

**How does Kenyan policy action for
comprehensive school food and nutrition
programmes compare with global
recommendations?**

**September
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About the Nutrition Research Facility

The Knowledge and Research for Nutrition project of the European Commission (2020-2024) aims to provide improved knowledge and evidence for policy and programme design, management and monitoring & evaluation in order to reach better nutrition outcomes.

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List of Acronyms

Acronym	Description
APHRC	African Population Health Research Centre
FAO	United Nations Food and Agriculture Organization
Food-EPI	Healthy Food Environment Policy Index
HGSMP	Home-Grown School Meals Programme
HIV	Human immunodeficiency virus
INFORMAS	International Network on Food and Obesity/NCDs Research, Monitoring and Action Support
IRD	French National Research Institute for Sustainable Development
LMICs	Low- and middle-income countries
MoE	Ministry of Education
NCDs	Non-communicable Diseases
NRF	Nutrition Research Facility
SIAA	School Interventions: which interventions are (or could be) implemented to promote nutritious diets of Adolescents living in urban Africa in the context of nutrition transition
WHO	World Health Organization
UNICEF	United Nation Children’s Fund

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Executive summary

Undernutrition rates in adolescents remain high in Kenya, while overweight and obesity are increasing. Schools have become important settings for nutrition programmes, since adolescents spend a lot of time at schools and are at an age when dietary habits are formed. The aim of this study was to assess the extent of current policy action in Kenya to understand how different global recommendations for comprehensive school food and nutrition programmes are addressed.

In a previous NRF study, we developed a framework based on a comprehensive search of global recommendations to capture all relevant elements of a comprehensive school food and nutrition programme. The identified 58 recommendations were divided into five main domains: school premises; school community; external school food environment; policy environment; and cross-cutting issues such as gender or environmental sustainability.¹ We then searched for evidence of policy action in Kenyan policy documents addressing the different domains. Websites were consulted and focal persons contacted from relevant government sectors. These documents had to meet five criteria of: i) be policy documents issued by a government body; ii) mention schools; iii) mention children or adolescents; iv) be issued by a Kenyan institution unless it was an African regional policy document, which was Kenya endorsed; and v) be published in 2010 or later. The identified global recommendations were then compared with policy actions that were formulated and adopted in Kenyan policy documents and directives.

The included 38 policy documents formulated policy actions across all the five domains and either fully or partially addressed 39 of the 58 recommendations for comprehensive school food and nutrition programmes. Good evidence was identified for policy actions targeting food safety, school health and nutrition services, nutrition education, water, sanitation and hygiene. Some policy domains were only partially addressed by policy action: food provision (increase availability of minimally processed foods in schools), promotion of healthy foods (regulate advertising of unhealthy foods/beverages in schools), physical education (ensuring it is tailored to girls and boys), school gardens (ensuring nutrient-dense foods are produced) and school policy environment (a food and nutrition policy in place). No policy actions were identified related to food prices (taxing or subsidising prices in school) or food labelling (menu board nudges, nutrient information in canteen). No policy actions were identified that targeted the external school food environment, e.g. food sold and promoted, food prices and food safety around schools.

Evidence was identified of policy action involving the school community. However, only partial evidence was found for actions to ensure the livelihood of suppliers (supporting smallholders and other actors to produce/process nutritious food), and training of the school community in nutrition. Cross-cutting issues were mainly only partially adopted in the policy documents, i.e. gender, participatory approaches, social inclusion and human rights and a trusting climate in schools. The exception was safety and violence prevention, which were fully adopted in policy. There was no evidence of adoption of policy action on private sector engagement in schools, and only one of four recommendations on environmental sustainability in school food was adopted in policy documents.

In conclusion, while we identified good commitment for actions within the school premises, more policy actions are needed to address provision of minimally processed foods in schools, regulate advertising of unhealthy foods/beverages in schools, develop school gardens and ensure physical education is tailored to girls and boys. Policy action in the external school food environment was severely lacking, with opportunities for government to regulate advertising, prices and availability of foods and beverages around schools. Evidence of policy action around prevention of undernutrition was more widespread, whereas policy action for schools related to healthy diets and obesity prevention seemed to be less widely adopted. Given the climate crisis, the need to consider the environmental sustainability of school food needs to be highlighted. There is potential for the government to act across several areas: food procurement incorporating traditional foods, ensuring plant-based meals are provided and introducing food waste targets for schools. This may be because these are more recent food and nutritional challenges, so are yet to filter through into school food policy making.

Table 1. Overview of evidence in Kenyan policy documents for adopting recommendations for school food & nutrition programmes*

Recommendations from reviewed literature ¹	Evidence of policy action (adoption) from Kenyan policy documents
1. School premises	
Food provision	Partial
R1. Promote healthy diets by increasing availability and access to a diverse range of minimally processed foods provided on the entire school premises while limiting access to unhealthy foods or beverages defined by (meal-, food- and/or nutrient-based) standards or guidelines.	Partial ^{102,105,111,112,137}
R2. Ensure that food procurement is as local, seasonal and culturally appropriate as possible.	Yes ^{103,106,112}
R3. Provide access to adequate, safe, clean eating spaces.	No
Food promotion	Partial
R4. Regulate advertising of unhealthy foods and beverages on school premises.	Partial ¹³⁷
R5. Promote healthy foods and nutritious diets using innovative communication tools tailored to young people.	Yes ¹⁰⁶
Food prices	No
R6. Tax or manipulate prices at school to make unhealthy foods more expensive.	No
R7. Subsidise or manipulate prices at school to make healthy foods cheaper or free.	No
Food labelling	No
R8. Combine menu board labelling system in school canteens with nudges towards healthier options.	No
R9. Display nutrition information, such as calorie content of food available in the school cafeteria, which is easy to understand.	No
Food safety	Yes
R10. Define food safety school standards that are in line with national food safety legislation.	Yes ^{103,106,112,120}
R11. Ensure that food handlers on school premises are trained and educated and have certificates in food safety and hygiene.	Yes ^{102,103}
R12. Ensure safety and hygiene in all areas where food is stored, prepared or sold.	Yes ¹⁰³
School health and nutrition services	Yes
R13. Deliver high-impact health and nutrition interventions to children and adolescents at schools through periodical visits or health care staff present at school (e.g. anthropometric monitoring, counselling, micronutrient supplements or deworming).	Yes ^{102,103,106,108,111,112,113,126,127,128,130,131,132,133,137}
R14. Set up referral systems and partnerships with local health services.	Yes ^{102,103,131}
R15. Involve parents with information, counselling and feedback systems about nutrition screening of students.	Yes ^{131,132}
Nutrition education	Yes
R16. Deliver mandatory, regular, culturally-appropriate nutrition education to students as part of classroom curricula through trained staff or nutrition experts and ensure consistency with food provision.	Yes ^{102,106,107,108,111,112,125,129,137}
R17. Integrate food and nutrition education throughout the school system and include it in extra-curricular activities, such as school gardens or community activities.	Yes ^{102,103,108,116,127,129,137}
R18. Include a range of topics in nutrition education, such as healthy eating practices, food systems and food environment by providing theory, strengthening practical competencies, using interactive learning strategies.	Partial ^{102,111,112,129,124,131}
Physical education	Partial
R19. Provide age-, sex-, disability- and culturally-appropriate physical education in the curriculum through qualified teachers.	Yes ^{108,125}

R20. Provide safe, spacious and clean spaces for indoor and outdoor physical activity.	Yes ^{106,111,137}
R21. Provide the opportunity for all age groups to access space and school sporting facilities for physical activity outside of the curriculum.	Yes ^{103, 108,137}
R22. Ensure that physical education meets the needs and interests of all students and is tailored to boys and girls and associated with fun, not punishment.	Partial ¹⁰⁷
R23. Advocate for walking and/or cycling as forms of transport for school commutes.	No
Water, sanitation and hygiene	Yes
R24. Ensure that safe drinking water is always available and easily accessible throughout the school premises and free of charge.	Yes ^{103,106,117,129,137}
R25. Ensure access to appropriate hand washing, personal hygiene and sanitation facilities with running water and soap to all students, especially close to toilets.	Yes ^{106,117,120}
R26. Make clean, age- and gender-appropriate sanitation facilities and products (including menstrual supplies) available and easily accessible to all students.	Yes ^{103,106,107,120,133,134,135,137}
R27. Promote safe hygiene and sanitary behaviour.	Yes ^{103,106,117 ,137}
School gardens	Partial
R28. Use school or urban gardens as a learning platform that can support school-based food and nutrition education.	Yes ^{100, 102, 103, 112, 115, 129}
R29. Ensure that food from school gardens is nutrient-dense.	No
2. School community	
Community involvement	Yes
R30. Raise and build awareness about healthy diets to improve diets of the wider community.	Yes ^{103,106,112,126,137}
R31. Ensure community mobilisation, ownership and involvement in the food and nutrition programme.	Yes ^{103,112}
Capacity development and training of the school community	Partial
R32. Strengthen capacity of school staff, vendors and suppliers to implement school food/nutrition activities.	Yes ^{102,103,112,137}
R33. Make training manuals/guidelines available and accessible for staff.	No
R34. Provide health screening for school staff and give free counselling.	No
Livelihood of suppliers	Partial
R35. Procure food for school food programmes from local farmers.	Yes ¹¹²
R36. Strengthen the capacities of smallholder farmers to produce nutritious food.	Partial ¹¹²
R37. Incentivise nutrition-sensitive value-chain actors to produce and process high-quality food for schools.	No
3. External food environment	
Food provision	No
R38. Limit exposure to unhealthy food outside the school premises by defining zones or public planning laws promoting healthy zones within a certain perimeter of school grounds in which unhealthy foods should not be sold.	No
Food promotion	No
R39. Regulate the promotion, marketing and advertising of foods, snacks and beverages high in energy, sugar, fat and salt around schools.	No
Food prices	No
No global recommendation identified	No
Food labelling	No
No global recommendation identified	No
Food safety	No
No global recommendation identified	No

