. Deep rooted gender inequalities within the county including unequal access to, use and control over benefits from productive resources especially by women and girls and their limited autonomy in decision making which is culturally a preserve for men, denies women and girls equal opportunities to exploit their potential as strong agents for increased food and nutrition security(CIDP)2018-2022).

The youth who form majority of the productive population have equally been left out thus the possibility of missing out on the existing potentials and their important role towards contributing socio-economic development in the county. Despite their social status as custodians of household and community based productive resources and decision making, men are inadequately involved in issues related to nutrition largely perceived as women's role. This is likely to result to inadequate of lack of support by men which can have a major negative impact on the efforts being made towards achieving improved nutrition and health related outcomes.

Other factors such as overburdening maternal roles, socio-cultural beliefs and practices around food sharing and uptake, negative cultural practices such as child and forced marriages, water scarcity and unequal or limited access to information and literacy levels disproportionately women and girls further represents part of the factors negatively impacting on food and nutrition security. This underscores the need to apply a rights-based approach to gender programming, with opportunities to leverage complementary rights-based and gender responsive nutrition principles which has been factored in Makueni county CNAP.

Notwithstanding, the roles, priorities, norms, needs and use of resources may differ between men and women. The way women and men are affected by nutrition actions may also differ as demonstrated within the CNAP. Weak inter-sectoral linkages, inadequate gender integration in nutrition assessments, surveys/research, inconsistent collection and use of sex-age disaggregated nutrition data leads to lack of evidence based decision making and the design of tailor made nutrition and health interventions responsive to the specific nutrition needs, priorities, challenges while building on the existing capacities, experience and knowledge among men and women of different age and diversities.

In order to achieve effective and sustainable nutrition and health outcomes, the CNAP seeks to integrate a gender transformative approach through effective gender mainstreaming at all levels of nutrition and health interventions. Specifically, this nutrition action plan has used mix approaches to a larger extent integrate gender in the development process and the final action plan. These include:

The use of the life cycle approach "all residents of Makueni County, throughout their life-cycle enjoy safe food in sufficient quantity and quality to satisfy their nutritional needs for optimal health at all times". Using the life-course approach, the action identifies key nutrition interventions for each age cohort and provides the linkages of nutrition to food production and other relevant sectors that impact on nutrition.

- Ensuring nutrition programming at all levels in Makueni County is consistently informed by context-based gender analysis defining the gender issues and relations relating to the specific nutrition needs and priorities of men and women of different ages and diversities across the county
- Specific strategies , interventions and activities are prioritized within the CNAPs addressing nutrition needs specific to women, men, adolescents (boys and girls) giving weight in identification and addressing the socio-cultural, economic, technology and political barriers to achieving gender equality in areas of human rights, equal participation of men and women in key decision processes pertaining to their nutrition and wellbeing, equal access, use and control over and benefit from resource

development resources adequately respond to the specific nutrition and health related needs of women and men across all ages and diversities.

- Development and implementation of an SBCC strategy to address underlying socio-economic barriers, cultural norms, beliefs, knowledge and practices affecting improved and sustainable food, nutrition and health related outcomes in Makueni county.
- Development and implementation of an SBCC strategy to address underlying socio-economic and cultural barriers and practices affecting improved and sustainable food, nutrition and health related outcomes in Makueni county.
- Support interventions promoting increased male and community engagement on their role in supporting improved uptake of optimal nutrition and health practices at the household level, community and across the county at large.
- Strengthening health systems to improve delivery of gender responsive health services by health care workers as well as increased demand and equitable uptake of optimal nutrition and health services and practices, by men and women of all ages and diversities in Makueni County.
- The CNAP development process has mainstreamed gender in its development process by making sure both females and males are invited and make meaningful participation all the stages of CNAP development, this include active participation in the inception meeting, writing and interventions prioritization meetings including validation, making the process inclusive and participatory with women and men having equal opportunity to in setting Nutrition agenda for Makueni county.
- The common result and accountability framework for Makueni CNAP has intentionally included indicator that are meant to monitor and evaluate gender transformative nutrition interventions for improved and sustainable nutrition and health related outcomes.
- Accountability for results is enhanced to improve transparency, leadership and the quality of statistics and information made available to the various stakeholders and the public by collecting sex age disaggregated data at all levels.

2.8 Target audience for CNAP

The target Audience for the CNAP involves organizations that will help in the implementation of the CNAP. The county nutrition action plan users will cut across policy makers and decision makers both at national and county governments, donors and implementing partners of both nutrition specific and sensitive interventions, line ministries, county health management team, sub county health management teams, nutrition workforce in health and other departments that

influence and provide enabling environment for nutrition to be achieved and the communities at the grassroots level. This will enable them to understand what the county government is doing to ensure optimal nutrition for the entire population and what they can do individually to contribute to the effort.

National and County government will mobilize resources for implementation of the CNAP and will be involved in monitoring and Evaluation to track progress. Research and training institution will mobilize resources to address critical gaps in gender integrated nutrition research.

3 KEY RESULTS AREAS(KRAs), OUTCOME OUTPUTS AND ACTIVITES

3.1 Introduction

The overall expected result or desired change for the CNAP is to contribute to the goal of KNAP 2018/19-2022/23in achieving optimal nutrition for a healthier and better-quality life and improved productivity for the country's accelerated social and economic growth. To achieve the expected result, a total of 8 key result areas (KRAs) have been defined for Makueni County and ordered covering all aspect of the life cycle as per life cycle approach. The KRAs are categorized into three focus areas: (a) Nutrition-specific (b) Nutrition-sensitive and (c) Enabling environment, See, Table 3.1. The KRAs has been matched with corresponding set of expected outcomes and outputs, as well priorities activities per each of the KRA presented see, section 3.3.

TABLE 3.1: *PRIORITIZED KRAS AS PER FOCUS AREA*

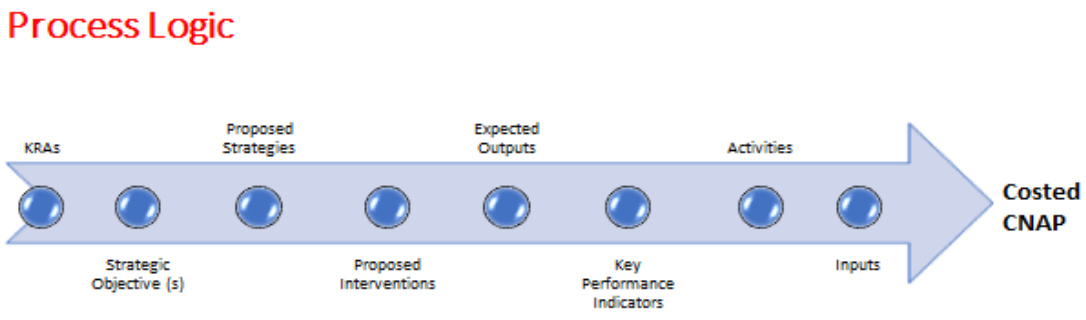
Nutrition specific	1. KRA 1. Maternal, infant and young child nutrition (MIYCN) scaled up.
	2. KRA 2. Nutrition of older children, adolescents, adults and older persons promoted.
	3. 'KRA 3. Prevention, control and management of micronutrient deficiencies scaled up
	4. KRA 4. Prevention, control and management of diet related non-communicable diseases (DRNCDs) and clinical nutrition scaled up
	5. KRA 5. Nutrition in IMAM and emergencies strengthened
Nutrition sensitive	6. 'KRA 6. Nutrition in health, education, agriculture, water, environment and social protection sectors strengthened
Enabling Environment	7. KRA 7. Multisectoral approach in nutrition governance (Leadership, coordination, regulatory framework and
	management) strengthened.
	8. 'KRA 8. Nutrition information systems, learning and research strengthened

3.2 Theory of change and CNAP logic framework.

The "Theory of Change" (ToC) is a specific type of methodology for planning, participation, and evaluation that is used to promote social change – in this case nutrition improvement. ToC defines long-term goals and then maps backward to identify necessary preconditions. It describes and illustrates how and why a desired change is expected to happen in a context. The pathway of change for the CNAP is therefore best defined through the theory of change. The ToC was used to develop a set of result areas that if certain strategies are deployed to implement prioritized activities using the appropriate then a set of results would be realized and if at scale, contribute to improved nutritional status of Makueni residents.

The logic framework outlining the key elements and process used to integrate the ToC in Makueni CNAP development is captured in the Figure 3.1. The expected outcome expected output and priorities activities in line with the process logic has been discussed in section 3.3.

FIGURE 3.1: THE CNAP LOGIC PROCESS



3.3 Key result areas, corresponding outcome, outputs, and activities

3.3.1 KRA 01. Maternal, infant and young child nutrition (MIYCN) scaled up.

Expected outcome

To improve nutrition status of women of reproductive age and children aged 0 -59 months

Output 1: Intensified advocacy, communication & social mobilization (ACSM) activities for improved MIYCN

Activities

1. Celebrate Malezi bora week
2. Celebrate world breast feeding week
3. Conduct advocacy meeting with key influencers on MIYCN prioritization
4. Conduct community dialogue days/ community action days for CHVs
5. Establish community peer to peer support groups e.g. mother to mother, father to father support groups to be used as platforms for peer to peer support and health education on MIYCN.
6. Conduct community health and nutrition education targeting men for their increased engagement on their role and support on MIYCN.

Output 2: Strengthened capacity of health care providers and CHVs for delivery of quality MIYCN services

Activities

1. Dissemination of MIYCN policies & guidelines
2. Disseminate complimentary feeding recipe book & guide to health care workers and CHVs
3. Sensitize managers on c-BFCI
4. Train health care workers on BFCI
5. Training of CHVs on c-BFCI
6. Training health care workers on BFHI
7. Conduct OJT & mentorship to health care workers on BFHI
8. Conduct mentorship and support supervision for BFCI
9. Conduct BFCI self and external assessment
10. Conduct BFHI self and external assessment
11. Train health care workers on growth standards
12. Procurement& distribution of anthropometric equipment
13. Procurement & distribution of MIYCN IEC materials
14. Train health care workers to effectively mainstream gender in nutrition programming for improved provision and implementation of gender responsive nutrition and health services and interventions.

Output 3: Enhanced support for breastfeeding female employees in both formal and informal sector

Activities

1. Establish breast feeding spaces at county HQ offices, Makueni referral and Makindu hospitals
2. Sensitize formal & informal day care centers on optimal nutrition care practices
3. Sensitize health care workers on BMS Act

3.3.2 KRA 02. Nutrition of older children, adolescents, adults and older persons promoted

Expected outcome

Improved nutritional status of older children (5-9 years), adolescents (10-15 years), adults and older persons.

Output 1: Increased nutrition awareness and uptake of nutrition services for improved nutritional status of older children (5-9 years), adolescents (10-15 years), adults and older persons.

