

KITUI COUNTY NUTRITIONAL RECOMMENDATIONS BULLETIN

June 2024

POLICY BULLETIN

Providing a platform to human nutrition agency in Kitui County for the selection and adoption of aligned actionable nutritional recommendations for Uptake. Proposed by Food and Local Agricultural and Nutritional Diversity Project (FOODLAND) and University of Nairobi, Kenya- Funded by the European Union

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EXECUTIVE SUMMARY

This bulletin is a social marketing platform for novel ideas that emerge from Food Local Agriculture and Nutrition Diversity Project. The ideas are offered in the form of **94 nutritional recommendations** each looking for uptake by foster implementors. For this reason, this bulletin is widely shared to touch as many fosters as possible. The nutritional recommendations are divided into seven categories namely; micronutrient intake, diet quality, food security, behavior and change adoption, nutritional status, policy advocacy research and innovation.

Human nutrition agency is the centre of attraction for this bulletin, namely, the county government departments, national line ministries for human nutrition, development partners, non-governmental organizations, industry and manufacturers, social media (content creators and consumers), community and faith-based organizations, households and individuals. As such, this is an appeal to all human nutrition related stakeholders to adopt for implementation the NRs aligned to their operations

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1: INTRODUCTION

1.1: Food Local Agriculture and Nutrition Diversity Project

Over the past four years, the Food Local Agriculture and Nutrition Diversity (FoodLAND) project which has 28 international partners worked diligently to address the pressing issue of malnutrition in six African countries in Northern and Eastern regions, namely; Morocco, Tunisia, Ethiopia, Kenya, Uganda, and Tanzania. The Kenyan partners are University of Nairobi (UoN), Kitui Enterprise Promotion Company (KEPC) and Department of Agriculture, Livestock and Fisheries (DALF). FoodLAND's efforts culminate in a comprehensive set of distinctive 360 nutritional recommendations (NRs) of which 121 are Kenyan based. These NRs are relevant, suitable and feasible to implement in combating the diverse forms of malnutrition prevalent in the three FoodLAND project sites; ultimately striving to contribute to the fulfillment of the Sustainable Development Goals, particularly target 2.2. In Kenya, the FoodLAND sites include Nyeri, Kisumu and KITUI counties.

1.2: Purpose and Objective of the Bulletin

The purpose of this bulletin is to widely create awareness and promote increased uptake of the results in the form of the NRs generated by FoodLAND project. As such, this bulletin addresses policy and decision makers as well as implementors including communities and households. The key targets of this bulletin being the line ministries such as Ministry of Health, Ministry of Agriculture and Livestock, Ministry of Mining, Blue Economy and Maritime Affairs (specifically the State Department of the Blue Economy and Fisheries), Ministry of Education and Ministry of Labour and Social Protection. The objective of the bulletin is to package the county specific NRs in a form that is user-friendly.

1.3: Generation of Nutritional Recommendations

The techniques used in generating the NRs included; desk review, field studies and conferences, the later as a modified form of public participation. Additional NRs were generated based on the FoodLAND's developed novel food products and technological innovations. The action of generating the NRs, involved representatives of households, community groups who represent households and individuals in various forums (community health promoters/volunteers (CHP/CHV), Sub-County Community Health Focal Person (SCCHFP), government ministries that are closely aligned to human nutrition agency, UoN, KEPC and Kisumu Food Hub that draws in DALF. **The following codes; D - Direct interventions, S - Nutrition Sensitive and F – Facilitative /enabling environment align the generated nutritional recommendations with the Ministry of Health intervention categories.**

1.4: Situational Architecture Kitui County

Kitui County, otherwise referred to as county 15, is located in the Eastern side of Kenya and is roughly 160 km from Kenya's capital city, Nairobi. Its headquarters are in Kitui Central Sub-county, Kitui town. It is one of the twenty-nine (29) counties that are classified as arid and semi-arid lands with an aridity ranging from 30% to 84%. Even though some parts of the county experience a sub-humid climate, most of the areas within Kitui County experience unreliable rainfall (Kitui County Integrated plan 2018-2022, 2018). According to the population census conducted in

2019, Kitui County has a total population of 1,082,136 persons with 48.3% male and 51.7% female. Children under the age of two years make up 6.8% of the population; (50.3% male and 49.7% female) whereas more than a quarter of the population (29.2%) is made up of women of reproductive age. According to KDHS 2022, the rates of wasting, stunting, underweight and overweight are 4%, 25%, 13.9% and 4% respectively. The level of food self-sufficiency in the county is 51%; however, 10% of the entire population is absolutely food insecure (Kitui County Integrated plan 2018-2022, 2018).