4. School policy environment	
School food and nutrition policy or institutional framework	Partial
R40. Put in place a school policy which addresses actions related to food and nutrition.	No
R41. Set up a school committee including the whole school community to routinely discuss policy implementation, monitoring and financing related to food and nutrition.	Yes ^{106,112,137}
5. Cross-cutting issues	
Gender sensitivity	Partial
R42. Ensure equal access to education, activities and services for girls and boys.	Yes ^{106,107,109,128,133,134,135}
R43. Encourage equal involvement of women in school food and nutrition programmes as cooks, farmers or programme managers without overburdening them.	Partial ¹⁰⁷
Participation	Partial
R44. Involve students in the design, development and implementation of school food and nutrition projects.	Yes ^{106,116,117,118}
R45. Facilitate students-led projects on food and nutrition.	Partial ¹⁰⁰
Social inclusion and human rights	Partial
R46. Take affirmative action against bullying, stigmatisation and discrimination.	Partial ^{106,107,128}
R47. Ensure that all students have access to a full, healthy, free or subsidised meals and education for all in line with rights-based and inequality sensitive approaches.	Partial ^{106,112}
Environmental sustainability	Partial
R48. Ensure environmental sustainability of food procurement by considering the use of traditional, neglected and underutilised foods.	No
R49. Promote sustainable diets, e.g. by setting limits on the number of servings or by requiring a set number of plant-based meals.	No
R50. Set criteria for reducing food loss and waste.	No
R51. Encourage fuel and energy saving.	Yes ^{112,124}
Safety and violence prevention	Yes
R52. Put in place rules and guidelines for staff and students related to physical safety, corporal punishment of students by teachers, fighting and other forms of violence and sexual harassment or substance abuse.	Yes ^{103,106,107,130,133,137}
R53. Trained teachers to monitor, administer and teach first aid and basic safety.	Yes ¹⁰⁶
Private sector engagement	No
R54. Monitor the involvement of the private sector in school food and nutrition activities to ensure it promotes nutritious school meals.	No
R55. Ensure that the private sector is not involved in the development of a school food and nutrition policy or a member of the school committee.	No
Friendly, trusting climate at school	Partial
R56. Promote good and equitable relationships between students and staff, as well as with families and the wider community.	Yes ^{107,118}
R57. Promote open and dynamic communication and interactions between all school community members.	No
R58. Avoid overburdening communities, parents, teachers and school staff with participation in school food/nutrition programmes.	No

*"yes": evidence was identified for every recommendation under a certain category, "partial": evidence was found for some of the recommendations; "no": no evidence was found for any of the recommendations.

Preface

This report was prepared as one of the deliverables of the research study “*School interventions: which Interventions are (or could be) implemented to promote nutritious diets of Adolescents living in urban Africa in the context of nutrition transition (SIAA)*”. This research study has been framed by the Nutrition Research Facility (NRF), as part of the Knowledge and Research for Nutrition project of the European Commission, following a consultation of decision-makers in East and West Africa from which emerged priority research questions, including this one.² The SIAA research study is implemented by the French National Research Institute for Sustainable Development (IRD) and the African Population Health Research Centre (APHRC).

The overall aim of the SIAA research study is to identify which interventions are (or could be) implemented to promote healthy diets and ultimately prevent overweight/obesity and micronutrient deficiencies in adolescents aged 14-18 years old. The context of urban environments in Kenya was chosen as a case study.

The SIAA study focuses on three main objectives:

1. Map the extent of current implementation of a comprehensive school food and nutrition programme to improve school food environments, compared to international good practice indicators.
2. Identify the challenges to the implementation of a comprehensive school food and nutrition programme.
3. Identify how emerging challenges can be addressed in new and/or improved interventions to improve school food environments.

A review of the literature was conducted as part of the first objective of this project to identify good practice indicators for comprehensive school food and nutrition programmes.¹ Using these indicators, this current review of Kenyan policy documents was conducted to identify evidence that policy actions have been adopted related to these indicators in Kenyan policy documents.

The aim of this report was to assess the extent of current policy action in Kenya to understand how different global recommendations for comprehensive school food and nutrition programmes are addressed.

Introduction

Nutrition situation of adolescents in Kenya

Undernutrition rates in adolescents remain high in Sub-Saharan Africa, while overweight and obesity are increasing.³ While the causes of overweight and obesity are complex, an unhealthy diet remains one of the key contributors, with data from the last 10 years showing that diets have only improved marginally.³ The diets of adolescents in low- and middle-income countries (LMICs) are also reported to be inadequate, predominantly cereal-based and limited in terms of animal-sourced foods, fruit and vegetables.⁴ Particularly in urban areas, an increased consumption of processed energy-dense and nutrient-poor foods and drinks has been reported.⁴

Schools as a setting for public health nutrition promotion

Children and adolescents spend a lot of time at school.^{5,6} Furthermore, schools are an important setting to reach children at an age when dietary habits are formed. Nutritious school food and school-based nutrition education can also influence families, the school community and be a channel for wider community participation.

Schools have therefore become important settings for nutrition programmes. However, until recently the focus of school interventions in Africa (and LMICs in general) has mainly focused on school feeding to increase enrolment or prevent acute or chronic undernutrition, rather than on comprehensive approaches that include the whole school food environment and community⁷ that address multiple burdens of malnutrition. Comprehensive school food and nutrition programmes can promote healthy food consumption in several ways: i) *controlling the availability of foods/beverages* sold or provided-type/portion size; ii) *introducing nutrition standards* for school meals or other foods sold in school; iii) *applying price interventions*, such as free or subsidised fruit and vegetables, or higher prices of energy-dense, nutrient-poor foods; iv) *engaging with family and the school community*; and v) *providing school nutrition/health services* that include water and sanitation, as well as micronutrient supplementation.⁷⁻⁹ A comprehensive school policy can therefore aim to reduce access to unhealthy foods, as well as encourage provision of healthier food.^{8,9}

Good practice indicators for school food and nutrition programmes

As part of the SIAA research project, a literature review of good practice indicators for school food and nutrition programmes was conducted prior the current review.¹ As part of that review, recommendations and indicators were identified from 63 - global level - policy documents and scientific publications. Recommendations were identified for actions addressing the school premises, the school community, the external school food environment, the school policy environment and cross-cutting considerations related to gender, participation, social inclusion and human rights, environmental sustainability, safety and violence prevention, private sector engagement and friendly, trusting climate at school. For the current review, the identified recommendations were compared with policy actions that have been adopted in Kenyan policy. As part of this report we were unable to assess if the policy actions outlined in these documents have been implemented in schools. However, for another activity of this project, the status of implementation of policies and programmes in selected schools will be assessed. The appraisal of policy documents allows us to assess whether policy has been adopted, which relates to step 3 of the policy cycle, i.e. the policy process is often described as consisting of five steps: step 1 agenda-setting, step 2 formulation, step 3 adoption, step 4 implementation, and step 5 evaluation.¹⁰

Background on schools in Kenya

School system and enrolment in Kenya

The Constitution of Kenya provides for children's right to free and compulsory basic education, including quality services, and access to educational institutions and facilities for persons with disabilities.¹¹ In 2019, Kenya's population was estimated at 47.6 million people, of which 36% are children of school going age (4 to 17 years).¹² By 2022, the country had roughly 31,200 and 1,250 public primary and secondary schools respectively.¹³ The school enrolment rateⁱ is higher for primary education compared with secondary education (81% vs 69%).¹⁴ In comparison, average enrolment rates in SSA are 99% for primary and 36% for secondary education.¹⁵

The provision of education services is the mandate of the Government's Ministry of Education (MoE), which is responsible for formulating and implementing education and training policies, standards, curricula, among others. Its functions are split between national and county governments. The National Government focuses on primary, secondary and higher education and research institutions. It is also responsible for policy, standards, curriculum, examinations and promotion of sports and sports education. The County Government on the other hand focuses on pre-primary education, village polytechnics providing vocational training in rural areas, home-craft centres, farmers' training centres and childcare facilities.¹³ The MoE also undertakes intra sectoral linkages, working closely with other government ministries and stakeholders to implement its mandate. Examples include the Ministry of Agriculture and Livestock Development, Lands, Housing and Urban Development, Energy, Information, Communication and Digital Economy, Health among others.¹⁶ From 1985 to 2017, the public education system in Kenya followed the 8-4-4 system which consisted of 8 years in primary school, 4 years in secondary school and 4 years in tertiary school; however, in 2017, it transitioned to the competency based curriculum system which consists of 6 years in primary school, 3 years in junior high school and 3 years in senior high school and 4 years in the university.¹⁷

Although there is roughly equal enrolment of girls and boys in primary schools in Kenya, there is a wider gender gap in secondary school (54% boys vs 46% girls)¹⁴. Very low enrolment and completion rates have been reported among the poorest quintile group, especially in the arid and semi-arid lands areas and informal urban settlements. A group of counties in the north and east of Kenya (Mandera, Turkana, Garissa and Wajir) have poorer enrolment and completion indicators, especially for girls. Wajir, for example, enrolls only about 14% of girls living there.¹³⁰ Enrolment of girls can be affected by menstruation, but also early pregnancies; studies have shown that girls from poor families can miss 20% of school days in a year due to lack of sanitary towels and about 13,000 girls drop out of school annually in Kenya due to early and unintended pregnancy.¹⁰⁹

School food and nutrition programmes in Kenya

The Government of Kenya initiated the **School Meal Programme** in 1980 in collaboration with development partners and, since then, school meals have remained an important development intervention in the country. Initially, the programme was providing a mid-day meal to public primary school children in Arid and Semi-Arid Sub-Counties and the informal settlements of Nairobi.

Since 2009, Kenya has introduced a more sustainable and nationally-owned **Home-Grown School Meals Programme** (HGSMP), prioritizing the local food supply to schools. Under the HGSMP, the Government disburses funds directly to schools and provides guidelines in key aspects of school meals, such as the nutritional composition of food baskets, adequate procurement processes and monitoring/evaluation.

The **Njaa Marufuku Kenya Programme** was launched by the Ministry of Agriculture in 2005 and aimed to improve agricultural development. The programme aims to increase food availability through small grants provided to community groups for scaling up agricultural activities, such as irrigation, high value crops, value addition, livestock; while also supporting community-level nutrition and school meals initiatives. One

ⁱ The net enrolment rate is the number of boys and girls of the age of a particular level of education that are enrolled in that level of education, expressed as a percentage of the total population in that age group

of its key achievements was the link between school meals and provision of training for smallholder farmers to improve their access to these markets.

Procurement of food for school meals in Kenya can take place through direct supply of internationally or locally procured food to schools either through the government or a delegated institution (centralised modality). Schools can also receive funds to organise purchases themselves, often through local smallholder farmers (decentralised modality). The decentralised modality is widely used in Kenya.¹¹² Procurement can also be outsourced to catering services, contracted by the school or the government or food could be procured through community-based initiatives. In the latter case, parents contribute food or money to purchase food.¹¹²

Aim of this review

The aim of this review was to assess the extent of current policy action in Kenya to understand how different global recommendations for comprehensive school food and nutrition programmes are addressed.