Activities

1. Train key stakeholders, teachers, health care workers and CHVs on healthy diets and physical activity
2. Training of adolescent peer educators
3. Conduct community outreaches to screen for NCDs.
4. Conduct nutrition sports days for the youth
5. Establish community nutrition support groups for the elderly.

Output 2: Increased uptake of nutrition services in schools

Activities

1. Disseminate school health policy and implementation framework
2. Conduct deworming and Vitamin A supplementation to children in ECD centers
3. Conduct nutrition OJT and mentorship to teachers in schools
4. Sensitize key stakeholders head teacher and principals on the implementation of the WIFs program
5. Training of School health teachers on WIFS
6. Procurement of the WIFs commodities
7. Conduct monitoring and evaluation of the implementation of the WIFs program in schools
8. Enhance capacity among teachers and health care workers to offer youth friendly nutrition and related health education and services.
9. Conduct health education sessions on Nutrition in schools

3.3.3 KRA 03. Prevention, control and management of Micronutrient Deficiencies Scaled up

Expected outcome

Improved micronutrient status of the population

Output 1: Increased uptake of micronutrient supplements

Activities

1. Sensitize managers and CHVs on micronutrient disease prevention and control
2. Sensitize health care workers on multiple micronutrient powders
3. Sensitize health care workers on Vitamin A logistics
4. Provision of the micronutrient supplements (Vitamin A capsules, IFAS, multiple micronutrient powders & Zinc)
5. Provision of documentation and reporting tools
6. Conduct Data Quality Audit (DQA)
7. Conduct supportive supervision on Micronutrient supplementation
8. Sensitize the CHVs and community (men and women including community leaders and other key influencers) on food fortification and on the importance of micro-nutrient supplementation for pregnant women, adolescent girls and children.
9. Monitor iodine in salt

3.3.4 KRA 04. Prevention, control and management of diet related non-communicable diseases (DRNCDs) and clinical nutrition scaled up.

Expected outcome

Prevention, management and control of non-communicable diseases strengthened

Output 1: Increased advocacy activities for prevention and control of diet related NCDs

Activities

1. Celebrate world diabetic day and hypertension day
2. Conduct advocacy meeting with key influencers on NCDs prioritization
3. Conduct integrated outreaches to screen for NCDs.
4. Disseminate NCDs policies & guidelines to health care workers, community and other stakeholders targeting men and women across different ages and diversities.
5. Train health care workers and CHVs on prevention and control of diabetes and hypertension
6. Procurement & distribution of NCDs IEC materials

Output 2: Scaled-up services and practices related to clinical nutrition and dietetics for disease prevention, control and management

Activities

1. Disseminate clinical nutrition guidelines
2. Develop and disseminate SoPs and protocols for nutrition and dietetics
3. Provision of IEC materials for nutrition management in diseases
4. Develop protocol for hospital food service
5. Training health care workers on post basic specialized full courses nutrition care.
6. Training of health care workers on specialized nutrition care short course
7. Conduct annual quality assurance and standards assessment for clinical nutrition services
8. Pilot and adopt tools for Monitoring & reporting of clinical nutrition and dietetics
9. Procure enteral and parenteral feeds

Output 3: Enhanced support for breastfeeding female employees in both formal and informal sector

Activities

1. Dissemination of nutrition in HIV guidelines
2. Training of health care providers on nutrition/HIV and, gender mainstreaming in nutrition services for HIV clients.
3. Training of health care providers on nutrition/TB and, gender mainstreaming in nutrition services for TB clients.
4. Provision of anthropometric equipment
5. Provision of diagnostic and anthropometric equipment

3.3.5 KRA 05. Nutrition in IMAM Emergencies Strengthened

Expected outcome

Improved management of malnutrition among children and adults

Output 1: Increased coverage of integrated management of acute malnutrition (IMAM) services

Activities

1. Train health care providers on IMAM
2. Train CHVs on CMAM.
3. Scale up IMAM services
4. Conduct 288 OJTs and mentorship to health care workers on IMAM
5. Conduct integrated supportive supervision to facilities on IMAM
6. Conduct outreach nutrition services for IMAM
7. Link IMAM to other programmes. (Wash, social net interventions)
8. Procure and distribute IMAM commodities
9. Train CHVs and Health care workers to effectively identify, document and address underlying social cultural and economic factors contributing to malnutrition, affecting optimal adherence to IMAM services and relapse by MAM/SAM patients.

Output 2: Improved multi-level and multisectoral capacity for risk preparedness, reduction and mitigation against impact of disasters

Activities

1. Develop contingency plan (CP) and response preparedness
2. Upscale access to high impact nutrition interventions in emergencies through mapping beneficiaries, procuring and redistribution of commodities
3. Intensify case finding for notifiable diseases.
4. Conduct assessment and hold meetings for resource mobilization for emergency response
5. Train health workers on MIYCN-e
6. Sensitize CHVs on MIYCN-e
7. Sensitize communities, health workers and stakeholders on the response preparedness during emergencies
8. Conduct community level dialogue and recovery initiatives in emergency
9. Sensitize the community on the importance of increased inclusion and participation of women and youth in disaster risk reduction and recovery initiatives in emergency

3.3.6 KRA 06. Nutrition in health, education, agriculture, water, environment and social protection sectors strengthened

Expected outcome

Improved multisectoral coordination of nutrition sensitive programmes

Outputs 1: Strengthened linkages between nutrition, agriculture and food security

Activities

1. Participate in the commemoration of world food day
2. Train farmers on production of high value nutritive foods/bio fortified foods
3. Train male and female farmers groups across different ages and diversity on diversification of enterprises
4. Train male and female farmers groups across different ages and diversity on integrated kitchen garden
5. Train male and female farmers groups across different ages and diversity on post-harvest management
6. Train agrinutritionists, agricultural extension officers on agrinutrition
7. Train male and female farmers groups across different ages and diversity on agrinutrition
8. Train male and female farmers groups across different ages and diversity on utilizing diversified foods
9. Conduct joint supportive supervision on utilizing diversified foods
10. Conduct OJT/mentorship on IMNCI
11. Conduct sensitization forums targeting men and women across different ages and diversities on safe and hygienic practices during food preparation and storage
12. Conduct joint supportive supervision on production of high value nutritive foods/biofortified foods, Agri nutrition, nutrition enterprises, integrated kitchen gardening. post-harvest management, food safety and hygiene
13. Participate in agricultural show

Output 2: Nutrition integrated into WASH policies, strategies, plans and programs

Activities

1. Commemorate World Menstrual Hygiene Day
2. Participate in commemoration of world toilet day
3. Participation in commemoration of global hand washing day
4. Participate in promotion of environmental hygiene at household level
5. Participate in sensitization forums on water harvesting through farm ponds and runoff at household level
6. Integrate hand washing messages and hygiene during nutrition sessions

Output 3: Nutrition mainstreamed in education sector policies, strategies and action plans.

Activities

1. Sensitize CSOs, BOMs and teachers on school health programme
2. Sensitize food service providers and handlers on school health programme
3. Sensitize parents, PAs and BOMs on comprehensive school health programme.
4. Hold meetings with key decision makers to allocate resources towards school feeding programme

Output 4: Integration of nutrition in social protection programs strengthened

Activities

1. Collaborate with CHVs and SDOs (Social Development Officers) to map households receiving safety nets for sensitization on nutrition
2. Mapping of vulnerable household who benefit from safety nets to integrate nutrition counselling through training of CHVs
3. Holding sensitization meetings with OVC institutions administrators
4. Integrated supportive supervision on Management of Neonatal and Childhood Illnesses (CIMNCI)
5. Train CHVs on Community Integrated Management of Neonatal and Childhood Illnesses (CIMNCI)
6. Participate in advocating for governance and accountability for nutrition and social protection for vulnerable groups
7. Participate in consultative meetings to mainstream nutrition services to social protection programmes
8. sensitize the vulnerable groups (Elderly, OVCs, PWDs) on health and nutrition
9. Train health workers on management of childhood illnesses
10. Training Gender Department and social protection officers on nutrition basics and linkages to social protection programmes

3.3.7 KRA 07. Multisectoral approach in nutrition governance (Leadership, coordination, Regulatory framework and Management) strengthened.

Expected outcome

Improved governance for nutrition

Expected output

Efficient and effective nutrition governance, coordination and legal frameworks in place in resource mobilization.

Activities

1. Hold multisectoral fora on nutrition
2. Hold periodic stakeholders' meetings
3. Map partners and stakeholders in nutrition
4. Participate in meetings to develop and implement a resource mobilization strategy for nutrition covering all aspects of resources
5. Participate in meetings to identify nutrition champion
6. Participate in meetings to strengthen mechanisms for policy,legal and regulatory framework engagement processes

3.3.8 KRA 08. Nutrition and Dietetics Information Systems, Learning and Research strengthened

Expected outcome

Improved monitoring, evaluation research and learning for nutrition and dietetics activities

Expected output

Sectoral and multisectoral nutrition information systems, learning and research strengthened

Output: Sectoral and multisectoral nutrition information systems, learning and research strengthened

Activities

1. Conduct routine data review
2. Avail nutrition data collection and reporting tools.
3. Conduct gender responsive nutrition data quality audit
4. Conduct gender integrative nutrition KAP survey
5. Conduct n gender integrative nutrition smart survey
6. Hold sub county monthly feedback meetings
7. Train health workers on nutrition data management
8. Conduct context-based gender analysis on gender, age and diversity, socio-cultural and economic determinants in nutrition and health.

4 MONITORING, EVALUATION, ACCOUNTABILITY AND LEARNING (MEAL) FRAMEWORK

4.1 Introduction

This chapter provides guidance on the monitoring, evaluation, accountability and learning process, and how the monitoring process will inform the county nutrition action plan. The CNAP will evolve as the county assesses data gathered through monitoring.

Monitoring and evaluation systematically tracks the progress of suggested interventions, and assesses the effectiveness, efficiency, relevance and sustainability of these interventions. Monitoring is the ongoing, routine collection of information about a programs activity in order to measure progress toward results. That information tells us if a change occurred (the situation got better or worse) which, in turn, helps in making more informed decisions about what to do next. Regular monitoring helps in detection of obstacles resulting in data-driven decisions, on how to address them. A program may remain on course or change significantly based on the data obtained through monitoring. Monitoring and evaluation therefore forms the basis for modification of interventions and assessment of the quality of activities being conducted.

It is critical to have a transparent system of joint periodic data and performance reviews that involves key health stakeholders who use the information generated from it. In order to ensure ownership and accountability, the nutrition program will maintain an implementation tracking plan which will keep track of review and evaluation recommendations and feedback. Stakeholders may include donors, departments, staff, national government and the community. Involvement of stakeholders contributes to better data quality because it reinforces their understanding of indicators, the data they expect to collect, and how those data will be collected. In addition, it helps to ensure that their user needs will be satisfied.