According to KDHS 2022, the rates of wasting, stunting, underweight and overweight are **4%, 25%, 13.9% and 4% respectively.**

2: NUTRITIONAL RECOMMENDATIONS FOR UPTAKE IN KITUI COUNTY

2.1 Children aged below six months

2.1.1 Recommendation on iron supplementation

NR1-D¹ Give routine iron supplements drops from four months to five years of age

NR2-D Administer routine iron supplementation for low birth weight babies

NR3-D Iron supplement available in health facilities only for low birth weight babies

NR4-F² [Manufacturers to develop age-appropriate iron supplements](#)

2.1.2 Recommendations on sunbathing

NR5-D Mother and child caregivers to sunbathe a child in minimal clothing exposing maximum skin to the sun, at least 15-30 minutes twice to thrice a week

2.2 Children aged between 6-24 months reflecting the first 1000 days of life

2.2.1 Recommendation on breastfeeding

NR6-D Mothers to practice continued breastfeeding (18-24 months)

NR7-D Mothers to seek medical advice on boosting breastmilk let down from professionals.

2.2.2 Recommendations for improvement of dietary quality

NR8-D Mothers/ caregivers to increase consumption of ghee (due to its high caloric content) for management and prevention of undernutrition (wasting and underweight).

NR9-D Mothers and caregivers to diversify the diet using the recommended 8 food groups

¹ D stands for Direct interventions

² F stands for Facilitative interventions



2.2.2 Recommendations for improvement of dietary quality (Continued)

- NR10-D Mothers and caregivers to incorporate high biological value proteins to the children's diet-
- NR11-D Mothers and caregivers to increase (in variety and amounts) consumption of traditional/indigenous vegetables in the children's diet
- NR12-D Mothers/ caregivers to give children above 1-year goat milk- Due to its numerous benefits such as ease in digestibility compared to cow milk
- NR13-F Nutritionists to create awareness and provide transformational health education to all mothers about food groups.
- NR14-F More frequent household outreach by CHP to encourage consumption of more food groups, at least four
- NR15-F Conduct longitudinal studies at county level to establish iron status in the first two years of life
- NR16-F Conduct research on the consumption of milk (quantities consumed)
- NR17-F Nutritionists to teach and encourage mothers on varied nutrient dense diet (Actors: Parents/ MoH/Health facility)

2.2.3 Recommendations for improvement of iron supplementation

- NR18-D Administer routine iron supplementation to children 6 - <24 months .
- NR19-F Media to promote age-specific iron supplementation for children 0 to<5 years.
- NR20-F Manufacturers to develop age-appropriate iron supplements.

2.2.4 Recommendations towards protection of dental health

- NR21-F Health practitioners to give health education on dental health

2.2.5 Recommendations towards nutrient preservation

- NR22-F Nutritionists to conduct transformational nutrition education on proper food preparation that preserve nutrients and reduction of the intake of simple sugars



2.3 Children aged between 24 to 59 months

2.3.1 Recommendations for improvement of dietary quality

NR23-D	Mothers/ caregivers to increase consumption of ghee (due to its high caloric content) for management and prevention of undernutrition (wasting and underweight).
NR24-D	Mothers and caregivers to diversify the diet using the recommended 8 food groups
NR25-D	Mothers and caregivers to incorporate high biological value proteins to the children's diet
NR26-D	Mothers and caregivers to increase (in variety and amounts) consumption of traditional vegetables in the children's diet
NR27-D	Mothers/ caregivers to give children above 1-year goat milk- Due to its numerous benefits such as ease in digestibility compared to cow's milk
NR28-F	Nutritionists to create awareness and provide transformational health education to all mothers about food groups.
NR29-F	More frequent household outreach by CHP to encourage consumption of more food groups, at least four
NR30-F	Conduct longitudinal studies at county level to establish iron status in the first two years of life
NR31-F	Conduct research on the consumption of milk (quantities consumed)
NR32-F	Nutritionists to teach and encourage mothers on varied nutrient dense diet (Actors: Parents/ MoH/Health facility)

2.3.2 Recommendations for improvement of iron supplementation

NR33-D	Administer routine iron supplementation to children 6 - <24 months
NR34-F	Media to promote age-specific iron supplementation for children 0 to<5 years

2.3.3 Recommendations towards protection of dental health

NR35-F	Health practitioners to give health education on dental health
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2.4 Adolescents

2.4.1 Recommendations for improvement of nutrient intake

NR36-D	Adolescents to adjust the three meals a day especially breakfast to resemble a whole meal that includes high nutrient dense foods especially those of high protein biological value and high fiber content (Whole foods).
NR37-D	Adolescents to increase consumption of iron rich foods
NR38-D	Adolescents should include in their diet proteins (e.g., eggs,) at least 3 thrice weekly



Households to increase consumption of protein of high biological value- meat, poultry, fish, eggs, dairy

2.4.2 Recommendations for improvement of dietary diversity

NR38-D Households to adopt consumption of pumpkin seeds (rich in zinc, manganese and vit K).