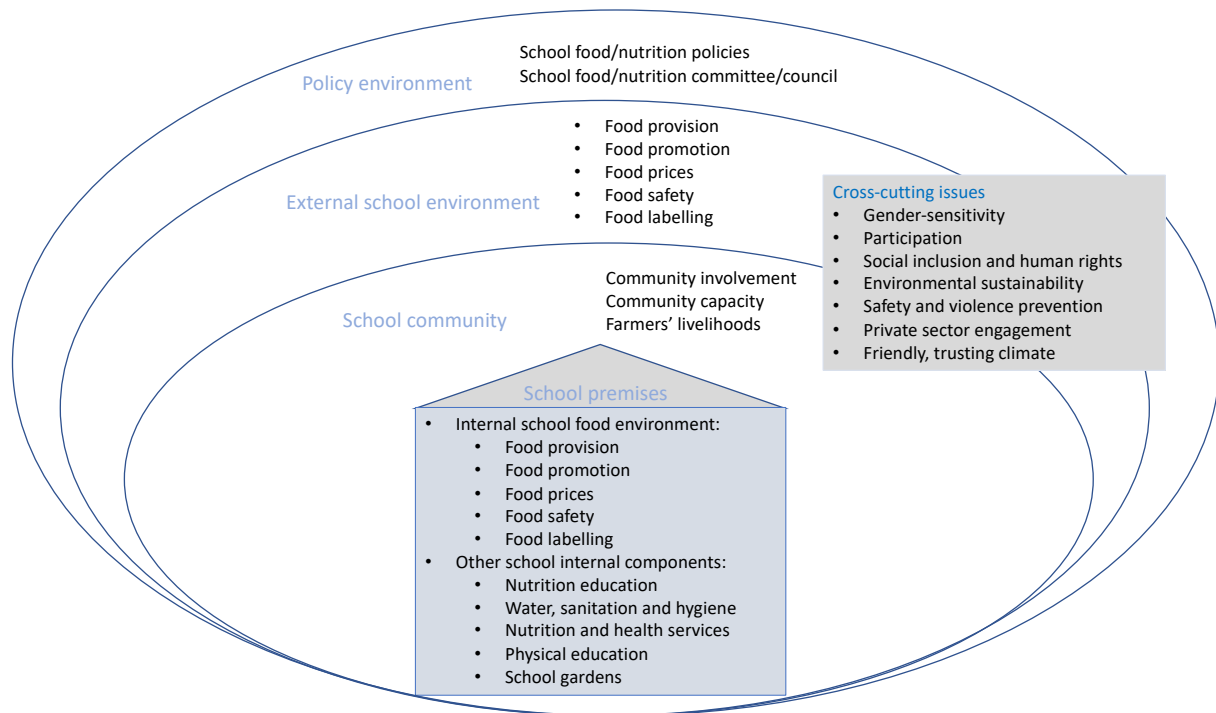
Method

Framework for this policy review

The Food-EPI framework for benchmarking food environment policies developed by INFORMAS (International Network on Food and Obesity/NCDs Research, Monitoring and Action Support), which has been adapted to Kenya, was used to guide this review.¹⁸ In addition, other frameworks were considered with regard to the school food environment,^{19,20} school food and nutrition programmes^{21–25} or specific components of these programmes such as: the home-grown school feeding programme,²⁶ the food environment in general^{27–29} or school food and nutrition interventions^{30–33}. The framework developed here includes relevant elements of a comprehensive school food and nutrition programme. The school food environment is separated into the *internal school food environment*, which refers to the physical environment within the walls of the school and the *external food environment*, which refers to the physical space outside the school premises. The rationale behind this division is that provision of services, as well as policy actions, might be addressed by different sectors and institutions depending on whether the setting is the school or the general community. The framework is divided into five main domains:

1. School premises: encompasses the internal food environment on the school premises, availability of a school garden, water, sanitation and hygiene facilities and services, health and nutrition services, physical education and nutrition education.
2. School community: includes teachers, parents, caregivers, other staff working at school, such as vendors or school food service staff, health workers, etc.
3. External school food environment: includes all components of the food environment outside the school premises.
4. Policy environment: encompasses availability and content of school nutrition policies and committees or teams responsible for nutrition.
5. Cross-cutting issues: include considerations of gender sensitivity, participation, social inclusion and human rights, environmental sustainability, safety and violence prevention, private sector engagement and friendly, trusting climate at school.

Figure 1: Proposed framework for comprehensive school food and nutrition programmes



Policy document collection and selection

In order to identify policy documents addressing all domains of the above framework, we searched documents from 21 relevant ministries: Education, Health, Agriculture and Livestock Development, Public Service, Gender and Affirmative Action, Water and Sanitation, etc. See Annex 1 for the list of all ministries from which we searched the websites and/or contacted respective focal persons for relevant documents.

The policy documents were outputs of decision-making in the form of published strategies, plans or policies and included legal outputs (regulations or directives), documents stating overarching government plans (policies and strategies) and sectoral documents proposing policy actions to implement policy goals (sectoral strategies, action plans, programme documents or guidelines).³⁴ In these policy documents actions have been formulated and adopted by respective government sectors. Our review therefore focuses on the stages of the policy cycle of policy adoption based on the information identified in adopted policy documents.¹⁰

This search resulted in 140 documents, of which one was only available in hardcopy.

Policy documents were screened and had to meet five criteria of: i) be policy documents issued by a government body; ii) mention schools; iii) mention children or adolescents; iv) be issued by a Kenyan institution unless it was an African regional policy document, which was endorsed by Kenya: and v) be published in 2010 or later. The policy actions outlined in the Kenyan policy documents were then compared with the identified global recommendations outlined above.¹ If a relevant document was issued after 2010, but replaced with an updated policy, only the most recent policy document was included. For instance, the National Nutrition Action Plan 2012-2017 was updated in 2018. We therefore only included the more recent one. After screening the documents, 38 documents remained for inclusion in this review.

Data extraction and synthesis

The included policy documents were all carefully reviewed, and the following descriptive information was extracted: year of publication, issuing institution(s), type of document (policy, action plan, strategy, guideline, law), main goal and goal specific to school food and nutrition. With regard to the good practice indicators identified previously, data were extracted for each of the following elements: i) *School premises*: food provision, promotion, prices, safety, and labelling, nutrition education, water, sanitation and hygiene,

nutrition and health services, physical education and school gardens; ii) *School community*: involvement, capacity building (of teachers or wider community), livelihoods of supplying farmers; iii) *External food environment*: food provision, promotion, prices, safety and labelling, iv) *School policy environment*: school food and nutrition policy and committee or council; and v) *Cross-cutting issues*: gender sensitivity, participation, social inclusion and human rights, environmental sustainability, safety and violence prevention, private sector engagement and friendly, trusting environment. In addition, school food and nutrition relevant indicators proposed in the policy documents were extracted.

Extracted data were then described, summarized and compared with the recommendations summarised in the framework¹ based on global documents. If all global recommendations were addressed, we categorized it as “yes”, meaning that the recommendation was fully addressed in Kenyan policy documents. If only some recommendations were addressed in the national documents for a specific domain, it was categorized as “partial”. In case no policy action was identified from Kenyan policy documents on a specific programme domain, we therefore classified it as “no” evidence. This approach has been applied previously using the WHO Double Duty Actions for the double burden of malnutrition in the Pacific.³⁵

Findings

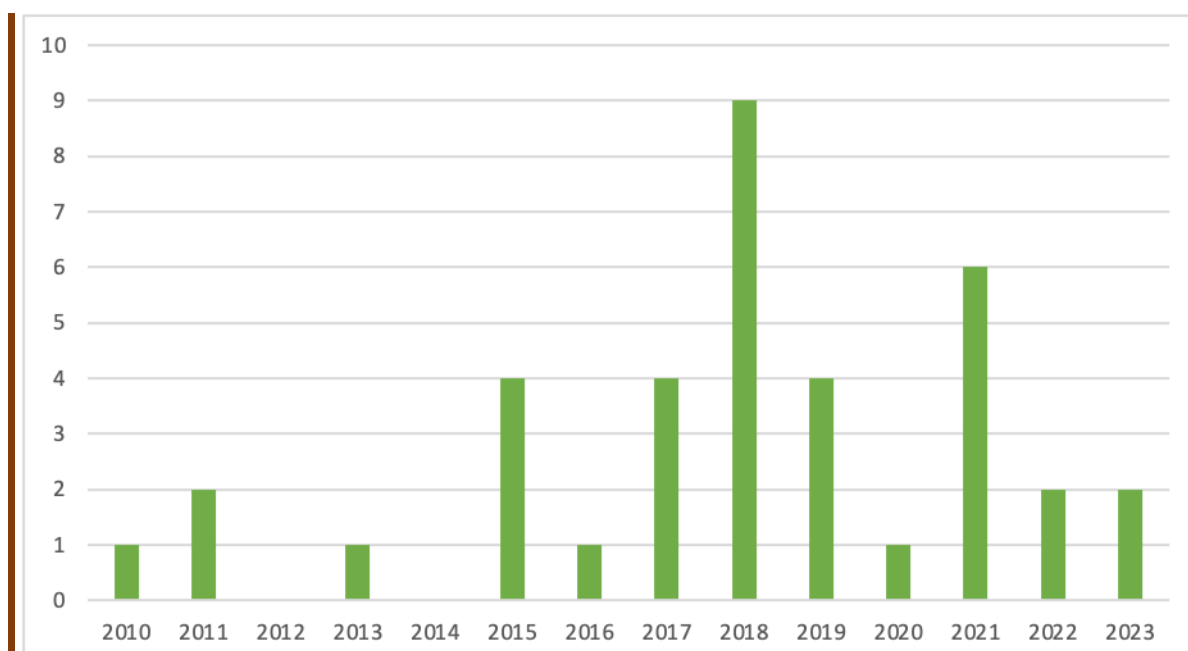
Description of included policy documents

The included 38 documents comprised: policies (n=12), guidelines or implementation frameworks (n=9), (action) plans (n=7), strategies (n=5), manifestos or policy statements (n=3), laws (n=1) and a budget plan (n=1).