An assessment of the technical M&E capacity of the program within the county is key. This includes the data collection systems that may already exist and the level of skill of the staff in M&E. It is recommended that approximately 10% of a programs total resources should be slated for M&E, which may include the creation of data collection systems, data analysis software, information dissemination, and M&E coordination.

4.2 Background and Context

The CNAP outlines expected results, which if achieved, will move the county and country towards attainment of the nutrition goals described in the global commitment e.g. WHA, SDGs, NCDs, and national priorities outlined in the KNAP and Food and Nutrition Security Policy. It also described the priority strategies and interventions necessary to achieve the outcomes,

strategy to finance them, and the organizational frameworks (including governance structure) required to implement the plan.

4.3 Purpose of the MEAL Plan

The CNAP MEAL Plan aims to provide strategic information needed for evidence-based decisions at county level through development of a Common results and Accountability framework (CRAF). The CRAF will form the basis of one common results framework that integrates the information from the various sectors related to nutrition, and other non-state actors e.g. Private sector, CSOs, NGOs; and external actors e.g. Development partners, technical partners resulting in overall improved efficiency, transparency and accountability.

While the CNAP describes the current situation (situation analysis), and strategic interventions, the MEAL Plan outlines what indicators to track when, how and by whom data will be collected, and suggests the frequency and the timeline for collective, program performance reviews with stakeholders.

Elements to be monitored include:

- Service statistics and utilization disaggregated by sex, age and diversity of the target population,
- Service coverage/Outcomes
- Client/Patient outcomes (behavior change, morbidity)
- Clients Access to services
- Quality of health and nutrition services
- Impact of interventions responsive to the specific nutrition and health needs for men and women across different ages and diversity.
- Satisfaction of users

The evaluation plan will elaborate on the periodic performance reviews/surveys and special research that complement the knowledge base of routine monitoring data. Evaluation questions, sample and sampling methods, research ethics, data collection and analysis methods, timing/schedule, data sources, variables and indicators are discussed.

In effort to ensure gender integration at all levels of the CNAP, all data collected, analyzed, and reported on will be broken down (disaggregated) by sex and age to provide information and address the impact of any gender issues and relations including benefits from the nutrition programming between men and women. Sex disaggregated data and monitoring can help detect any negative impact of nutrition programming or issues with targeting in relation to gender. Similarly, positive influences and outcomes from the interventions supporting gender equality for improved nutrition and health outcomes shall be documented and learned from to improve and optimize interventions. Other measures that will be in place to mainstream gender in the MEAL plan will include:

- Development / review M&E tools and methods to ensure they document gender differences.
- Ensuring that terms of reference for reviews and evaluations include gender-related results.
- Ensuring that M&E teams (e.g. data collectors, evaluators) include men and women as diversity can help in accessing different groups within a community.
- Reviewing existing data to identify gender roles, relations and issues prior to design of nutrition programming to help set a baseline.
- Holding separate interviews and FGDs with women and men across different gender, age and diversities including other socio-economic variations.
- Inclusion of verifiable indicators focused on the benefits of the nutrition programming for women and men.
- Integration of gender-sensitive indicators to point out gender-related changes leading to improved nutrition and related health outcomes over time.

4.4 MEAL Team

The County M&E units or equivalent will be responsible for overall oversight of M&E activities. The functional linkage of the nutrition program to the department of health and the overall county intersectoral government M&E will be through the county M&E TWG. Health department M&E units will be responsible for the day to day implementation and coordination of the M&E activities to monitor this action plan.

The nutrition program will share their quarterly progress reports with the county department of health (CDOH) M&E unit, who will take lead in the joint performance reviews at subnational level. The county management teams will prepare the quarterly reports and in collaboration with county stakeholders and organize the county quarterly performance review forums. These reports will be shared with the national M&E unit during the annual health forum, which brings together all stakeholders in health to jointly review the performance of the health sector for the year under review.

For a successful monitoring of this action plan, the county will have to strengthen their M&E function by investing in both the infrastructure and the human resource for M&E. Technical capacity building for data analysis could be promoted through collaboration with research institutions or training that target the county M&E staff. Low reporting from other sectors on nutrition sensitive indicators is still a challenge due to the use of different reporting systems that are not inter-operational. Investment on Health Information System (HIS) infrastructure to facilitate e-reporting is therefore key. Timely collection and quality assurance of health data will improve with a team dedicated to this purpose.

4.5 Logic Model to Monitoring and Evaluation of the CNAP

Monitoring and evaluation of the CNAP will follow a logical model, looking at what it takes to achieve intended results, linking this with the result expected and with the strategies, outputs and inputs, for shared understanding of the relationships between the results expected, activities conducted, and resources required.

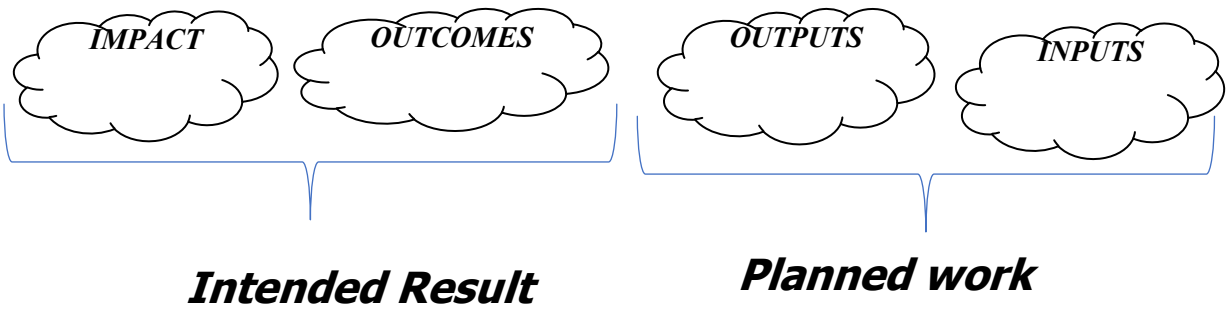


TABLE 4.1: RESULTS FRAMEWORK

OUTCOMES	**Outcome 1.Reduction in undernutrition:** -Reduce prevalence of stunting among children under five years by 40%; -Reduce and maintain childhood wasting to less than 5%; -Reduce and maintain childhood underweight to less than 10%; - Reduce malnutrition among older children and adolescent by 15%	**Outcome 2. Reduction of micronutrient deficiencies** - Reduce anemia in children 0-59 months by 30% - Reduce anemia in adolescent girls by 30% - Reduce folic acid deficiency among non-pregnant women by 50% - Reduce vitamin A deficiency in children by 50% - Reduce iodine deficiency among children <5 years by over 50% - Reduce prevalence of zinc deficiency among pregnant women by 10%.	**Outcome 3.Reduction in diet related NCDs** -Reduce prevalence of insufficient physical activity. -Halt and reverse the rise in obesity by 30% - Reduce proportion of population with raised fasting blood sugar.	**Outcome 4.Improved leadership, governance, and coordination** -Increased domestic financing for nutrition -Improved monitoring, evaluation research and learning for nutrition and dietetics activities -Improved multi-level and multisectoral capacity for risk preparedness, reduction and mitigation against impact of disasters	**Outcome 5. Reduction in mortality due to acute malnutrition** -Maintain mortality rates at below 3% for MAM and 10% for SAM
OUTPUTS	**Outputs** -Intensified advocacy, communication and social mobilization activities for improved MIYCN -Strengthened capacity	**Outputs** - Increased uptake of micronutrient supplements	**Outputs** Improved care for mothers and children and better feeding practices -Increased advocacy activities for	**Outputs** -Strengthened linkages between nutrition, agriculture and food security -Nutrition integrated into WASH policies,	**Outputs** - Increased coverage of IMAM Services

	of HCWs for delivery of quality MIYCN services -Enhanced support for breastfeeding female employees at county HQ offices, Makueni referral and Makindu hospitals -Increased uptake of nutrition services in schools - Increased nutrition awareness and uptake of nutrition services for improved nutritional status		prevention and control of diet related NCDs - Scaled-up services and practices related to clinical nutrition and dietetics for disease prevention, control and management.	strategies, plans and programs. - Nutrition mainstreamed in education sector policies, strategies and action plans. - Integrated nutrition education and promotion in social protection programs	
INPUTS	1. Organization of service delivery for nutrition;				
	2. Human Resource for Nutrition;			6. Nutrition Financing;	
	3. Nutrition infrastructure;			7. Nutrition research;	
	4. Nutrition products and Technology;			8. Nutrition leadership;	
	5. Nutrition Information;			9. Financial, human, physical and social capital;	

4.6 Monitoring process

In order to achieve a robust monitoring system, effective policies, tools, processes and systems should be in place and adequately disseminated. The collection, tracking and analysing of sex, age and diversity disaggregated data thus making implementation effective to guide decision making. The critical elements to be monitored are: Resources (inputs); Service statistics; Service coverage/Outcomes; Client/Patient outcomes (behaviour change, morbidity); Investment outputs; Access to services; and impact assessment. All key monitoring processes will be achieved through stakeholder collaboration.

The key monitoring processes as outlined in Figure 4.1*: monitoring process*

will involve:

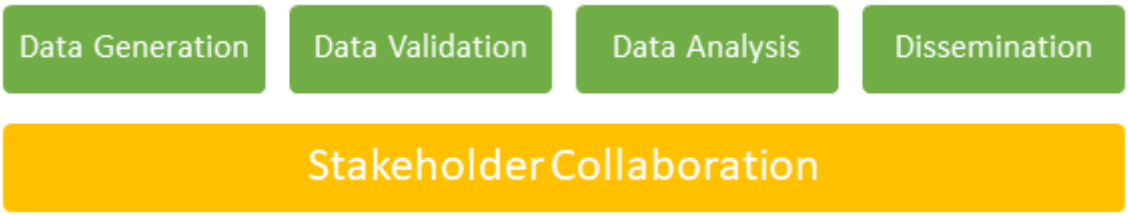


FIGURE 4.1: MONITORING PROCESS

4.6.1 Data Generation

- Various types of data will be collected from different sources to monitor the implementation progress. These data are collected through routine methods, surveys, sentinel surveillance and periodic assessments among others.
- Routine data will be generated using the existing mechanisms and uploaded to the KHIS monthly.
- Strong multi-sectoral collaboration with nutrition sensitive sectors.
- Data flow from the primary source through the levels of aggregation to the national level will be guided by reporting guidelines and SOPs.
- Data from all reporting entities should reach MOH by agreed timelines for all levels.

4.6.2 Data Validation

- Data validation through checking or verifying whether the reported progress is of the highest quality and ensure that data elements are clear and captured in various tools and management information systems, through regular data quality assessment. Annual and Quarterly verification process should be carried out, to review the data across all the indicators.

4.6.3 Data analysis

- This step ensures transformation of data into information which can be used for decision making at all levels. This will be led by the county nutrition monitoring and evaluation focal person in collaboration and consultation with all stakeholders, including civil society on a quarterly basis.