NR39-D Households to increase consumption of protein of high biological value- meat, poultry, fish, eggs, dairy

NR40-D Households to increase consumption of macadamia nuts

NR41-D Household members to intentionally chew seeds in fruits- melon seeds, passion seeds (intentional chew and break them to aid digestion- normally people don't chew, they swallow them whole- passion seeds are rich in magnesium, potassium, vit A, & vit C).

2.4.3 Recommendations for reduction of NCDs risk

NR42-D Adolescents should drink water- 6-8 glasses (240ml)

NR43-D Adolescents to increase participation in games and sports such as soccer/ football, basketball, netball, volleyball etc.



Tape measures

To prevent and manage overweight and obesity households should have tape measures to be monitoring the size of their waistlines to ensure they do not exceed 35 inches for women and 40 inches for men.

- NR44-D Parents and caregivers to buy colourful bottles; to aid in consumption of recommended amounts of water
- NR45-D Adolescents to go for regular health screening
- NR46-D Adolescents to reduce consumption of highly processed salted snacks – crisps and sweetened beverages
- NR47-F Nutritionists to provide transformational nutrition education on importance of eating healthy, consumption of breakfast, need for eating a diversified diet
- NR48-F Nutritionists to give nutrition education on overweight and obesity

2.4.4 Recommendations for further research

- NR49-F Conduct research on nutritional status and diet quality of adolescents

2.5 Women of reproductive age

2.5.1 Improvement of birth outcomes

- NR50-D Women to go for medical testing and check-up so as to ensure all indicators are at normal before conception
- NR51-D Women to go for routine check for calcium and iron status
- NR52-D Pregnant women to go for routine check-ups

2.5.2 Improvement of dietary quality

- NR53-D Women should ensure they diversify their diet using the recommended 10 food groups; Include the use of whole grains and consumption of dark green and yellow vegetables
- NR54-D Household to provide adequate and nutritious food to teenage mothers
- NR55-D Teenage mothers to increase consumption of high biological value protein and nutrient dense foods.
- NR56-D Spouse and other household members to continuously offer support for lactating mothers.
- NR57-D Women to increase consumption of foods rich in- iodine and calcium
- NR58-F The county governments should educate and give relevant skills on diversifying sources of income to solve lack of enough food and income issues
- NR59-F Nutritionists to help teenage mothers to come up with strategies to increase calcium and iron intake



2.5.3 Recommendation on women supplementation

NR58-F The government should ensure iron and calcium supplements are made available

2.5.4 Recommendations on improvement of infrastructure

NR59-F Government to enforce law mandating employers to provide lactation rooms for lactating mothers

2.5.5 Recommendation on Introduction of new crops for households age

NR60-S Households to adopt growing and consumption of nutrient dense crops – such as quinoa. Quinoa contains all the nine essential amino acids that the body, on its own, cannot make and it is also gluten free.

NR61-S Household to revive/establish kitchen gardens (individual or households in groups).

NR62-S Household to adopt production of mala (fermented milk) and yogurt for household consumption and income generation.

2.5.6 Recommendations for improvement of livelihoods and household incomes

NR63-S Households to establish means of generating their own income to reduce dependency on remittances

2.5.7 Recommendations for innovations

NR64-S Farmers to use novel precise fruit harvesting systems- FoodLAND developed precision mango harvesting tool.

NR65-S Manufacturers to engage in transfer and multiplication of novel technologies developed by FoodLAND; cold storage, solar driers, mango harvesting tool and bio-based packaging materials

NR66-S Social media platforms to social market and promote adoption of the novel technologies developed by FoodLAND

NR67-S Research on different locally and wild growing berries- nutritional and nutraceutical value



Iron supplementation **for children <6months**

Research shows that the children aged below six months need additional iron. Therefore, a policy on routine iron supplementation is needed.