With regard to the different Government ministries, most policy documents were issued by the Ministry of Health (n=10), followed by the Ministry of Education (n=9) and the Ministry of Agriculture and Livestock Development (n=4). Ministries responsible for Public Service, Gender and Affirmative Action, Environment and Forestry, Roads, Transport and Public Works and Energy each published one or two documents, which we included in the review. Four documents were published by National Councils and three were authored by no specific ministry, but by the Republic of Kenya.

All but one document from Kisumu county were documents with a national focus. More policy documents were published in the last 6 years (2018- 2023), compared with the previous period (2010-17), i.e. n=13 vs n=23 (see Fig 2.) From one document, the year of publication was not provided.

Figure 2. Number of policy documents published per year (n=37)



Recognised challenges and opportunities in the policy documents

Policy documents, especially from the health and education sector, reported that malnutrition in early childhood can affect school enrolment, attendance, attentiveness, concentration, aptitude and overall performance and have economic and productivity impacts on individuals, households and the whole country.^{102,106,108,112, 129} Good nutrition in turn was recognised as essential to realise the learning potential of children and to maximise returns on educational investments and economic development.^{102,106,108,112,129} Improving access to safe drinking water, sanitation facilities and menstrual hygiene management were also recognised as important for enrolment and retention in school, especially of girls.¹²⁰

Schools were also considered as an ideal setting to promote good health and nutrition as they can reach a high proportion of children and adolescents.^{102,106,110,112} Policy documents recognised adolescence as a critical time when children become more independent in their dietary choices, but are also vulnerable to peer pressure, media and food marketing, especially in relation to body image and marketing of foods high in salt, sugar and/or fats, promoting unhealthy dietary habits, due to the increasing time they spend at school.^{106,129} Dietary behaviours formed at that age can continue into adulthood and affect the health of adolescents as well as of future generations.¹²⁹ The Kenyan National Nutrition Action Plan 2018 also recognised this nutritional urgency in urban areas, where unhealthy foods are more readily available to children.¹²⁹

While policy documents recognised the burden of stunting, wasting and underweight in children, only two documents also reflected on the emerging problem of overweight and obesity and nutrition-related non-communicable diseases, especially in urban areas.^{104,112}

Goal setting of the policy documents

The overall goals of most policy documents were either related to the health or nutritional situation of the whole Kenyan population (n=5) or were specifically tailored to adolescents' (reproductive) health or empowerment (n=6) or specific to school health or nutrition (n=6). Other documents aimed to improve agriculture, gender inequalities, alcohol consumption, economic inclusion, environmental sustainability, with some school- or adolescent-specific actions.

Findings for specific school food and nutrition programme elements

The school premises

The definition of school premises for the purpose of this report entails any food and nutrition related activities within the walls of the school, including the internal food environment, availability of school gardens, water, sanitation, and hygiene facilities and services, health and nutrition services, physical education, and nutrition curriculum.

Food provision in the internal school food environment

Food provision refers to any foods or beverages offered on the school premises as part of the cafeteria, vendors, or kiosks but also food provided through specific programmes such as school feeding.

Table 2. Food provision recommendations

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R1. Promote healthy diets by increasing availability and access to a diverse range of minimally processed foods provided on the entire school premises while limiting access to unhealthy foods or beverages defined by (meal-, food- and/or nutrient-based) standards or guidelines.	Partial ^{102,105,111,112,137}
R2. Ensure that food procurement is as local, seasonal and culturally appropriate as possible.	Yes ^{103,106,112}
R3. Provide access to adequate, safe, clean eating spaces.	No

R1. Policy documents referred to the importance of school meals with regard to the nutrients the meals should provide and the evidence that school meals have a positive effect on education indicators, as well as a positive contribution to reducing hunger and improving nutritional intake and enrolment.^{102,112,129} The National School Meals and Nutrition Strategy stated that “*school meals should not only strive to alleviate short-term hunger but should also meet the nutritional needs of children*”.¹¹² Only one document referred to food provision beyond school meals, proposing to “*promote healthy snacks in food outlets within the school*”.¹³⁷

School meals should be adequate in terms of quality and quantity,^{103,237} which should cover a third of daily requirements of macro and micronutrients.¹¹² With regard to macronutrients, the National School Meals and Nutrition Strategy specified the following: “*School meal rations should provide adequate amounts of fats, carbohydrates and proteins*” meeting the requirements of students.^{111,112} Public health concern relating to micronutrient deficiencies (iron, iodine and vitamin A) was also mentioned in policy documents, i.e. school meal programmes should take them into account by providing micronutrient rich foods, such as fruit and vegetables and other plant-based foods.^{102,112} Policy documents also emphasized the importance of diversity of a healthy diet.^{112,137}

Table 3 shows the minimum school meal composition recommended for one school meal to ensure a healthy diet and prevent malnutrition,¹¹² which was also supported by national guidelines stating that school meals should provide nutritious meals from at least two food groups, including a staple, a protein rich food and a fruit and/or vegetable. However, the latter does not include quantified targets, stating more loosely that these should be available “*as often as possible*”.¹¹² Indeed, the Kenya Kwanza Manifesto 2022 called for compulsory lunch time meals in all schools from pre-school to tertiary level and compulsory daily fruit for all students across all levels of education.¹⁰⁵

Table 3. Recommended minimum school meal composition¹¹²

Food group	Amount
Staples: cereals and root crops: cassava, maize, rice, sorghum, millet, sweet potato, yam, Irish potato, bread and chapatti	~150 g per child per school day
Protein sources and possible substitutes: eggs, pulses (beans, lentils, pigeon peas, cow peas etc.), meat, groundnuts	~40 g per child per school day
Dairy	½ to 1 cup per school day
Vegetable oil	~5 g per child per school day
Iodized Salt	~3 g per child per school day
Complementary rations of fresh fruits and vegetables	1 cup as often as possible ½ cup cooked or 1 cup fresh as often as possible
When school meals do not suffice, micronutrient powders can be added to cooked school meals.	

The National Guidelines for Healthy Diets and Physical activity proposed that a healthy nutritious meal at schools could contain: “*milk, sandwiches, fruits (banana, orange), fresh fruit juices, vegetables (carrots, tomatoes, sweet potatoes, arrow roots), ground nuts and water*.”¹¹¹ With regards to liquids, the guidelines stated “*A child at this age should drink plenty of fluids especially water and milk*”¹¹¹ and the Alcoholic Drinks Control Act bans alcoholic drinks from primary and secondary schools.¹⁰¹

Regarding types and timing of meals or snacks, they should be provided as early as possible, during the first break, as mid-morning snacks¹⁰³ for half-day schools or as lunch in full-day schools.¹⁰⁷ In full-day schools, complementary snacks are strongly recommended either on arrival or return of learners to their homes.¹¹²

The budget policy statement in 2023 called for doubling the amount of money allocated for school feeding programmes to increase the number of beneficiaries from 2 to 4 million.^{135,136}

R2. Food procurement for the National School Meals and Nutrition Programme should be guided by the Public Procurement and Assets Disposals Act 2015, give preference to local smallholder farmers and

community-based initiatives for milling, fortifying or preservation to promote availability and access of local foods.^{103,106,112}

The School Meals and Nutrition Strategy further calls for school meals to be adapted to local and regionally available nutritious foods and ingredients to promote culturally sensitive local food habits and provide socially appropriate meals.¹¹² Meals should further be sustainable in terms of cost, supply and logistics by keeping the number of commodities to an acceptable minimum; choosing easy-to-prepare commodities, and assessing if local processing and fortification is available or could be developed.¹¹²

R3. While we identified policy proposals for a safe environment in the school in general (see under *Safety and Violence Prevention* below), we could not find evidence specific to eating spaces.

Food promotion in the internal school food environment

Promotion of foods and beverages entails both unhealthy and healthy foods and beverages. Marketing techniques can be used to promote healthy foods and beverages among students for instance in the school cafeteria.

Table 4. Food promotion recommendations

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R4. Regulate advertising of unhealthy foods and beverages on school premises.	Partial ¹³⁷
R5. Promote healthy foods and nutritious diets using innovative communication tools tailored to young people.	Yes ¹⁰⁶

R4. The Kenyan Nutrition Action Plan referred to sensitizing school stakeholders to marketing within the school but without proposing specific actions.¹⁰⁸ The School Health Implementation Guidelines recommended “no hawking or marketing of food and beverages in and around schools at all times”, but did not specify if this was referring to specific foods and beverages.¹³⁷

R5. Policy documents called for the promotion of good nutrition among students, through nutrition services at school and by providing information, education and communication materials.¹⁰⁶

Food prices in the internal school food environment

Food prices encompass the actual price of different foods and beverages available in schools, as well as potential subsidies or taxation of foods and beverages. No evidence was found for policy action on food prices in schools (Table 5).

Table 5. Food prices recommendations

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R6. Tax or manipulate prices at school to make unhealthy foods more expensive.	No
R7. Subsidise or manipulate prices at school to make healthy foods cheaper or free.	No

Food labelling in the internal school food environment

Recommendations related to food labelling at school cafeterias entail display of school menus with nutritional information, such as on calorie content of the meals. No evidence was found for policy action on food labelling in schools (Table 6).

Table 6. Food labelling recommendations

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R8. Combine menu board labelling system in school canteens with nudges towards healthier options.	No
R9. Display nutrition information, such as calorie content of food available in the school cafeteria, which is easy to understand.	No

Food safety in the internal school food environment

The element of 'food safety' contains any hygiene or safety related food stored, prepared, or served at school. It also refers to hygiene practices of food vendors based within the school premises and anybody handling food at school.

Table 7. Food safety recommendations

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R10. Define food safety school standards that are in line with national food safety legislation.	Yes ^{103,106,112,120}
R11. Ensure that food handlers on school premises are trained and educated and have certificates in food safety and hygiene.	Yes ^{102,103}
R12. Ensure safety and hygiene in all areas where food is stored, prepared or sold.	Yes ¹⁰³

R10. Policy documents recognised that food supply at schools must satisfy nutrition, food safety and quality standards and be in line with the national standards.^{103,112,120} Food provided in schools should also be inspected for food safety by Public Health Officials.¹⁰⁶

R11. Proposed policy actions included providing food handlers in schools with updates and appropriate training on safe and hygienic preparation and handling of foods.^{102,103} Capacity building for food handlers was also proposed for vector rodent control.¹⁰³

R12. The National School Health Strategy Implementation Plan recommends that all food for use should be transported, stored, prepared and served in a hygienic manner. The plan outlines the intention to construct 10,000 food storage facilities using approved designs by respective ministries.¹⁰³

School health and nutrition services

Schools also offer an opportunity to deliver high-impact health and nutrition interventions to children and adolescents who might be otherwise hard to reach. Recommended services include micronutrient supplementation (vitamin A, iron-folic acid or iron supplement), provision of anthelmintic treatment (deworming), malaria prevention, vaccination, oral health promotion, vision screening and treatment, sexual and reproductive health services, menstrual hygiene management, height and weight measurement, dietary counselling and feedback system for parents and children, food fortification, fortification of school meals with adequately iodised salt or fortified cereals.