4.6.4 Information dissemination

- Information products developed will be routinely disseminated to key sector stakeholders and the public as part of the quarterly and annual reviews to get feedback on the progress and plan for corrective measures.

4.6.5 Stakeholder Collaboration

- There is needed to effectively engage other relevant Departments and Agencies and the wider private sector in the health sector M&E process.
- Each of these stakeholders generates and requires specific information related to their functions and responsibilities.
- The information generated by all these stakeholders is collectively required for the overall assessment of sector performance.

4.7 Monitoring Reports

The following are the monitoring reports and their periodicity:

Table 4.2: Periodicity and monitoring reports

Process/Report	Frequency	Responsible	Timeline
Annual Work Plans	Yearly	All departments	End of June
Surveillance Reports	Weekly	DSSC and health facility in charges	COB Friday
Health Data Reviews	Quarterly	All departments	End of each quarter
Monthly reports submissions	Monthly	Facilities, CUs	5th of every month
Quarterly reports	Quarterly	All departments	After 21st of the preceding Month
Bi-annual Performance Reviews	Every six Months	All departments	End of January and end of July
Annual performance Reports and reviews	Yearly	All departments	Begins July and ends November
Expenditure returns	Monthly	All levels	5th of every month
Surveys and assessments	As per need	Nutrition program	Periodic surveys

4.8 Evaluation of the CNAP

Evaluation is intended to assess if the results achieved can be attributed to the implementation of CNAP by all stakeholders.

Evaluation ensures both the accountability of various stakeholders and facilitates learning with a view to improving the relevance and performance of the health sector over time.

A midterm review and an end evaluation will be undertaken to determine the extent to which the objectives of this CNAP are met.

4.9 Evaluation Criteria

To carry out an effective evaluation of the CNAP, there will be need for clear evaluation questions. Evaluators will assess the relevance, efficiency, effectiveness and sustainability for the CNAP. The proposed evaluation criteria are elaborated on below;

Relevance: The extent to which the objectives of the CNAP correspond to specific needs for men and women across different ages and diversities including the vulnerable groups. It also includes an assessment of the responsiveness considering changes and shifts caused by external factors.

Efficiency: The extent to which the CNAP objectives have been properly achieved with the appropriate amount of resources and provide explanations if not achieved.

Effectiveness: The extent to which CNAP objectives have been achieved, and the extent to which these objectives have contributed to the achievement of the intended results. Assessing the effectiveness will require a comparison of the intended goals, outcomes and outputs with the actual achievements in terms of results.

Sustainability: The continuation of benefits from an outlined intervention after its termination and the commitment of beneficiaries to leverage on those benefits.

The CNAP will be monitored through a set of indicators as outlined in the Common Results and Accountability Framework in Table 4.3.

TABLE 4.3: MAKUENI CNAP COMMON RESULT AREAS AND ACCOUNTABILITY FRAMEWORK 2018/19-2022/23

MAKUENI CNAP COMMON RESULTS AND ACCOUNTABILITY FRAMEWORK 2018/19-2022/23							
KEY RESULT AREA 1: Maternal, infant and young child nutrition (MIYCN) scaled up							
Outcome	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
Reduction in undernutrition	Prevalence of stunting in children 0-59 months (%)	**28% (2015)**	**20%**	**16.80%**	**GBD (2015)**	**Annual**	**Nutrition Program**
	Prevalence of wasting (W/H >2SD) in children 0-59 months (%)	**4%**	**4%**	**4%**	**GBD (2015)**	**Annual**	**Nutrition Program**
	Prevalence of underweight (W/A <2SD) in children 0-59 months	**12%**	**11%**	**10%**	**GBD (2015)**	**Annual**	**Nutrition Program**
Output	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
Intensified advocacy, communication and social mobilization activities for improved MIYCN	Malezi bora week celebrated	Yes	yes	yes	Program Reports	Annual	Nutrition Program
	world breast feeding weeks celebrated	Yes	yes	yes	Program Reports	Annual	Nutrition Program

Output	Indicator	Baseline (2018)	Mid-term Target (2020)	End-Term target (2022)	Data Source	Frequency of data collection	Responsible person
	Prevalence of exclusive breastfeeding in children 0-6 months (%)	**36% (2017)**	**40%**	**43.20%**	**GBD (2017)**	**Annual**	**Nutrition Program**
Strengthened capacity of HCWs for delivery of quality MIYCN services	No. of health care workers trained on BFHI	0	30	60	Program Reports	Annual	Nutrition Program
	No. of health care workers trained on BFCI	2	52	102	Program Reports	Annual	Nutrition Program
	No. of CHVs trained on BFCI	0	120	240	Program Reports	Annual	Nutrition Program
	Proportion of facilities implementing BFHI, that have conducted external assessment	0	10%	30%	Program Reports	Annual	Nutrition Program
	No. of community units implementing BFCI that have conducted external assessment	0	2	6	Program Reports	Annual	Nutrition Program
Enhanced support for breastfeeding female employees at county HQ offices, Makueni referral and Makindu hospitals	No. of breast-feeding places established	0	3	3	Program Reports	Every 2-years	Nutrition Program

KEY RESULT AREA 2: Nutrition of older children, adolescents, adults and older persons promoted.							
Outcome	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
Reduce malnutrition among older children and adolescent by 15%	Proportion of adolescents and older children with a normal BMI	65%	70%	75%	STEPs Survey	Every 5 Years	Nutrition Program/NCD Program
Reduce anemia in adolescent girls by 30%	Prevalence of anemia in girls 15-19 years (%)	55%	47%	39%	KDHS	Every 5 years	Nutrition Program
Output	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
Increased nutrition awareness and uptake of nutrition services for improved nutritional status of older children (5-9 years), adolescents (10-15 years), adults and older persons.	No. of nutrition support groups for the elderly established	No data	15	30	Program reports	Annual	Social protection/Nutrition program

Output	Indicator	Baseline (2018)	Mid-term Target (2020)	End-Term target (2022)	Data Source	Frequency of data collection	Responsible person
Increased uptake of nutrition services in schools	No. of schools sensitized on school health policy 2016	0	100	400	Program Reports	Annual	Nutrition Program/Department of Education
	No. of adolescent girls in school supplemented with WIFs	No Data	5500	16500	Program Reports	Annual	Nutrition Program/Department of Education
	Number of teachers trained on WIFs	0	100	400	Program Reports	Annual	Nutrition Program/Department of Education
	Number of schools visited for support supervision and mentorship				Program Reports	Quarterly	Nutrition Program/Department of Education
KEY RESULT AREA 3: Prevention, control and management of Micronutrient Deficiencies Scaled up							
Outcome	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
Reduce anemia in children 0-59 months by 30%	Prevalence of anemia in children 0-59 months (%)	26	22	17	KDHS	Every 5 years	Nutrition Program
Reduce anemia in adolescent girls by 30%	Prevalence of anemia in girls 15-19 years (%)	27	22	17	KDHS	Every 5 years	Nutrition Program
Reduce folic acid deficiency among non-pregnant women by 50%	Proportion of non-pregnant women with folic acid deficiency (%)	39	28	20	KMNS	Every 5 years	Nutrition program

Outcome	Indicator	Baseline (2018)	Mid-term Target (2020)	End-Term target (2022)	Data Source	Frequency of data collection	Responsible person
Reduce iodine deficiency among children <5 years by over 50%	Prevalence of iodine deficiency in children <5 years (%)	26	20	<10	KMNS	Every 5 years	Nutrition program
Reduce prevalence of zinc deficiency among pregnant women by 10%	Prevalence of zinc deficiency among pregnant women (%)	60	45	36	KMNS	Every 5 years	Nutrition program
Output	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
Increased uptake of micronutrient supplements	No. of health workers sensitized on multiple micronutrient powders	0	235	700	Program Reports	Annual	Nutrition Program
	No. of community groups sensitized on food fortification and diversity	0	12	24	Program Reports	Annual	Nutrition Program
	Percentage of pregnant women attending ANC receiving IFAS	84.3% KHIS 2018	87%	90%	KHIS	Quarterly	Nutrition Program
	Vitamin A coverage for children 6-59 months	191.9% KHIS 2018	200%	220%	KHIS	Quarterly	Nutrition Program
	Percentage of children under 5 with diarrhea, treated with zinc and ORS	110.4%	100%	100%	KHIS	Quarterly	Nutrition program
	Proportion of children aged 12-59 months dewormed	92.3%	94%	96%	KHIS	Quarterly	Nutrition Program

KEY RESULT AREA 4: Prevention, control and management of Diet Related Non-Communicable Diseases (DRNCDs) and clinical nutrition scaled up.							
Outcome	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
A 10% relative reduction in prevalence of insufficient physical activity	Prevalence of insufficient physical activity in adults (%)	6.5	6	5	STEPWise Survey	Every 5 years	Nutrition Program/NCD
Halt and reverse the rise in obesity by 30%	Prevalence of overweight/obesity in adults (18-69 years)	28	25	20	STEPWise Survey	Every 5 years	Nutrition Program/NCD
Reduce proportion of population with raised fasting blood sugar	Proportion of adults 18-69 years with raised fasting blood sugar (%)	1.9	1.7	1.5	STEPWise Survey	Every 5 years	Nutrition Program/NCD
Output	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
Increased advocacy activities for prevention and control of diet related NCDs	Celebration of world diabetic and hypertension day	Yes	Yes	Yes	Program Reports	Annual	Nutrition Program/NCD Program
	No. of facilities conducting nutrition assessment	8	9	13	Program Reports	Annual	Nutrition Program/NCD Program
	No. of facilities conducting nutrition counselling and support	8	9	13	Program Reports	Annual	Nutrition Program/NCD Program

Output	Indicator	Baseline (2018)	Mid-term Target (2020)	End-Term target (2022)	Data Source	Frequency of data collection	Responsible person
	No.of CHVs trained on prevention & control of diabetes & hypertension		267	567	Program Reports	Annual	Nutrition Program/NCD Program
Scaled-up services and practices related to clinical nutrition and dietetics for disease prevention, control and management.	No. of hospitals with specialised anthropometric equipment	0	1	3	Program Reports	Annual	Nutrition Program
	No. of hospitals with enteral and parenteral feeds	0	1	3	Program Reports	Annual	Nutrition Program
	No. of hospitals with protocol for food services	0	4	20	Program Reports	Annual	Nutrition Program
Strengthened capacity of health care workers to provide quality nutrition services for HIV and TB clients	No. of health care providers trained on nutrition & HIV	0	30	60	Program Reports	Annual	Nutrition Program/HIV Program
Enhanced capacity of HCW on HIV and TB nutrition	No. of health care providers trained on nutrition & HIV	0	30	60	Program Reports	Annual	Nutrition Program/HIV Program
	No. of health care providers trained on nutrition & TB	0	30	60	Program Reports	Annual	Nutrition Program/TB Program