2.5.8 Recommendations for improvement of livelihoods

NR68-F	County governments and collaborative partners to promote fish farming (aquaculture) to increase production and consumption of fish. The farming can be done for example, at nyumba kumi level, women's group, men's groups etc.
NR69-F	County governments and collaborative partners to encourage increased production and consumption of ruminants and poultry; rabbits, chicken, quails, duck, turkey, guinea fowls (For rabbits- recommend the type that is kept in hutches)
NR70-F	County governments to facilitate increased production and consumption of pigs and other large animals: cattle, goats
NR71-F	County governments to promote increased consumption of mulberry fruit and leaves in the country
NR72-F	County governments to promote growing and consumption of nutrient dense crops such as quinoa
NR73-F	Build capacity on production of yogurt and mala

2.6 Adult men

2.6.1 Recommendations toward reduction of NCD risk

NR74-D	Adult men to moderate or completely abstain from consumption of alcohol and other mind-altering drugs.
NR75-D	Adult men to reduce consumption of highly processed salty foods
NR76-D	Adult men should create intention to read food labels and to act appropriately
NR78-D	Adult men to go for regular medical check-ups (e.g., blood glucose, blood pressure, prostate cancer)
NR79-D	Diversify the diet using the recommended 10 food groups (use five groups), physical exercise. Actor nutritionist.
NR80-D	Regular eye and dental check-up for appropriate action
NR81-D	The elderly to moderate and preferably abstain from alcohol consumption.
NR82-D	Elderly to integrate intake of drinking water for weight loss, good health and well-being.
NR83-D	The elderly and the caregivers to obtain for application all nutritional and aligned advice from licensed practitioners.
NR84-D	The elderly to ensure they engage in age-appropriate physical exercises for weight management, muscle toning/building and well-being.
NR85-F	Ministry to promote early screening for cancer
NR86-F	Nutritionists to encourage adult men to engage in healthy eating practices and physical exercises



NR87-F Nutritionists to provide transformative nutrition education, to adult men, on benefits of snacks consumption for informed decision and their consumption.

NR88-F Nutritionists and other health workers to sensitize adult men on the various ways of measuring physical activity performance (mobile phone apps etc.)

2.7. Households

2.7.1 Recommendations toward improvement of dietary quality

NR89-D Household members to ensure consumption of legumes (beans, cowpeas, green-grams, pigeon peas) when organ meat unaffordable

NR91-D Households to ensure consumption of locally available fruits every day.

NR92-D Give offal/ organ meat once a week

NR93-D Mothers to feed children on traditional vegetables everyday

NR94-F **Manufacturers to develop age-appropriate iron supplements**



Household members to ensure consumption of legumes (beans, cowpeas, green-grams, pigeon peas) quinoa and organ meat

Introducing quinoa growing in Kitui County

Quinoa ready for threshing

Labels

For manufacturers to embrace nutritional friendly warning labelling and consumers to read labels with the intention to act on the advice

“Excessive use of sugar intake is harmful to your health”

“Excessive salt intake is harmful to your health”

“Excessive consumption of ultra-processed snacks is harmful- avoid them”

“Excessive intake of carbonated drinks is harmful to your health”

“Excessive intake of fast foods is harmful to your health”



3: WAY FORWARD AND PARTING SHOT

As a way forward, the NRs will be shared via other channels and content related to NRs will be created; e.g. press releases, short videos, including TikTok. Advocating for inclusion of as many NRs as is feasible in the Kitui County Integrated Development Plan and County Nutrition Action Plan is another follow-up to be implemented. Relatedly, lobbying for increment in budgetary allocation for specific nutrition activities. Finally advocate for the adoption by the faith-based organizations of more nutrition impact yielding NRs.

As a parting shot, the purpose of this bulletin is to foster adoption for implementation and monitoring of these NRs in Kitui County. Selection and uptake of the NRs for implementation and monitoring would go a long way in improving the nutritional status and mitigating against non-communicable diseases in Kitui County; in addition to enhancing longevity and sustainability of the exploitable research results and products developed by the FoodLAND project.