Table 8. School health and nutrition service recommendations

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R13. Deliver high-impact health and nutrition interventions to children and adolescents at schools through periodical visits or health care staff present at school (e.g. anthropometric monitoring, counselling, micronutrient supplements or deworming).	Yes ^{102,103,106,108,111,112,113,126,127,128,130,131,132,133,137}
R14. Set up referral systems and partnerships with local health services.	Yes ^{102,103,131}
R15. Involve parents with information, counselling and feedback systems about nutrition screening of students.	Yes ^{131,132}

For all these three recommendations, good evidence on policy actions was identified from different policy documents.

R13. The importance of school health facilities was widely recognised in policy documents given the ideal setting of schools to promote health.^{102,103,106,108,111,112,113,126,127,128,130,131,132,133,137} It was proposed that these services could be integrated in schools or be provided in collaboration with local health centres or mobile school health centres in pastoral areas.¹¹³ In order to provide these services well, policies called on the need to develop tools and manuals for nutrition assessment in schools, to procure anthropometric assessment equipment¹²⁹ and put in place guidelines/standards and information/education materials for different services, disease control and prevention.¹⁰⁶

Health and nutrition services that were mentioned in the different policy documents included:

- Nutrition: periodic nutrition assessments of nutritional status, deworming, micronutrient supplementation when necessary (iron, folic acid and vitamin A; addition of micronutrient powders in meals); adolescent growth and development
- Infectious diseases: detection and reporting, human immunodeficiency virus (HIV) prevention education and testing, prevention of malaria through insecticide-treated nets
- Sexual and reproductive health: Human papillomavirus (HPV), sexual and gender-based violence counselling and referral
- Other: personal hygiene and sanitation, first aid, oral health promotion, prevention of non-communicable diseases, mental health, eye health.

R14. Referral, linkage and follow up between school based and clinical based models were recommended in policy documents.^{102,103,131}

R15. Policies also recommended to raise awareness of parents or guardians of adolescent¹³¹ and encourage them to take a lead role in teaching and counselling their children on responsible sexual behaviour.¹³²

Nutrition education

School-based food and nutrition education can provide children, adolescents with information and practical skills to practice healthy behaviours. School health education can be delivered in different ways; as a specific subject, as part of other subjects, such as science, health, home economics, mathematics and agriculture, or integrated into the broader school system and extra-curricular activities.

Table 9. Nutrition education recommendations

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R16. Deliver mandatory, regular, culturally appropriate nutrition education to students as part of classroom curricula through trained staff or nutrition experts and ensure consistency with food provision.	Yes ^{102,106,107,108,111,112,125,129,137}
R17. Integrate food and nutrition education throughout the school system and include it in extra-curricular activities, such as school gardens or community activities.	Yes ^{102,103,108,116,127,129,137}
R18. Include a range of topics in nutrition education, such as healthy eating practices, food systems and food environment by providing theory, strengthening practical competencies, using interactive learning strategies.	Partial ^{102,111,112,129,124,131}

R16. We identified policy actions to improve and integrate nutrition in curricular as well as extra-curricular activities by regularly reviewing and updating curricula and training teachers well on nutrition issues.^{102,106,107,108,111,112,125,129,137} However, with regard to the regularity of the nutrition education, we could not find any mention of number of hours or frequency of nutrition education activities. Nutrition education should be provided by or in collaboration with specialists and extension workers.¹⁰²

R17. Proposed channels for extra-curricular nutrition education included social media, school health clubs, school music or drama events, demonstration gardens and 4K clubs, which aim to empower young people with agriculture and life skills, essay writing, sports activities or inter-class or inter-school events or competitions.^{102,103,108,116,127,129,137}

R18. A range of topics for nutrition education were proposed in policy documents to include in curricular or extra-curricular activities.^{102,111,112,129,124,131} They can be synthesised into 3 categories:

- Healthy eating practices: intake of adequate, locally available, safe, diverse and nutritious foods, nutrition and food safety awareness, food preparation, food safety, hygiene and sanitation.
- Food systems: only topics related to food production of diverse, nutritious and safe food were identified related to food systems.
- Food environment: no information was found regarding nutrition education related to food environments.

Physical education

Physical education can be part of the formal curriculum or integrated in different extra-curricular activities to address leisure activities. The extra-curricular activities include any form of activity provided by schools other than formal classes, such as activities in break-times, before, after or outside of school or integrated as part of events or projects. These activities require resources, spaces, and equipment to be available on the school grounds for students. These can be as simple and low cost as skipping ropes, hula-hoops and balls. For any curricular or extra-curricular physical education, safety of students should be ensured through safe equipment as well as supervision.

Table 10. Physical education recommendations

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R19. Provide age-, sex-, disability- and culturally-appropriate physical education in the curriculum through qualified teachers.	Yes ^{108,125}
R20. Provide safe, spacious and clean spaces for indoor and outdoor physical activity.	Yes ^{106,111,137}
R21. Provide the opportunity for all age groups to access space and school sporting facilities for physical activity outside of the curriculum.	Yes ^{103, 108,137}
R22. Ensure that physical education meets the needs and interests of all students and is tailored to boys and girls and associated with fun, not punishment.	Partial ¹⁰⁷
R23. Advocate for walking and/or cycling as forms of transport for school commutes.	No

It was recognised in the documents that physical activity should be promoted through schools because the introduction to activity and sports early in life is essential for developing healthy habits for better health outcomes.¹²⁵ Schools should therefore promote the importance of physical education and activity for health promotion and disease prevention. The National Guidelines for Healthy Diets and Physical Activity specified key recommendations for children and adolescents 5-17 years old to engage at least 60 minutes of moderate to vigorous physical activity daily.¹¹¹ The guidelines do not specify the role of schools in these recommendations but state that the recommendations should be achieved in the course of a normal daily activity.

R19. We identified policy actions to improve and integrate physical activity in curricular as well as extra-curricular activities.^{108,125}

R20. Four policy documents recommended that all schools should provide safe facilities for physical education and playground areas.^{106,111,137}

R21. With regard to extra-curricular opportunities for physical activity, policy documents called for play and leisure activities at schools.^{103,108,137}

R22. With regard to tailoring physical education to the preferences of boys and girls, we found a recommendation for recreation and sports facilities to be gender-responsive and a general mention of curricula needing to be gender responsive, but with no specific mention of physical education.¹⁰⁷ We could not find any policy calling for the need to associate physical activity with fun and not with punishment.

R23. No evidence for policy action was identified related to advocating for walking or cycling as forms of transport for school commutes.

Water, sanitation and hygiene on the school premises

Providing clean water and sanitation at schools helps prevent infectious diseases, such as helminthic infections and diarrhoea. These diseases can impair physical and cognitive development of children. Research shows that health promoting environments including sanitation and safe water supplies in school, as well as knowledge on menstrual hygiene, reduced absenteeism and the risk of diarrhoea.^{36,37}

Table 11. Water, sanitation and hygiene recommendations

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R24. Ensure that safe drinking water is always available and easily accessible throughout the school premises and free of charge.	Yes ^{103,106,117,129,137}
R25. Ensure access to appropriate hand washing, personal hygiene and sanitation facilities with running water and soap to all students, especially close to toilets.	Yes ^{106,117,120}
R26. Make clean, age- and gender-appropriate sanitation facilities and products (including menstrual supplies) available and easily accessible to all students.	Yes ^{103,106,107,120,133,134,135,137}
R27. Promote safe hygiene and sanitary behaviour.	Yes ^{103,106,117,137}

R24. Kenyan policies recognise that every child has a right to safe and clean drinking water that meets the basic minimum water requirements and adequate sanitation which schools should provide and combine with hygiene promotion and education.^{103,106,117,129,137}

R25. Policies stated that schools should provide adequate and well-maintained handwashing facilities. Soap should be provided and located within the vicinity of the toilet/latrine, eating and play areas.^{106,117,120}

R26. As prescribed in the Public Health Act CAP 242, building code, sanitation facilities shall be designed and constructed to be gender sensitive.^{106,112} Furthermore, free sanitary towels should be provided in schools,^{103,106,107,120,133,134,137} which was also budgeted for in the 2023 Budget Policy Statement.¹³⁵

The Sanitary Towels programme to girls in public schools was first launched in 2011 under the MoE. The programme was then transferred from the MoE to the Ministry of Public Service, Youth and Gender Affairs. The objective of the programme is to increase access of teenage girls to sexual and reproductive health products to improve their retention in school. The Basic Education Act Section 39 (k) states that *“It shall be the duty of the Cabinet Secretary to provide free, sufficient and quality sanitary towels to every girl child registered and enrolled in a public basic education institution who has reached puberty and provide a safe and environmentally sound mechanism for disposal of the sanitary towels”*³⁸

With regard to menstrual hygiene, the Hygiene Promotion in Schools guidelines stated that menstrual hygiene management remains a practical challenge for many girls. Menstrual hygiene management should therefore include the following actions: ^{106,120}

- Raise awareness of and knowledge on menstruation, clarify myths, stereotypes and taboos associated with menstruation: raising awareness not only of girls but of the wider community including boys and men;
- Provide adequate, well maintained, private water and sanitation facilities for girls;
- Provide safe and hygienic management of menstrual waste;
- Ensure that all menstruating girls have access to affordable, safe, hygienic and absorbent menstrual products;
- Facilitate access to relevant health services.

R27. The National School Health Strategy Implementation Plan called to educate learners and parents in schools on hygiene through activities, such as handwashing campaigns in schools and use of information, education and communication material on hygiene promotion. ^{103,106, 117,137}

School garden

School gardens should be a platform for active learning by providing school children with practical experience in food production and natural resource management, which serve as a source of innovation they can take home to their families and apply in their own household gardens and farms. Furthermore, school gardens could contribute food to school feeding programmes with a variety of fresh micronutrient-rich products.