Output	Indicator	Baseline (2018)	Mid-term Target (2020)	End-Term target (2022)	Data Source	Frequency of data collection	Responsible person
	No. of facilities offering HIV/TB care, with nutrition commodities	235	235	235	Program Reports	Annual	Nutrition Program/TB-HIV Program
Improved technical capacity for health care workers on clinical nutrition and dietetics in disease management	No. of health care workers trained on post basic specialized full courses in nutrition care	0	1	3	Program Reports	Annual	Nutrition Program
	No. of health care workers trained on specialized nutrition care short course	1	3	5	Program Reports	Annual	Nutrition Program
	No. of health care workers sensitized on clinical nutrition guidelines	15	55	75	Program Reports	Annual	Nutrition Program
	No. of health facilities with SOPs and protocols for nutrition and dietetics	0	10	40	Program Reports	Annual	Nutrition Program

KEY RESULT AREA 5: Nutrition in IMAM Emergencies Strengthened							
Outcome	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
Maintain mortality rates at below 3% for MAM and 10% for SAM	Proportion of discharges from treatment program who have died from MAM and SAM	0.2 MAM 1.7 SAM	<0.2 MAM <1.7 SAM	<0.2 MAM <1.7 SAM	KHIS	Quarterly	Nutrition program
Output	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
Increased coverage of IMAM Services	No. of health workers trained on IMAM	0	40	80	Program Reports	Quarterly	Nutrition Program
	No. of CHVs trained on IMAM	0	40	80	Program Reports	Quarterly	Nutrition Program
	No. of health workers trained on MIYCN-e.	0	6	12	Program Reports	Quarterly	Nutrition Program
	No. of CHVs sensitized on MIYCNs	0	6	12	Program Reports	Quarterly	Nutrition Program
Improved multi-level and multisectoral capacity for risk preparedness, reduction and mitigation against	Proportion of targeted beneficiaries receiving high impact nutrition interventions during emergency		60%	80%	Program Reports	Annual	Nutrition Program

Output	Indicator	Baseline (2018)	Mid-term Target (2020)	End-Term target (2022)	Data Source	Frequency of data collection	Responsible person
impact of disasters	No. of integrated disease surveillance and response reports	235	235	235	Program Reports	Monthly	Nutrition Program
	Contingency plan in place	No	Yes	Yes	Program Reports	Monthly	Nutrition Program
	Percentage of health workers sensitization on emergency preparedness and response	0	30%	30%	Program Reports	Monthly	Nutrition Program
	No. of emergency preparedness and response sensitization meeting held.	0	6	12	Program Reports	Monthly	Nutrition Program
	% increase of women and youth actively engaged in decision making processes in DRR and recovery initiatives in	10%	10%	10%	Program Reports	Annual	Nutrition Program

KEY RESULT AREA 6: Nutrition in Health, Education, Agriculture, Water, Environment and Social protection sectors strengthened							
Outcome	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
Improved multisectoral coordination of nutrition sensitive programmes	Proportion of nutrition sensitive sectors with nutrition as a priority in their strategic plans	0	50%	75%	Departmental reports	Every 2 years	All nutrition sensitive sectors/Nutrition program
Output	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
Strengthened linkages between nutrition, agriculture and food security	Commemorate world food day	Yes	Yes	Yes	Agriculture program reports	Annual	Department of Agriculture/Nutrition program
	No. of Agri nutritionist and agricultural extension workers trained on Agri nutrition disaggregated by sex.	0	80	160	Program Reports	Annual	Nutrition Program/Department of Agriculture

Output	Indicator	Baseline (2018)	Mid-term Target (2020)	End-Term target (2022)	Data Source	Frequency of data collection	Responsible person
	No. of farmers trained on Agri nutrition disaggregated by sex, age and diversity.	0	12000	12000	Program Reports	Annual	Nutrition Program/Department of Agriculture
	No. of kitchen gardens initiated	0	2000	4000	Program Reports	Annual	Nutrition Program/Department of Agriculture
	No. of households utilizing diversified foods	210	328	656	Program Reports	Annual	Nutrition Program/Department of Agriculture
Nutrition integrated into WASH policies, strategies, plans and programs.	No. of households with water harvesting structures	No data	120	240	Program Reports	Annual	Nutrition Program/WASH
	World toilet day activity commemorated	Yes	Yes	Yes	Program Reports	Annual	Nutrition Program/WASH
	% increase of women actively participating in WASH decision making processes for improved nutrition, care and hygiene practices.	15%	15%	15%	Program reports	Annual	Nutrition Program

Output	Indicator	Baseline (2018)	Mid-term Target (2020)	End-Term target (2022)	Data Source	Frequency of data collection	Responsible person
	Global hand washing day activity commemorated	Yes	Yes	Yes	Program Reports	Annual	Nutrition Program/WASH
Nutrition mainstreamed in education sector policies, strategies and action plans.	No. of teachers sensitized on school health programme	No Data	567	1701	Program Reports	Annual	Nutrition Program/Department of Education
	No. of parent sensitized on school health programme	No Data	850	1700	Program Reports	Annual	Nutrition Program/Department of Education
Integrated nutrition education and promotion in social protection programs	No. of vulnerable groups sensitized on nutrition	No Data	300	600	Program Reports	Annual	Nutrition Program/Social Protection Program
	No. of nutrition programmes linked to social protection	No Data	2	4	Program Reports	Annual	Nutrition Program/Social Protection Program
	No. of social protection actors sensitized on nutrition and health education.	No Data	30	60	Program Reports	Annual	Nutrition Program/Social Protection Program

KEY RESULT AREA 7: Multisectoral approach in nutrition governance (Leadership, coordination, Regulatory framework and Management) strengthened.							
Outcome	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
Improved Governance for nutrition	Proportion of nutrition policies customized to county context	No Data	50%	70%	Program Reports	Every 2 years	Nutrition program
Output	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
Efficient and effective nutrition governance, coordination and legal frameworks in place.	No. of multisectoral forum on nutrition held	1	3	5	Program Reports	Annual	Nutrition Program/Social Protection Program
	No. of nutrition stakeholders meeting held	2	6	10	Program Reports	Annual	Nutrition Program/Social Protection Program
	No.of nutrition champions identified	0	14	28	Program Reports	Annual	Nutrition Program/Social Protection Program

KEY RESULT AREA 8: Nutrition Information Systems, Learning and Research strengthened							
Outcome	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
Improved monitoring,	Increased use of sex and age disaggregated data	20%	50%	75%	Program evaluations	Every 2-3 years	Nutrition Program
evaluation research and learning for nutrition and dietetics activities	for decision making						
Output	**Indicator**	**Baseline (2018)**	**Mid-term Target (2020)**	**End-Term target (2022)**	**Data Source**	**Frequency of data collection**	**Responsible person**
Sectoral and multisectoral nutrition information systems, learning and research strengthened	No. of monthly feedback meetings held	72	216	360	Program Reports	Quarterly	Nutrition Program/M&E
	No. of health workers trained on nutrition data management	40	80	80	Program Reports	Quarterly	Nutrition Program/M&E
	No. of gender integrated nutrition surveys conducted smart and KAP survey	1	3	5	Program Reports	Every 2 Years	Nutrition Program/M&E
	No. of Nutrition data quality audits conducted	4	12	20	Program Reports	Quarterly	Nutrition Program/M&E

5 CNAP RESOURCE MOBILIZATION AND COSTING FRAMEWORK

5.1 Introduction

A good health system raises adequate revenue for health service delivery, enhances the efficiencies of management of health resources and provides the financial protection to the poor against catastrophic situations. By understanding how the health systems and services are financed, programs and resources can be better directed to strategically compliment the health financing already in place, advocate for financing of needed health priorities, and aid populations to access available health services.

Costing is a process of determining in monetary terms, the value of inputs that are required to generate an output. It involves estimating the quantity of inputs required by an activity/programme. Costing may also be described as a quantitative process, which involves estimating both operational (recurrent) costs and capital costs of a programme. The process ensures that the value of resources required to deliver services are cost effective and affordable.

This is a process that allocates costs of inputs based on each intervention and activity with an aim of achieving set goals /results. It attempts to identify what causes the cost to change (cost drivers). All costs of activities are traced and attached to the intervention or service for which the activities are performed.

The chapter describes in detail the level of resource requirements for the strategic plan period, the available resources and the gap between what is anticipated and what is required.

5.2 Costing Approach

Financial resources need for the CNAP was estimated by costing all the activities necessary to achieve each of expected outputs in each of Key Result Area (KRA). The costing of the CNAP used result-based costing to estimate the total resource need to implement the action plan for the next five years. The action plans were costed using the Activity-Based Costing (ABC) approach. The ABC uses a bottom-up, input-based approach, indicating the cost of all inputs required to achieve Strategic plan targets. ABC is a process that allocates costs of inputs based on each activity, it attempts to identify what causes the cost to change (cost drivers); All costs of activities are traced to the product or service for which the activities are performed. The premise of the methodology under the ABC approach will be as follow; (i) The activities require **inputs,** such as labour, conference hall etc.; (ii) These inputs are required in certain **quantities,** and with certain **frequencies;** (iii) It is the product of the **unit cost**, the **quantity**, and the **frequency** of the input that gave the **total input cost;** (iv) The sum of all the input costs gave the **Activity Cost.** These were added up to arrive at the **Output Cost,** the **Objective Cost,** and **eventually the budget**.

The cost over time for all the thematic areas provides important details that will initiate debate and allow County Department of Health (CDOH) and development partners to discuss priorities and decide on effective resource allocation for Nutrition.

5.3 Total Resource Requirements (2018/19 – 2022/23)

The total cost required for the implementation of this CNAP, based on the targets and unit costs for the inputs, were computed. To fully actualize the CNAP, KSh. 1.26 billion is required as shown in Table 5.1. Further annual breakdown of cost requirement (s) is also presented.