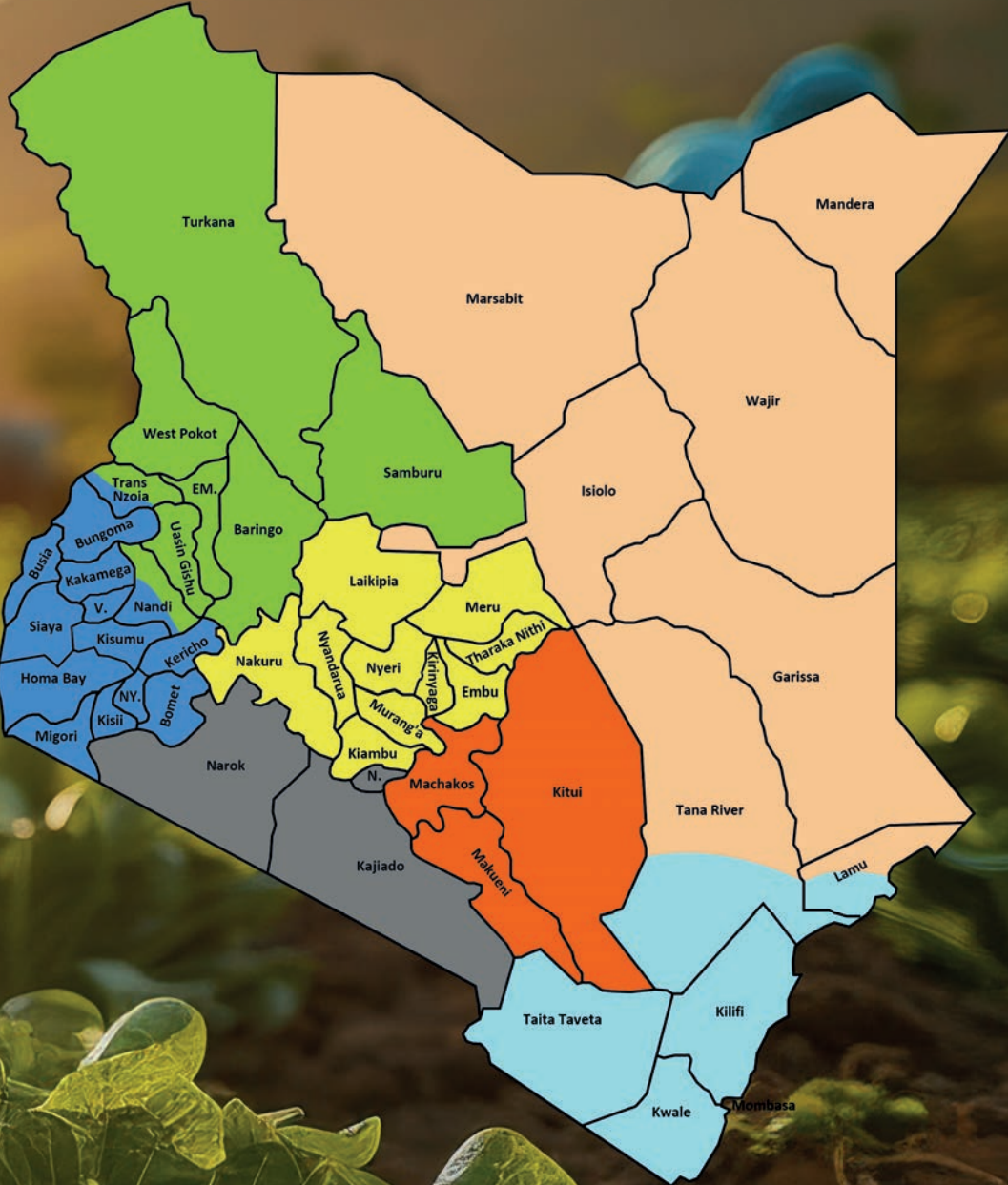
As such, this is an appeal to nutrition agency and related stakeholders to adopt for implementation the NRs aligned to their operation.

References

- i. FoodLAND D2.4- Desk review report (2022).
- ii. FoodLAND D2.6- Nutritional Recommendations (2023)
- iii. KITUI County Integrated Development Plan (2023-2027).



Kitui County...classified as arid and semi-arid lands with an aridity ranging from **30% to 84%**. Even though some parts of the county experience **a sub-humid climate**, most of the areas within Kitui County **experience unreliable rainfall.**





Enhance dietary diversity

Daily consume at least five food groups

Seven days of the week	A	B	C	D	E	F	G
Eggs	√		√		√		√
Meat, poultry and fish		√		√		√	
Pulses	√		√		√		√
Nuts and seeds (Macadamia pic)		√		√		√	
Dairy	√	√	√	√	√	√	√
Dark leafy greens and vegetables	√	√	√	√	√	√	√
Other vitamin A-rich fruits and vegetables (Avocado pic)	√	√		√	√		√
Other Vegetables	√		√		√		√
Other Fruits			√			√	
Grain, roots and tubers	√	√	√	√	√	√	√

Opt to consume nutrient dense foods:

Macadamia, groundnuts, avocado, ghee, eggs (at least four times a week)



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Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Commission.



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