Table 12. School garden recommendations

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R28. Use school or urban gardens as a learning platform that can support school-based food and nutrition education.	Yes ^{100, 102, 103, 112, 115, 129}
R29. Ensure that food from school gardens is nutrient-dense.	No

R28. Several documents stressed the importance of school gardens for crop production, but also for small animals or fish. ^{100,102,103,112,115,129} The gardens could serve as demonstration gardens and could even be container gardens in urban schools. ¹⁰³ It was proposed that school gardens should be expanded to every school with a focus on teaching and demonstrating not only safe food production but also food preservation and preparation ¹⁰³ and also to use them for sustainable HGSMPS. ¹⁰³

R29. None of the policies specified the nutrient-density for the food products to be produced in the school gardens. Only the School Health Implementation Guidelines mentioned the need to include livestock in school gardens. ¹³⁷

The school community

Community involvement

The term ‘community’ refers to students, parents, teachers, staff working at the school (nurses, canteen staff), farmers or companies providing food to the school, as well as the wider community living around the school.

Table 13. Community involvement recommendations

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R30. Raise and build awareness about healthy diets to improve diets of the wider community.	Yes ^{103,106,112,126,137}
R31. Ensure community mobilisation, ownership and involvement in the food and nutrition programme.	Yes ^{103,112}

Several policy documents recognised the importance of community involvement, especially parents¹⁰⁶ and that community ownership of school feeding programmes increases the programme’s success and sustainability.¹¹²

R30. The School Health Policy stated that “*good nutrition practices in schools and integration of nutrition interventions can impact the community since children are good change agents*”. Parents, guardians and caregivers have a great influence on the food choices and their support can positively influence nutrition outcomes. Involving parents and guardians in school nutrition can reduce inconsistencies between suggestions and practices on nutrition at home and at school.¹⁰⁶ The school community should therefore be educated about diverse, safe and nutritious foods.¹³⁷

Parents should also be involved and sensitized in nutrition education.¹⁰³ In addition to healthy diets and nutrition, parents should be involved with regard to their role in preventing alcohol or substance use¹¹⁰ and sexual and reproductive health of adolescents.¹⁰⁹ The Action Plan for Addressing Adolescent Health and Teenage Pregnancy in Kenya also called for a national standard information package for parents and guardians on adolescent health for schools.¹²⁶

R31. Policy documents recommended that school communities should be engaged in resource mobilization and actively participate in implementation, and included in the design, oversight and monitoring and evaluation of school meal and nutrition initiatives.^{103,112}

Capacity development and training of the school community

This component includes any training or capacity development of teachers, cafeteria staff, vendors, farmers and food suppliers on the basics of nutrition, new food and nutrition policies and programmes at school. Therefore school-based food and nutrition actions require capacity development across the board. Training could include the following topics: healthy diets, healthy food preparation, food safety and hygiene and should be provided with training materials adapted to the specific audience.

Table 14. Capacity development and training of the school community recommendations

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R32. Strengthen capacity of school staff, vendors and suppliers to implement school food/nutrition activities.	Yes ^{102,103,112,137}
R33. Make training manuals/guidelines available and accessible for staff.	No
R34. Provide health screening for school staff and give free counselling.	No

R32. Policy documents stressed that the capacity of school health teachers and other teachers should incorporate nutritional and food safety considerations and messages.^{102,103,137} Their knowledge and understanding should be adequate in both depth and scope to handle the many facets of nutrition issues.¹⁰² Health workers should also receive in-service training on school health.¹³⁷

Implementers of school meal programmes, such as teachers, agriculture and health extension workers should receive adequate training.¹¹² School meal programmes procuring food from farmers should provide capacity development for smallholder farmers on credit access, farming technologies, marketing and procurement procedures.¹¹² The National School Meals and Nutrition Strategy also proposed preparing guiding documentation, including detailed implementation standards and guidelines, formats for reporting, but did not specified if and how these will be accessible to staff.¹¹²

R33 and R34- No evidence was found related to making training manuals and guidelines available and accessible for staff at schools or for providing health screening and counselling for school staff.

Livelihoods of suppliers

Procuring food from local smallholder farmers for school feeding, school meal programmes or any school food, can transform the livelihoods of local farmers and their families by increasing demand for local food

and guarantee markets for local producers. It requires envisioning farmers not only as service providers for school food but also as direct beneficiaries in terms of their livelihoods.

Table 15. Livelihoods of suppliers' recommendations

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R35. Procure food for school food programmes from local farmers.	Yes ¹¹²
R36. Strengthen the capacities of smallholder farmers to produce nutritious food.	Partial ¹¹²
R37. Incentivise nutrition-sensitive value-chain actors to produce and process high-quality food for schools.	No

R35. The National School Meals and Nutrition Strategy was the only document that referred to livelihoods of farmers from whom food is procured for school meal programmes. Direct purchase of food items from smallholder farmers for the school meal programme should be prioritized over procurement from other regions.¹¹² By offering stable markets, the Strategy states *“home-grown school meals offer unique opportunities to strengthen smallholder and community capacities and improve their income, ultimately improving livelihood opportunities and sustainable and inclusive development.”* Local procurement should also facilitate the development of markets for smallholder farmers and other actors along the supply chain.¹¹²

R36. No evidence was found for training smallholder farmers in producing nutritious food, but training was proposed for the creation and development of cooperatives and associations, access to inputs such as credit, facilities, technologies and seeds, and support on production planning, marketing and access to markets.¹¹²

R37. No evidence was identified for actions to incentivise nutrition sensitive value-chain actors to produce and process high-quality food for schools.

External school food environment

The physical access to diverse types of food in the food environment influences what consumers can purchase and consume. Policies are needed to encourage healthy food outlets and combat unhealthy food provision at food retail outlets near schools. The impact of the sale of unhealthy foods outside the school is particularly strong where children have access to these foods at lunchtime (e.g. if they can leave the school grounds or purchase foods through the schoolyard fence), which can negatively influence dietary behaviours of students.

Food provision – external school food environment

Table 16. Recommendations for food provision in the external school food environment

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R38. Limit exposure to unhealthy food outside the school premises by defining zones or public planning laws promoting healthy zones within a certain perimeter of school grounds in which unhealthy foods should not be sold.	No

R38. The only policy action related to food or beverage provision identified outside schools was related to alcohol and drugs. The National Guidelines for Alcohol and Substance Use Prevention and Management in Basic Education Institutions called for *“vigilance to prevent sale, manufacture or storage of alcohol and drugs in establishments around the school. Where an alcohol-selling/manufacturing/storage outlet is operating within 300 meters of the school compound the administration shall report in writing to the sub-county education office to liaise with Ministry of Interior and County Government to close the outlet. The*

school shall also collaborate with the same offices for closure of kiosks and vendors operating next to schools.”^{101,110}

Food promotion – external school food environment

Table 17. Recommendations for food promotion in the external school food environment

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R39. Regulate the promotion, marketing and advertising of foods, snacks and beverages high in energy, sugar, fat and salt around schools.	No

R39. One policy document referred to avoiding hawking or marketing of food and beverages in and around schools at all times, but did not specify the type of food or beverage.¹³⁷ Only for alcohol, a policy document called to “report alcohol advertisements/billboards next to schools to the sub-county education office to liaise with Ministry of Interior and County Government for action.”¹¹⁰

School policy environment

School food and nutrition policy or institutional framework

Recommendations related to school policies include written documents defining rules and regulations around different elements of school food and nutrition, as well as the presence of a coordinating committee for food and nutrition matters.

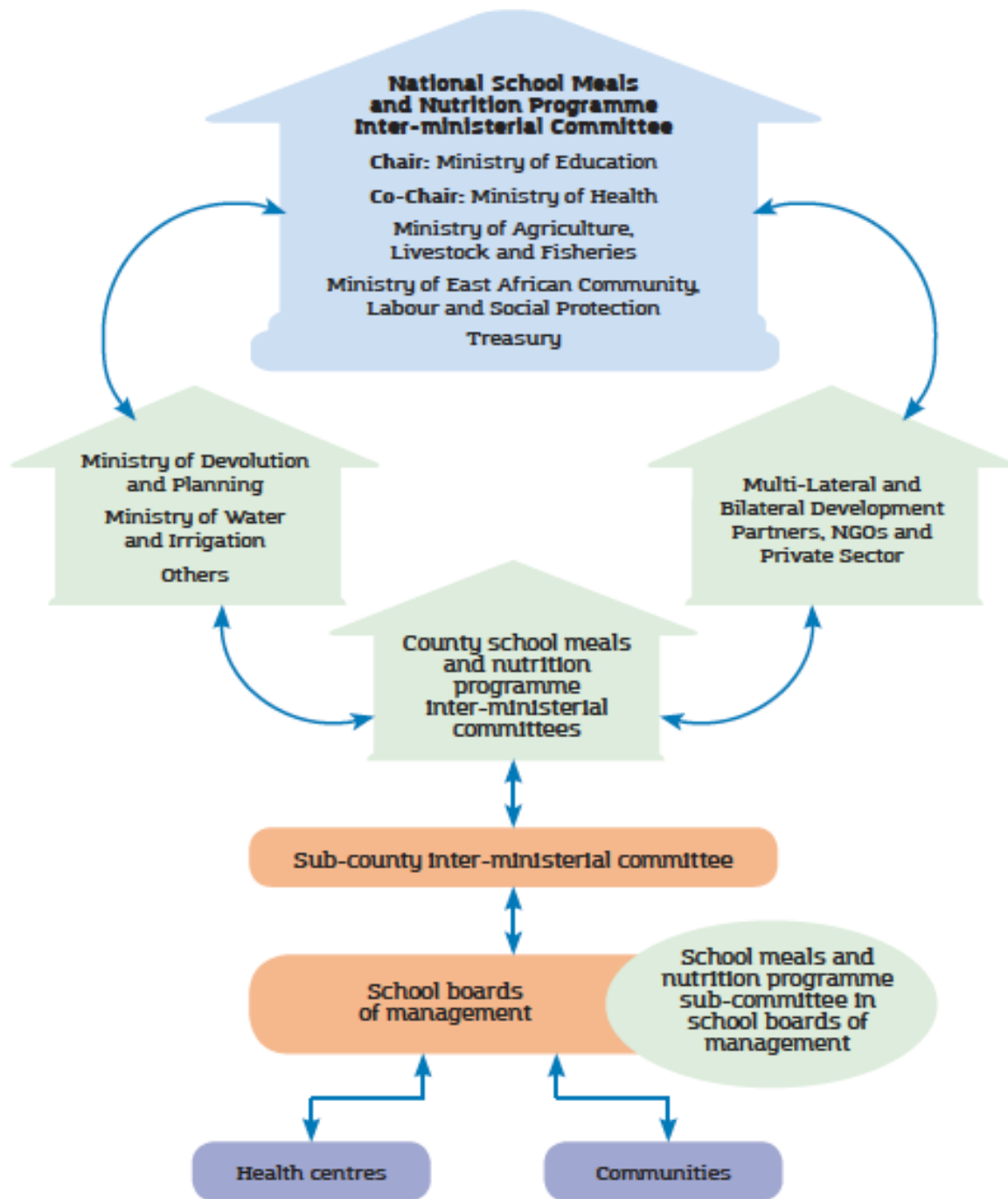
Table 18. Recommendations for school food and nutrition policy or institutional framework

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R40. Put in place a school policy which addresses actions related to food and nutrition.	No
R41. Set up a school committee including the whole school community to routinely discuss policy implementation, monitoring and financing related to food and nutrition.	Yes ^{106,112,137}

R40. National policies for school food and nutrition are in place, which could be applied to individual schools. However, we could not find any evidence for implementing a policy addressing food and nutrition related issues at the level of the school.