5.4 Resource Requirements

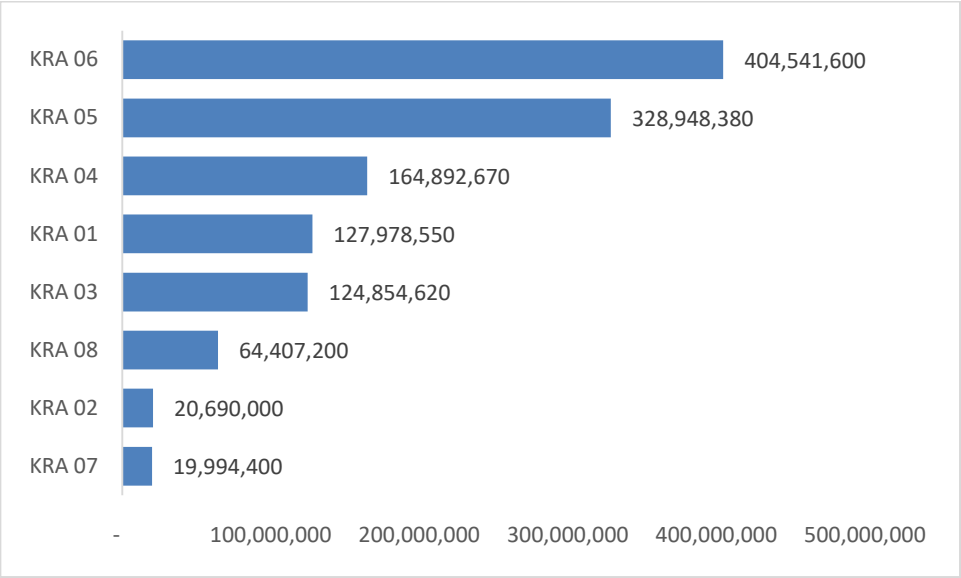
According to the costing estimates, the County department of health requires an investment worth KSh.1.26 billion for nutrition over the plan period. This further has been disaggregated by KRAs as shown in the table 5.1. In. addition, disaggregation by output and activity is presented in Appendix Table 1

TABLE 5.1: RESOURCE REQUIREMENTS

CATEGORY OF KRAs	Key Result Areas by Activities	2018/19	2019/20	2020/21	2021/22	2022/23	Total
Nutrition specific	KRA 01. Maternal, infant and young child nutrition (MIYCN) scaled up.	5,716,530	27,154,115	36,075,915	26,626,415	32,596,075	127,978,550
	KRA 02. Nutrition of older children, adolescents, adults and older persons promoted.	1,820,000	3,793,700	5,376,100	4,733,100	4,967,100	20,690,000
	KRA 03. Prevention, control and management of Micronutrient Deficiencies Scaled up	13,438,300	26,853,460	28,187,620	28,187,620	28,187,620	124,854,620
	KRA 04. Prevention, control and management of Diet Related Non-Communicable Diseases (DRNCDs) and clinical nutrition scaled up.	13,053,680	25,963,440	45,512,250	35,887,600	44,475,700	164,892,670
	KRA 05. Nutrition in Emergencies Strengthened	38,797,180	72,808,300	73,165,800	71,865,700	72,311,400	328,948,380
Nutrition sensitive	KRA 06. Nutrition in Health, Education, Agriculture, Water, Environment and Social protection sectors strengthened	3,653,600	108,101,100	106,872,100	98,012,100	87,902,700	404,541,600
Enabling Environment	KRA 07. Multisectoral approach in nutrition governance (Leadership, coordination, Regulatory framework and Management) strengthened.	498,000	4,902,200	4,846,000	4,902,200	4,846,000	19,994,400
	KRA 08. Nutrition	-	16,333,100	14,688,500	19,867,100	14,688,500	64,407,200
	Information Systems, Learning and Research strengthened						
Grand Total		**76,977,290**	**285,909,415**	**314,724,285**	**290,081,835**	**289,975,095**	**1,256,307,420**

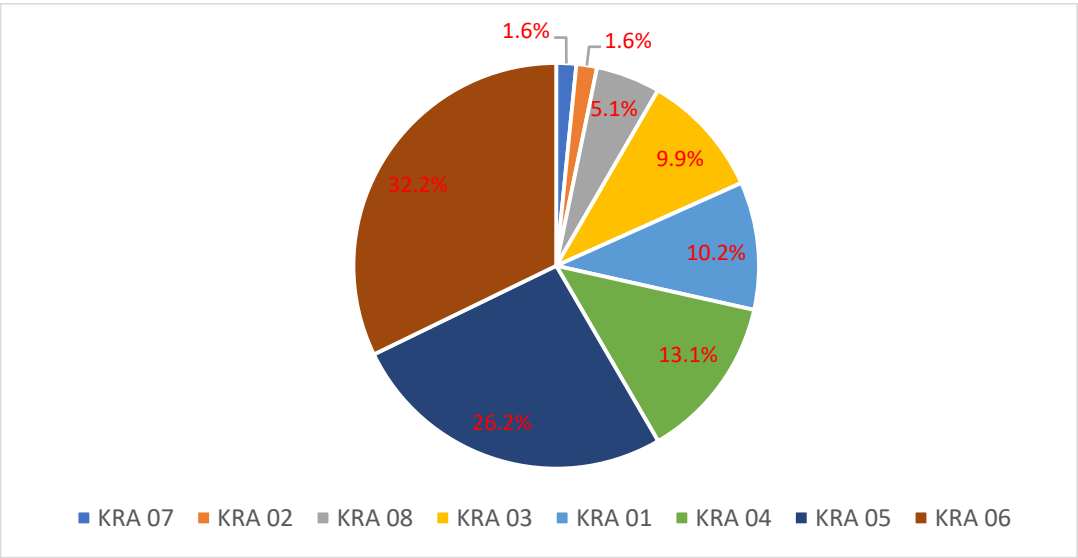
Further total breakdown of cost requirement (s) is also presented.

FIGURE 5.1: TOTAL COST REQUIREMENTS (2018/19 – 2022/23)



Analysis of the cost requirements shows that 32.2 percent of the funds are required to cater for KRA on Nutrition in Health, Education, Agriculture, Water, Environment, gender integration and Social protection sectors strengthened; 26.2 percent on KRA on Nutrition in Emergencies Strengthened; 13.1 percent on Prevention, control and management of Diet Related Non-Communicable Diseases (DRNCDs) and clinical nutrition scaled up. This breakdown has been illustrated by the pie chart that follows.

FIGURE 5.2: BREAKDOWN OF TOTAL COST PER KEY RESULT AREA(S)



5.5 Strategies to ensure available resources are sustained

5.5.1 Strategies to mobilize resources from new sources

- Lobbying for a legislative framework in the county assembly for resource mobilization and allocation
- Identification of potential donors both bilateral and multi-lateral
- Conducting stakeholder mapping
- Call the partners to a resource mobilization meeting
- Identification, appointment and accreditation of eminent persons in the community as resource mobilization good will ambassadors

5.5.2 Strategies to ensure efficiency in resource utilization

- Through planning for utilization of the allocated resources (SWOT analysis)
- Implementation plans with timelines
- Continuous monitoring of impact process indicators
- Periodic evaluation objectives if they have been achieved as planned.

REFERENCES

1. CIDP. (2018.). *Makueni County Integrated Development Plan (CIDP 2018-2022).*
2. KHIS. (2018). *Kenya Health Information Software.*
3. GOK. (2011). *Kenya Food and Nutrition Security Policy.* Nairobi.
4. GOK. *Makueni County Vision 2025.*
5. GOK, MOH. (2018). *The Kenya National Action Plan 2018-2022.*
6. IHRIS. (2019). *Integrated Human Resource Information System .*
7. KDHS. (2014). *Kenya Demographic and Health Survey.* Nairobi.
8. KHIS. (2019). *Kenya Health Information System.*
9. KNBS. (2019). *Kenya National Bureau of Statistics Census 2019 .*
10. Kenya National Bureau of Statistics (KNBS) and ICF Macro. 2016. Kenya Demographic and Health Survey 2014. Calverton, MD: KNBS and ICF Macro.
11. Min Public Health & Sanitation. (2012). *Kenya Nutrional Action Plan 2012-2017.* Nairobi.
12. MOH. (2010). *Kenya National Nutrition and Dietitics Reference Manual .* Government of Kenya.
13. MOH. (2011). *The Kenya National Micronutrient Survey.* Nairobi.
14. MOH. (2013). *Maternal, Infant and Young Child Nutrition National Operational Guidelines for Health Workers.* Nairobi.
15. MOH. (2017). *National Guidelines for Healthy Diets and Physical Activity.* Nairobi: Government of Kenya.
16. NI. (2018). *Nutririon International Programme Gender Equality Strategy.*
17. NI. (November 2018). *Nutrition International Integrating Gender Equality into Technical Assistance .* Working Draft.
18. WORLD BANK. (2016). *Why Invest in Nutrition?*

APPENDICES

ANNEX: CNAP FINANCIAL REQUIREMENT BY KRA AND ACTIVITY

Key Result Areas by Activities	2018/19	2019/20	2020/21	2021/22	2022/23	Total
KRA 01. Maternal, infant and young child nutrition (MIYCN) scaled up.	**5,716,530**	**27,154,115**	**36,075,915**	**26,626,415**	**32,596,075**	**127,978,550**
Output 1: Intensified advocacy, communication & social mobilization (ACSM) activities for improved MIYCN	**1,180,800**	**1,576,500**	**1,756,500**	**1,576,500**	**1,756,500**	**7,656,300**
Celebrate Malezi bora week	584,000	584,000	584,000	584,000	584,000	2,920,000
Celebrate world breast feeding week	456,800	456,800	456,800	456,800	456,800	2,284,000
Conduct advocacy meeting with key influencers on MIYCN prioritization	-	-	180,000	-	180,000	360,000
Conduct community dialogue days/ community action days for CHVs	-	205,200	205,200	205,200	205,200	820,800
Establish community peer to peer support groups e.g. mother to mother, father to father support groups to be used as platforms for peer to peer support and health education on MIYCN.	-	190,500	190,500	190,500	190,500	**571,500**
Conduct community health and nutrition education targeting men for their increased engagement on their role and support on MIYCN.	140,000	140,000	140,000	140,000	140,000	700,000
Output 2: Strengthened capacity of health care providers and CHVs for delivery of quality MIYCN services	**4,535,730**	**25,577,615**	**31,004,415**	**24,937,415**	**30,727,075**	**116,782,250**
Dissemination of MIYCN policies & guidelines	970,200	2,494,800	-	-	-	3,465,000

Key Result Areas by Activities	2018/19	2019/20	2020/21	2021/22	2022/23	Total
Disseminate complimentary feeding recipe book & guide to health care workers and CHVs	-	-	5,067,000	-	-	5,067,000
Sensitize managers on c-BFCI	-	247,500	247,500	247,500	247,500	990,000
Train health care workers on BFCI	-	2,059,500	2,059,500	2,059,500	2,059,500	8,238,000
Training of CHVs on c-BFCI	-	1,020,000	1,020,000	1,020,000	1,020,000	4,080,000
Training health care workers on BFHI	-	-	1,832,600	1,832,600	-	3,665,200
Conduct OJT & mentorship to health care workers on BFHI	-	320,000	140,000	140,000	140,000	740,000
Conduct mentorship and support supervision for BFCI	254,400	254,400	254,400	254,400	254,400	1,272,000
Conduct BFCI self and external assessment	-	-	101,000	101,000	101,000	303,000
Conduct BFHI self and external assessment	-	-	101,000	101,000	101,000	303,000
Train health care workers on growth standards	-	485,100	485,100	485,100	485,100	1,940,400
Procurement& distribution of anthropometric equipment	3,311,130	18,211,215	18,211,215	18,211,215	24,833,475	82,778,250
Procurement & distribution of MIYCN IEC materials	-	-	1,000,000	-	1,000,000	2,000,000
Train health care workers to effectively mainstream gender in nutrition programming for improved provision and implementation of gender responsive nutrition and health services and interventions.	-	485,100	485,100	485,100	485,100	1,940,400

Key Result Areas by Activities	2018/19	2019/20	2020/21	2021/22	2022/23	Total
Output 3: Enhanced support for breastfeeding female employees in both formal and informal sector	-	-	3,315,000	112,500	112,500	3,540,000
Establish breast feeding spaces at county HQ offices, Makueni referral and Makindu hospitals	-	-	1,717,500	-	-	1,717,500
Sensitize formal & informal day care centers on optimal nutrition care practices	-	-	112,500	112,500	112,500	337,500
Sensitize health care workers on BMS Act	-	-	1,485,000	-	-	1,485,000
KRA 02. Nutrition of older children, adolescents, adults and older persons promoted.	**1,820,000**	**3,793,700**	**5,376,100**	**4,733,100**	**4,967,100**	**20,690,000**
Output 1: Increased nutrition awareness and uptake of nutrition services for improved nutritional status of older children (5-9 years), adolescents (10-15 years), adults and older persons.	**140,000**	**912,200**	**1,745,700**	**1,102,700**	**1,336,700**	**5,237,300**
Train key stakeholders, teachers, health care workers and CHVs on healthy diets and physical activity	-	545,400	779,400	545,400	779,400	2,649,600
Training of adolescent peer educators	-	-	190,500	190,500	190,500	571,500
Conduct community outreaches to screen for NCDs.	140,000	140,000	140,000	140,000	140,000	700,000
Conduct nutrition sports days for the youth	-	-	409,000	-	-	409,000
Establish community nutrition support groups for the elderly.	-	226,800	226,800	226,800	226,800	907,200
Output 2: Increased uptake of nutrition services in schools	**1,680,000**	**2,881,500**	**3,630,400**	**3,630,400**	**3,630,400**	**15,452,700**

Key Result Areas by Activities	2018/19	2019/20	2020/21	2021/22	2022/23	Total
Disseminate school health policy and implementation framework	-	477,000	477,000	477,000	477,000	1,908,000
Conduct deworming and Vitamin A supplementation to children in ECD centers	1,680,000	1,680,000	1,680,000	1,680,000	1,680,000	8,400,000
Conduct nutrition OJT and mentorship to teachers in schools	-	549,000	549,000	549,000	549,000	2,196,000
Sensitize key stakeholders head teacher and principals on the implementation of the WIFs program	-	-	315,000	315,000	315,000	945,000
Training of School health teachers on WIFS	-	-	175,500	175,500	175,500	526,500
Procurement of the WIFs commodities	-	-	219,400	219,400	219,400	658,200
Conduct monitoring and evaluation of the implementation of the WIFs program in schools	-	-	39,000	39,000	39,000	117,000
Conduct health education sessions on Nutrition in schools	-	175,500	175,500	175,500	175,500	702,000
KRA 03. Prevention, control and management of Micronutrient Deficiencies Scaled up	**13,438,300**	**26,853,460**	**28,187,620**	**28,187,620**	**28,187,620**	**124,854,620**
Output 1: Increased uptake of micronutrient supplements	**13,438,300**	**26,853,460**	**28,187,620**	**28,187,620**	**28,187,620**	**124,854,620**
Sensitize managers and CHVs on micronutrient disease prevention and control	1,474,800	2,943,240	3,062,400	3,062,400	3,062,400	13,605,240
Sensitize health care workers on multiple micronutrient powders	-	-	1,215,000	1,215,000	1,215,000	3,645,000
Sensitize health care workers on Vitamin A logistics	990,000	1,215,000	1,215,000	1,215,000	1,215,000	5,850,000

Key Result Areas by Activities	2018/19	2019/20	2020/21	2021/22	2022/23	Total
Provision of the micronutrient supplements (Vitamin A capsules, IFAS, multiple micronutrient powders & Zinc)	5,924,000	13,924,000	13,924,000	13,924,000	13,924,000	61,620,000
Provision of documentation and reporting tools	2,046,500	2,046,500	2,046,500	2,046,500	2,046,500	10,232,500
Conduct Data Quality Audit (DQA)	-	910,000	910,000	910,000	910,000	3,640,000
Conduct supportive supervision on Micronutrient supplementation	3,003,000	4,004,000	4,004,000	4,004,000	4,004,000	19,019,000
Sensitize the CHVs and community (men and women including community leaders and other key influencers) on food fortification and on the importance of micro-nutrient supplementation for pregnant women, adolescent girls and children.	-	1,500,320	1,500,320	1,500,320	1,500,320	6,001,280
Monitor iodine in salt	-	310,400	310,400	310,400	310,400	1,241,600
KRA 04. Prevention, control and management of Diet Related Non-Communicable Diseases (DRNCDs) and clinical nutrition scaled up.	**13,053,680**	**25,963,440**	**45,512,250**	**35,887,600**	**44,475,700**	**164,892,670**
Output 1: Increased advocacy activities for prevention and control of diet related NCDs	**3,032,480**	**11,799,140**	**11,759,900**	**7,045,400**	**11,759,900**	**45,396,820**
Celebrate world diabetic day and hypertension day	947,200	947,200	947,200	947,200	947,200	4,736,000
Conduct advocacy meeting with key influencers on NCDs prioritization	-	180,000	-	-	-	180,000
Conduct integrated outreaches to screen for NCDs.	1,085,280	3,100,800	3,100,800	3,100,800	3,100,800	13,488,480
Disseminate NCDs policies & guidelines to health care workers, community and other	-	768,000	768,000	768,000	768,000	3,072,000

Key Result Areas by Activities	2018/19	2019/20	2020/21	2021/22	2022/23	Total
stakeholders targeting men and women across different ages and diversities.						
Train health care workers and CHVs on prevention and control of diabetes and hypertension	-	5,803,140	5,943,900	1,229,400	5,943,900	18,920,340
Procurement & distribution of NCDs IEC materials	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
Output 2: Scaled-up services and practices related to clinical nutrition and dietetics for disease prevention, control and management	**6,000,000**	**6,176,500**	**24,647,150**	**23,535,000**	**23,535,000**	**83,893,650**
Disseminate clinical nutrition guidelines	-	176,500	176,500	-	-	353,000
Develop and disseminate SoPs and protocols for nutrition and dietetics	-	-	1,000,000	-	-	1,000,000
Provision of IEC materials for nutrition management in diseases	-	-	1,000,000	1,000,000	1,000,000	3,000,000
Develop protocol for hospital food service	-	-	1,000,000	1,000,000	1,000,000	3,000,000
Training health care workers on post basic specialized full courses nutrition care.	-	-	13,800,000	13,800,000	13,800,000	41,400,000
Training of health care workers on specialized nutrition care short course	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	30,000,000
Conduct annual quality assurance and standards assessment for clinical nutrition services	-	-	130,650	195,000	195,000	520,650
Pilot and adopt tools for Monitoring & reporting of clinical nutrition and dietetics	-	-	1,000,000	1,000,000	1,000,000	3,000,000
Procure enteral and parenteral feeds	-	-	540,000	540,000	540,000	1,620,000
Output 3: Enhanced support for breastfeeding						

Key Result Areas by Activities	2018/19	2019/20	2020/21	2021/22	2022/23	Total
female employees in both formal and informal sector	**4,021,200**	**7,987,800**	**9,105,200**	**5,307,200**	**9,180,800**	**35,602,200**
Dissemination of nutrition in HIV guidelines	2,358,000	3,144,000	3,144,000	3,144,000	3,144,000	14,934,000
Training of health care providers on nutrition/HIV and, gender mainstreaming in nutrition services for HIV clients.	1,663,200	1,663,200	3,562,200	1,663,200	3,562,200	12,114,000
Training of health care providers on nutrition/TB and, gender mainstreaming in nutrition services for TB clients.	-	-	1,899,000	-	1,899,000	3,798,000
Provision of anthropometric equipment	-	-	500,000	500,000	500,000	1,500,000
Provision of diagnostic and anthropometric equipment	-	3,180,600	-	-	75,600	3,256,200
KRA 05. Nutrition in Emergencies Strengthened	**38,797,180**	**72,808,300**	**73,165,800**	**71,865,700**	**72,311,400**	**328,948,380**
Output 1: Increased coverage of integrated management of acute malnutrition (IMAM) services	**2,156,000**	**35,234,000**	**31,246,800**	**34,379,600**	**30,392,400**	**133,408,800**
Train health care providers on IMAM	-	3,748,360	1,335,360	2,893,960	480,960	8,458,640
Train CHVs on CMAM.	-	422,400	-	422,400	-	844,800
Scale up IMAM services	-	164,800	-	164,800	-	329,600
Conduct 288 OJTs and mentorship to health care workers on IMAM	-	480,960	480,960	480,960	480,960	1,923,840
Conduct integrated supportive supervision to facilities on IMAM	2,156,000	5,345,000	4,358,000	5,345,000	4,358,000	21,562,000

Key Result Areas by Activities	2018/19	2019/20	2020/21	2021/22	2022/23	Total
Conduct outreach nutrition services for IMAM	-	303,360	303,360	303,360	303,360	1,213,440
Link IMAM to other programmes. (Wash, social net interventions)	-	564,000	564,000	564,000	564,000	2,256,000
Procure and distribute IMAM commodities	-	24,040,320	24,040,320	24,040,320	24,040,320	96,161,280
Train CHVs and Health care workers to effectively identify, document and address underlying social cultural and economic factors contributing to malnutrition, affecting optimal adherence to IMAM services and relapse by MAM/SAM patients.	-	164,800	164,800	164,800	164,800	659,200
Output 2: Improved multi-level and multisectoral capacity for risk preparedness, reduction and mitigation against impact of disasters	**36,641,180**	**37,574,300**	**41,919,000**	**37,486,100**	**41,919,000**	**195,539,580**
Develop contingency plan (CP) and response preparedness	7,182,000	7,182,000	7,182,000	7,182,000	7,182,000	35,910,000
Upscale access to high impact nutrition interventions in emergencies through mapping beneficiaries, procuring and redistribution of commodities	19,535,400	19,535,400	19,535,400	19,535,400	19,535,400	97,677,000
Intensify case finding for notifiable diseases.	1,522,800	1,522,800	1,522,800	1,522,800	1,522,800	7,614,000
Conduct assessment and hold meetings for resource mobilization for emergency response	2,280,600	2,280,600	2,280,600	2,280,600	2,280,600	11,403,000
Train health workers on MIYCN-e	-	-	2,874,500	-	2,874,500	5,749,000
Sensitize CHVs on MIYCN-e	-	466,560	1,936,760	466,560	1,936,760	4,806,640