R41. The Kenyan School Nutrition and Meals Strategy recognises that for effective coordination and execution of a school meals programme, strong multi-sectoral governance and institutional arrangements are required.¹¹² On the national level, the School Nutrition and Meals Strategy proposed sharing responsibilities across various ministries and other non-governmental stakeholders, while the School Nutrition and Meals coordination Unit has its home at the MoE. The school meal and nutrition committees shown in Figure 3 are responsible for the implementation of the National School Meals and Nutrition Programme and involve the different ministries, such as the Ministry of Education, the Ministry of Agriculture Livestock and Fisheries, the Ministry of Health, the Treasury and the Ministry of East African Community, Labour and Social Protection.¹¹² On the level of the school, school meal and nutrition sub-committees should be established within boards of management. The committees should include the principal or headteacher, curriculum support officer, public health officer, health facility in charge, school health teachers, students council president and they should meet once per term.¹³⁷ The roles of these committees should include proposal development or procurement.¹¹² The School Health Policy further proposed a school health committee at the level of the school, which should also be linked to the students’ council at the school.¹⁰⁶

Figure 3. Coordination structure proposed for the School Meal Programme¹¹²



Cross-cutting issues

Gender sensitivity

Including a gender perspective in school policies that deal with food and nutrition can help to address gender inequalities in access to food, education, income and have a positive impact in breaking the intergenerational cycle of malnutrition. Women can be empowered through involvement in food procurement, preparation and management of school food and nutrition programmes. Unintentional consequences of putting too much burden on women in school food and nutrition programmes should be considered.

Table 19. Recommendations related to gender sensitivity

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R42. Ensure equal access to education, activities and services for girls and boys.	Yes ^{106,107,109,128,133,134,135}
R43. Encourage equal involvement of women in school food and nutrition programmes as cooks, farmers or programme managers without overburdening them.	Partial ¹⁰⁷

R42. Policy documents stressed the need to address gender related barriers to the health and wellbeing of learners, to promote gender equality amongst learners¹⁰⁶ and advocate for elimination for legal and socio-cultural barriers that perpetuate gender inequalities in schools.^{137,103} Training of teachers was also proposed with regard to gender mainstreaming, gender-based violence and hygiene promotion.¹⁰³

With regard to equal access, documents referred to the risk of girls dropping out and how to ensure retention especially of vulnerable girls,^{109,134} to support those who have dropped out, especially girls who get married or pregnant while in school should be allowed to continue learning.^{107,109,128,131,133}

Schools should tackle early, unintended pregnancies in girls by providing access to information and services to prevent early childbearing,^{106,128} but also establish childcare facilities near schools allowing teenage mothers to attend school.¹³⁵

R43. The Education and Training Sector Gender Policy proposed supporting equal participation of women and men as decision-makers in shaping the educational policies and practices; ensure gender equity in awarding of tenders for provision of school equipment and ensure equity in recruitment, staff development and promotion at all levels of education.¹⁰⁷ However, we could not find any evidence specific to food and nutrition programmes or regarding unintended consequences of overburdening women as part of their role in those programmes.

Participation

Recommendations related to participation include ensuring inclusive non-discriminatory participation in decision-making and in review and accountability mechanisms of school food and nutrition programmes. Students should be engaged in discussions about how school-based programmes can operate. They should have an opportunity to express their preferences and have some influence in determining the decisions that are made.

Table 20. Recommendations related to participation

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R44. Involve students in the design, development and implementation of school food and nutrition projects.	Yes ^{106,116,117,118}
R45. Facilitate students-led projects on food and nutrition.	Partial ¹⁰⁰

R44. Policy documents recognised the importance of participatory approaches because through them “*children acquire skills, build competence and gain confidence, social skills and respect for others, all which contribute to personal development*”.¹¹⁷ The Guidelines for Child Participation in Kenya establish, regulate and enforce procedures and standards for children’s involvement in different spheres of life, including home, school, community, national, regional and international platforms. Participation of children may take various forms but should be conducted in a child-friendly manner, adapted to children’s capacities according to their age and evolving capacities. Every child, however, has the right not to exercise this right. When children choose to exercise their right, adequate time and resources should be made available.¹¹⁶

Several documents proposed that children and adolescents should be given the opportunity to express their views^{106,116,117,118} and be involved in planning, designing and implementation of school health

programmes.¹⁰⁶ The Kenya Children’s Parliament and Children’s Councils, taking place in schools were mentioned as good opportunities for children to get engaged in planning and decision making.¹¹⁶

R45. The 4k club initiative aims to empower youth with agricultural and life skills in order to contribute towards better nutrition, health and higher standards of living.¹⁰⁰

Social inclusion and human rights

School meals can support the fight against health inequalities but targeting needs to be done carefully to avoid stigmatisation, exclusion or discrimination. Universal provision of free or subsidised school meals should be central to rights-based and inequality sensitive approaches. Addressing stigmatisation of students, about the food they bring to schools, or their body image, needs to be tackled too.

Table 21. Recommendations related to social inclusion and human rights

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R46. Take affirmative action against bullying, stigmatisation and discrimination.	Partial ^{106,107,128}
R47. Ensure that all students have access to a full, healthy, free or subsidised meals and education for all in line with rights-based and inequality sensitive approaches.	Partial ^{106,112}

R46. In line with the Constitution, policy documents advocated for non-discrimination and equal participation, rights, opportunities and responsibilities without any discrimination of girls and boys, women and men.^{106,107} For example: *“They shall be protected from all forms of neglect and abuse on the basis of sex, gender, ethnicity, race, family and social status, religion, locality, political affiliation, disability, HIV status or illness among others.”*¹⁰⁶ With regard to disabilities, learners with chronic health challenges should be assisted to access medication and other relevant health services and be linked to government-authorized officers for appropriate services.^{106,128} No policy actions related to bullying or stigmatization could be identified.

R47. The right to education was clearly stated in the policy documents in accordance with the United Nations Convention on the rights of the Child that *“every child has a right to basic, compulsory and quality education irrespective of sex, colour, creed, gender and culture”*.^{106,107} The right to basic nutrition for every child, to be free from hunger and to have adequate food of acceptable quality, was stated in the Kenya Constitution.¹¹² Feeding programmes shall therefore be established and food supplements given to the vulnerable children especially those living in poverty and in marginalized areas.¹⁰⁶ However, the policy documents do not specify if the provided school meals should be free or subsidized.

Environmental sustainability

Environmental sustainability should address all components of the school food and nutrition activity: procurement from local climate smart producers, using sustainable transport for food, using sustainable food preparation methods and addressing food loss and waste.

Table 22. Recommendations related to environmental sustainability

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R48. Ensure environmental sustainability of food procurement by considering the use of traditional, neglected and underutilised foods.	No
R49. Promote sustainable diets, e.g. by setting limits on the number of servings or by requiring a set number of plant-based meals.	No
R50. Set criteria for reducing food loss and waste.	No
R51. Encourage fuel and energy saving.	Yes ^{112,124}

R48. Environmental sustainability was mentioned less in the context of food procurement, but with regard to the energy efficiency of schools, e.g. the installation of solar systems on school buildings and with regard to increasing tree coverage on school premises.¹²⁴

R49. Some documents also referred to promoting sustainable production applying climate smart agriculture and conservation techniques in schools to ensure efficient and sustainable use of land and water resources.^{114,115} Environmental sustainability was also mentioned with regard to the curriculum, but not in the context of food. Extra-curricular activities were suggested through environment clubs, music, drama and journalism, visits to museums, resource centres, such as National Climate Change Resource Centre and participation in art competitions such as the Kenya Climate Change Art and Essay Competition.^{113,116,123,124} However, for promotion of sustainable diets, no evidence was identified.

R50. No evidence was found for criteria to reduce food loss and waste.

R51. Two documents called for fuel-efficient cooking stoves to be affordable and available for use in schools.^{112,124}

Safety and violence prevention

Safety and security at school could relate to physical equipment and infrastructure at the school but also to the behaviour of staff and other students.

Table 23. Recommendations related to safety and violence prevention

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R52. Put in place rules and guidelines for staff and students related to physical safety, corporal punishment of students by teachers, fighting and other forms of violence and sexual harassment or substance abuse.	Yes ^{103,106,107,130,133,137}
R53. Trained teachers to monitor, administer and teach first aid and basic safety.	Yes ¹⁰⁶

R52. Policies called for minimizing the risk of physical injury and disease transmission in schools with adequate safety measures. Schools should provide safe environments with no tolerance for sexual harassment, abuse and other forms of juvenile exploitation.^{106,130,133} Gender-based violence policies and reporting mechanisms for sexual harassment victims should be in place and health services and protect students from gender-based violence and harmful cultural practices.^{103,106,107,137}

The School Health Policy states that safety of physical structures need to be ensured by complying with the building and construction codes^{106,137} and that school buildings should be protected from environmental hazards such as floods and should be at a safe distance from sewage sites, bars or factories.¹³⁷

With regard to substance abuse, kiosks in and around the school which may be used as conduits for drugs and other illegal activities should be banned and alcohol and substance use within the school premises and during school activities and events is prohibited.¹¹⁰ Regular inspections of school facilities for illegal substances and activities are recommended.^{103,110}

R53. One policy document reported that the school curriculum for both students and teachers should include first Aid training and awareness raising and first aid facilities be provided at school.¹⁰⁶

Private sector engagement

The private sector could be a significant player in promoting healthy diets in schools. However, private sector engagement in foods and beverages is likely to have a conflict of interest in school food and nutrition that might not be in line with public health goals. Potentially harmful actions that food producers and food distributors could undertake include: promotion of unhealthy foods on the school premises, free distribution of unhealthy foods or promotion of unhealthy food through sponsoring sports events.