Key Result Areas by Activities	2018/19	2019/20	2020/21	2021/22	2022/23	Total
Sensitize communities, health workers and stakeholders on the response preparedness during emergencies	1,206,360	1,206,360	1,206,360	1,206,360	1,206,360	6,031,800
Conduct community level dialogue and recovery initiatives in emergency	4,914,020	4,914,020	4,914,020	4,825,820	4,914,020	24,481,900
Sensitize the community on the importance of increased inclusion and participation of women and youth in disaster risk reduction and recovery initiatives in emergency		466,560	466,560	466,560	466,560	1,866,240
KRA 06. Nutrition in Health, Education, Agriculture, Water, Environment and Social protection sectors strengthened	**3,653,600**	**108,101,100**	**106,872,100**	**98,012,100**	**87,902,700**	**404,541,600**
Outputs 1: Strengthened linkages between nutrition, agriculture and food security	**619,000**	**42,146,000**	**41,666,000**	**41,666,000**	**41,666,000**	**167,763,000**
Participate in the commemoration of world food day	50,600	50,600	50,600	50,600	50,600	253,000
Train farmers on production of high value nutritive foods/bio fortified foods	-	7,222,200	6,742,200	6,742,200	6,742,200	27,448,800
Train male and female farmers groups across different ages and diversity on diversification of enterprises	-	5,689,800	5,689,800	5,689,800	5,689,800	22,759,200
Train male and female farmers groups across different ages and diversity on integrated kitchen garden	-	5,689,800	5,689,800	5,689,800	5,689,800	22,759,200
Train male and female farmers groups across different ages and diversity on post-harvest management	-	5,689,800	5,689,800	5,689,800	5,689,800	22,759,200
Train Agri nutritionists, agricultural extension officers on Agri nutrition	-	2,168,800	2,168,800	2,168,800	2,168,800	8,675,200

Key Result Areas by Activities	2018/19	2019/20	2020/21	2021/22	2022/23	Total
Train male and female farmers groups across different ages and diversity on Agri nutrition	-	5,658,600	5,658,600	5,658,600	5,658,600	22,634,400
Train male and female farmers groups across different ages and diversity on utilizing diversified foods	-	75,000	75,000	75,000	75,000	300,000
Conduct joint supportive supervision on utilizing diversified foods	-	6,157,800	6,157,800	6,157,800	6,157,800	24,631,200
Conduct OJT/mentorship on IMNCI	-	936,000	936,000	936,000	936,000	3,744,000
Conduct sensitization forums targeting men and women across different ages and diversities on safe and hygienic practices during food preparation and storage	522,000	522,000	522,000	522,000	522,000	2,610,000
Conduct joint supportive supervision on production of high value nutritive foods/biofortified foods, Agri nutrition, nutrition enterprises, integrated kitchen gardening. post-harvest management, food safety and hygiene	-	2,239,200	2,239,200	2,239,200	2,239,200	8,956,800
Participate in agricultural show	46,400	46,400	46,400	46,400	46,400	232,000
Output 2: Nutrition integrated into WASH policies, strategies, plans and programs	**3,034,600**	**3,534,600**	**3,534,600**	**3,534,600**	**3,534,600**	**17,173,000**
Commemorate World Menstrual Hygiene Day	820,000	820,000	820,000	820,000	820,000	4,100,000
Participate in commemoration of world toilet day	820,000	820,000	820,000	820,000	820,000	4,100,000
Participation in commemoration of global hand washing day	350,600	350,600	350,600	350,600	350,600	1,753,000
Participate in promotion of environmental hygiene at household level	522,000	522,000	522,000	522,000	522,000	2,610,000

Key Result Areas by Activities	2018/19	2019/20	2020/21	2021/22	2022/23	Total
Participate in sensitization forums on water harvesting through farm ponds and runoff at household level	522,000	522,000	522,000	522,000	522,000	2,610,000
Integrate hand washing messages and hygiene during nutrition sessions	-	500,000	500,000	500,000	500,000	2,000,000
Output 3: Nutrition mainstreamed in education sector policies, strategies and action plans.	**-**	**18,435,600**	**18,435,600**	**8,826,600**	**5,072,400**	**50,770,200**
Sensitize CSOs, BOMs and teachers on school health programme	-	14,781,000	14,781,000	5,172,000	1,834,800	36,568,800
Sensitize food service providers and handlers on school health programme	-	434,400	434,400	434,400	17,400	1,320,600
Sensitize parents, PAs and BOMs on comprehensive school health programme.	-	2,909,400	2,909,400	2,909,400	2,909,400	11,637,600
Hold meetings with key decision makers to allocate resources towards school feeding programme	-	310,800	310,800	310,800	310,800	1,243,200
Output 4: Integration of nutrition in social protection programs strengthened	**-**	**43,984,900**	**43,235,900**	**43,984,900**	**37,629,700**	**168,835,400**
Collaborate with CHVs and SDOs (Social Development Officers) to map households receiving safety nets for sensitization on nutrition	-	853,600	853,600	853,600	853,600	3,414,400
Mapping of vulnerable household who benefit from safety nets to integrate nutrition counselling through training of CHVs	-	976,100	976,100	976,100	976,100	3,904,400
Holding sensitization meetings with OVC institutions administrators	-	506,800	506,800	506,800	506,800	2,027,200
Integrated supportive supervision on Management of Neonatal and Childhood	-	936,000	936,000	936,000	936,000	3,744,000

Key Result Areas by Activities	2018/19	2019/20	2020/21	2021/22	2022/23	Total
Illnesses (CIMNCI)						
Train CHVs on Community Integrated Management of Neonatal and Childhood Illnesses (CIMNCI)	-	1,603,000	1,603,000	1,603,000	-	4,809,000
Participate in advocating for governance and accountability for nutrition and social protection for vulnerable groups	-	573,800	100,800	573,800	100,800	1,349,200
Participate in consultative meetings to mainstream nutrition services to social protection programmes	-	276,000	-	276,000	-	552,000
sensitize the vulnerable groups (Elderly, OVCs, PWDs) on health and nutrition	-	31,167,000	31,167,000	31,167,000	31,167,000	124,668,000
Train health workers on management of childhood illnesses	-	5,047,200	5,047,200	5,047,200	1,044,000	16,185,600
Training Gender Department and social protection officers on nutrition basics and linkages to social protection programmes	-	2,045,400	2,045,400	2,045,400	2,045,400	8,181,600
KRA 07. Multisectoral approach in nutrition governance (Leadership, coordination, Regulatory framework and Management) strengthened.	**498,000**	**4,902,200**	**4,846,000**	**4,902,200**	**4,846,000**	**19,994,400**
Output: Efficient and effective nutrition governance, coordination and legal frameworks in place.	**498,000**	**4,902,200**	**4,846,000**	**4,902,200**	**4,846,000**	**19,994,400**
Hold multisectoral fora on nutrition	-	138,000	138,000	138,000	138,000	552,000
Hold periodic stakeholders' meetings	498,000	498,000	498,000	498,000	498,000	2,490,000
Map partners and stakeholders in nutrition	-					

Key Result Areas by Activities	2018/19	2019/20	2020/21	2021/22	2022/23	Total
		552,000	552,000	552,000	552,000	2,208,000
Participate in meetings to develop and implement a resource mobilization strategy for nutrition covering all aspects of resources	-	1,714,000	1,714,000	1,714,000	1,714,000	6,856,000
Participate in meetings to identify nutrition champion	-	286,200	230,000	286,200	230,000	1,032,400
Participate in meetings to strengthen mechanisms for policy, legal and regulatory framework engagement processes	-	1,714,000	1,714,000	1,714,000	1,714,000	6,856,000
KRA 08. Nutrition Information Systems, Learning and Research strengthened	**-**	**16,333,100**	**14,688,500**	**19,867,100**	**14,688,500**	**64,407,200**
Output: Sectoral and multisectoral nutrition information systems, learning and research strengthened	**-**	**16,333,100**	**14,688,500**	**19,867,100**	**14,688,500**	**64,407,200**
Conduct routine data review	-	644,000	644,000	644,000	644,000	2,576,000
Avail nutrition data collection and reporting tools.	-	1,170,000	1,170,000	1,170,000	1,170,000	4,680,000
Conduct gender responsive nutrition data quality audit	-	474,600	-	474,600	-	949,200
Conduct gender integrative nutrition KAP survey	-	-	-	2,802,000	-	2,802,000
Conduct n gender integrative nutrition smart survey	-	-	-	1,902,000	-	1,902,000
Hold sub county monthly feedback meetings	-	11,880,000	11,880,000	11,880,000	11,880,000	47,520,000
Train health workers on nutrition data management	-	994,500	994,500	994,500	994,500	3,978,000
Conduct context-based gender analysis on						

Key Result Areas by Activities	2018/19	2019/20	2020/21	2021/22	2022/23	Total
gender, age and diversity, socio-cultural and economic determinants in nutrition and health.		1,170,000				
Grand Total	**76,977,290**	**285,909,415**	**314,724,285**	**290,081,835**	**289,975,095**	**1,256,307,420**

LIST OF KEY CONTRIBUTORS:

	NAME	DESIGNATION	ORGANIZATION
1.	DR ANDREW MULWA	COUNTY EXECUTIVE COMMITTTEE MEMBER-HEALTH SERVICES	MAKUENI COUNTY
2.	DR KIBWANA M. P	CHIEF OFFICER-HEALTH SERVICES	MAKUENI COUNTY
3.	DR STEPHEN NDOLO	DIRECTOR OF MEDICAL SERVICES	MAKUENI COUNTY
4.	DAVID KIULUKU	DIRECTOR OF HEALTH PLANNING	MAKUENI COUNTY
5.	RUTH KALOKI	COUNTY NUTRITION COORDINATOR	MAKUENI COUNTY
6.	EVANS KISILU	ECONOMIST	MAKUENI COUNTY
7.	ROBERT MULI	COUNTY COORDINATOR	KENYA RED CROSS
8.	VERONICA MBITHE	SCNC	MAKUENI COUNTY
9.	STANSLOUS NDETO	CHILD HEALTH FOCAL PERSON	MAKUENI COUNTY
10.	ROSELINE K MUTUKU	CNO	MAKUENI COUNTY
11.	ANGELINE M KYUVI	Snr. ACCOUNTANT	MAKUENI COUNTY
12.	ZIPPORAH WAENI	SCSDO	MAKUENI COUNTY
13.	CHRISTOPHER MUTHAMA	CAPHO	MAKUENI COUNTY
14.	SERAH KIOKO	DIRECTOR ECDE	MAKUENI COUNTY
15.	BRETTA V. MUTISYA	CHPO	MAKUENI COUNTY
16.	ROBINSON KIARII	C.E.O	MAKUENI COUNTY
17.	DR JOACHIM MULWA	SCMOH	MAKUENI COUNTY
18.	SIMON KAVISI	CHRIO	MAKUENI COUNTY
19.	ELIZABETH WANZA MAKAU	WAO	MAKUENI COUNTY
20.	MARTIN KOOME	COUNTY PROGRAM COORDINATOR	NUTRITION INTERNATIONAL