Table 24. Recommendations related to private sector engagement

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R54. Monitor the involvement of the private sector in school food and nutrition activities to ensure it promotes nutritious school meals.	No
R55. Ensure that the private sector is not involved in the development of a school food and nutrition policy or a member of the school committee.	No

R54. No policy document referring to monitoring private sector involvement was found. The School Nutrition and Meals Strategy stated that implementing national school meals and nutrition programmes relies on partnerships and resource mobilization from various sources, including both the public and private sectors.

R55. Private sector engagement was proposed as part of investments in infrastructure for food storage and kitchens in schools, as well as for water access, ensuring a stable supply of inputs, equipment and services to farmers, marketing agricultural produce in domestic and international markets, technology transfer, and maintenance of quality standards.¹¹² However, the strategy also stated that any funding support agreements with the private sector should be in line with principles, guidelines and goals established of the School Nutrition and Meals Strategy.¹¹² No policy document referred to involvement of the private sector in school food and nutrition policies or committees.

Friendly, trusting climate at school

Ensuring the active and sustainable involvement of the community in school programmes requires a positive and trusting atmosphere at school. Open conversations, ensuring a culture of values and respect between all community members is key. This might increase teachers' motivation, as well as the wider school community to engage in school activities.

Table 25. Recommendations related to a friendly and trusting climate at school

Recommendations from reviewed literature	Evidence from Kenyan policy documents
R56. Promote good and equitable relationships between students and staff, as well as with families and the wider community.	Yes ^{107,118}
R57. Promote open and dynamic communication and interactions between all school community members.	No
R58. Avoid overburdening communities, parents, teachers and school staff with participation in school food and nutrition programmes.	No

R56. Only two documents referred to the general learning environment, which should be socially and culturally appropriate, supportive for all learners and the importance for a peaceful coexistence between the school, parents and the community^{107,118} The education and Training Sector Gender Policy also called for curricula promoting empathy and social responsibility and non-violent relationships.¹⁰⁷

R57 and R58. No evidence was found for promoting open and dynamic communication and interactions between all school community members or for avoiding overburdening communities, parents, teachers and school staff with participation in school food and nutrition programmes.

Conclusion and recommendations

Policy documents, especially from the health and education sector reported that malnutrition in early childhood can influence school enrolment, attendance, attentiveness, concentration, aptitude and overall performance. Policy documents from eight different sectors proposed policy actions related to different components of comprehensive school food and nutrition programmes. Good or partial evidence for policy actions defined in policy documents was identified for food provision, promotion of healthy foods, food safety, school health and nutrition services, nutrition education, physical education, water, sanitation and hygiene and school gardens within the school premises. With regard to the school community, policy actions were proposed with regard to community involvement and livelihood of suppliers of school food. No proposed policy actions were identified related to food prices or labelling within the school premises. The external school food environment was not addressed with any policy actions. Cross-cutting issues like gender, inclusion, environmental sustainability and violence prevention were only partially addressed in the policy documents.

In conclusion, while we identified good commitment for actions within the school premises, more policy actions are needed to address provision of minimally processed foods in schools, regulate advertising of unhealthy foods/beverages in schools, develop school gardens and ensure physical education is tailored to girls and boys. Policy action in the external school food environment was severely lacking, with opportunities for government to regulate advertising, prices and availability of foods and beverages in and around schools. Evidence of policy action around prevention of undernutrition was more widespread, whereas policy action for schools related to healthy diets and obesity prevention seemed to be less widely adopted. Given the climate crisis, the need to consider the environmental sustainability of school food needs to be highlighted. There is potential for the government to act across several areas: food procurement incorporating traditional foods and introducing food waste targets for schools. This may be because these are more recent food and nutritional challenges, so are yet to filter through into school food policy making.

Limitations and reflections on the framework

Whilst this review focused on policy actions adopted in policy documents, it does not provide information on the level of implementation of these actions. However, as part of the NRF SIAA project, implementation of the recommended policy actions will be assessed.

The framework used for this report proved to be useful in order to map out the policy actions. A domain that could have been more explicit was the involvement of parents and the influence of the home environment as well as peers. Students might bring food from home, which could constitute an important part of their food intake. Also, the influence from peers or sharing of food among students could be relevant and important to address through programmes at schools. These social aspects could be reflected better in the framework.

Recommendations

- Develop comprehensive school food and nutrition policies addressing the school compound, the community, the external food environment, the policy framework, as well as cross-cutting issues by involving different sectors, members of the community and activity involving teachers and students.
- Develop specific goals for food (groups) and nutrients with regard to their availability on school premises, especially for fruit and vegetables.
- Recommendations on food safety should provide more detail on what standards should be met for food providers at school and how training and certification schemes for food providers at schools should be implemented.

- Regulate prices of available foods and beverages at the school premises to make healthier foods more affordable or provide fruit and vegetables for free, for example.
- Define policy actions addressing the external school food environment, such as regulating advertising of unhealthy foods and beverages, reducing prices of or subsidising healthy foods, imposing taxes on unhealthy foods, such as sugar-sweetened beverages or increasing availability of healthy foods such as fruit and vegetables outside the school gates. Policy actions addressing the external food environment will require engagement from sectors other than education, such as health, trade or urban planning.
- Reframe policy actions to address the double burden of malnutrition and diet-related non-communicable diseases.
- Tailor actions related to environmental sustainability towards sustainable diets by promoting traditional, locally available, seasonal foods at school and by avoiding food waste.
- Strengthen participatory approaches involving students in school food and nutrition policies and programmes to engage students more actively.

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129	Ministry of Health	The Kenya Nutrition Action Plan (KNAP) 2018 – 2022 https://familyhealth.go.ke/wp-content/uploads/2020/10/Kenya-Nutrition-Action-Plan-2018-2022.pdf	2018
130	Ministry of Health	The National Reproductive Health Policy http://guidelines.health.go.ke/#/category/18/347/meta	2022
131	Ministry of Health	National Guidelines for Provision of Adolescent and Youth Friendly Services in Kenya https://faces.ucsf.edu/sites/g/files/tksra4711/f/YouthGuidelines2016.pdf	2016
132	Ministry of Information, Communications and Digital Economy, Ministry of Innovation and Youth Affairs, State Department for Youth Affairs	Kenya Youth Development Policy 2019 https://ict.go.ke/wp-content/uploads/2020/08/Kenya-Youth-Development-Policy-2019.pdf	2019
133	Ministry of Public Service, Youth and Gender	National Policy on Gender and Development http://psyg.go.ke/wp-content/uploads/2019/12/NATIONAL-POLICY-ON-GENDER-AND-DEVELOPMENT.pdf	2019
134	Ministry of Public Service, Youth and Gender	Strategic Plan 2018 – 2022 https://gender.go.ke/wp-content/uploads/2019/08/Strategic-Plan.pdf	2018
135	The National Treasury and Economic Planning	2023 Budget Policy Statement https://www.treasury.go.ke/wp-content/uploads/2023/02/2023-Budget-Policy-Statement.pdf	2023
136	Republic of Kenya	Programme based budget of the national government of Kenya https://www.treasury.go.ke/wp-content/uploads/2021/05/FY2021-22-Programme-Based-Budget.pdf	2021
137	Ministry of Education	Kenya School Health Implementation Guidelines	2018

Annex 1 – Government ministries websites reviewed (n=21)

Ministry	State departments
<u>Ministry of Interior and National Administration</u>	State Department for Correctional Services
	State Department for Internal Security and National Administration
	State Department for Citizen Services
<u>The National Treasury and Economic Planning</u>	State Department of Finance
	State Department for Economic Planning
<u>Ministry of Foreign and Diaspora Affairs</u>	State Department for Foreign Affairs
	State Department for Diaspora Affairs
Ministry of Defence	<u>State Department of Defence</u>
<u>Ministry of Health</u>	<u>State Department for Medical Services</u>
	<u>State Department for Public Health Services</u>
<u>Ministry of Education</u>	State Department for Basic Education
	State Department for Technical, Vocational Education and Training
	State Department for Higher Education and Research
Ministry of Roads, Transport and Public Works	State Department of Roads
	State Department for Transport
	State Department for Public Works
Ministry of Devolution and Arid and Semi-Arid Lands (ASALs)	State Department of Devolution
	State Department of Arid and Semi-Arid Lands (ASALs)
Ministry of Lands, Housing and Urban Development	State Department for Lands and Physical Planning
	State Department for Housing
	State Department for Urban Development
<u>Ministry of Environment and Forestry</u>	State Department of Environment and Forestry
<u>Ministry of Mining and Petroleum</u>	State Department of mining
	State Department of Petroleum
Ministry of Agriculture and Livestock Development	State Department for Crop Development
	State Department for Livestock Development
<u>Ministry of East African Community and Northern Corridor Development</u>	State Department of East African Community and Northern Corridor Development
<u>Ministry of Labour and Social Protection</u>	State Department of Labour
	State Department of Social Protection, Pensions and Senior Citizens Affairs
<u>Ministry of Tourism and Wildlife</u>	State Department of Tourism
	<u>State Department of Culture</u>
	<u>State Department of Heritage</u>
<u>Ministry of Water and Sanitation</u>	State Department of Water and Sanitation
Ministry of Public Service, Gender and Affirmative Action	State Department for Public Service
	State Department for Gender and Affirmative Action
<u>Ministry of Energy</u>	State Department of Energy
	State Department of Renewable Energy
<u>Ministry of Trade, Investments and Industry</u>	State Department for Industry
	State Department of Trade
<u>Ministry of Information Communications and The Digital Economy</u>	State Department for Broadcasting and Telecommunications
	State Department for Information Communication Technology (Ict) and Digital Economy
<u>Ministry of Youth Affairs, Sports and the Arts</u>	State Department of Sports

