



Foresight4Food
International Collaborative Initiative

Background policy paper

Prevention of overweight, obesity, and diet-related diseases in Uganda

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Key Messages

a

Non-communicable diseases (NCDs) include cardiovascular diseases (CVDs), diabetes, cancers, and chronic respiratory conditions contribute to over 33% of deaths in Uganda, driven by rising overweight and obesity rates. Aggressive marketing of processed foods and sugary drinks, along with the absence of food-based dietary guidelines, exacerbates the issue.

b

Overweight, obesity, and diet-related NCDs have a significant economic impact. Addressing these issues is essential to meet sustainable development goals, reduce healthcare costs, and improve economic stability through a more productive workforce.

c

Using the foresight approach, this paper outlines future scenarios, critical uncertainties, and their implications. Effective governance, dietary patterns, and environmental sustainability will play a crucial role in shaping these scenarios.

d

Cognisant of the challenges in policy implementation in Uganda, this brief suggests four key recommendations to tackle challenges associated with NCDs in the food system:

- Develop and implement a comprehensive policy integrating health, agriculture, and environmental sustainability.
- Enact laws to restrict the marketing and advertising of unhealthy foods, especially to vulnerable populations like children.
- Develop evidence-based food and dietary guidelines tailored to local needs, emphasizing nutritious diets and healthy eating practices.
- Incentivize and support farmers to adopt sustainable agricultural practices that enhance food security and promote local and safe food production.

Tackling overweight, obesity, and diet-related NCDs necessitates a multi-sectoral approach focusing on health promotion, sustainable agriculture, and regulatory measures.

1 Prevalence of overweight, obesity, and diet-related NCDs in Uganda

Uganda is witnessing a growing trend of overweight and obesity. According to the 2016 Uganda Demographic and Health Survey (UDHS), 24% of women and 9% of men aged 15 to 49 were classified as overweight or obese (UBOS & ICF, 2018), increasing to 26% of women and 11% of men in the 2022 UDHS (UBOS, 2022). Additionally, in 2022, overweight was estimated at 2.9% among children under five (UBOS, 2022). This rise significantly contributes to the increasing burden of diet-related NCDs and places growing pressure on Uganda's healthcare system.

Increase of obesity and overweight among men and women aged 15–49

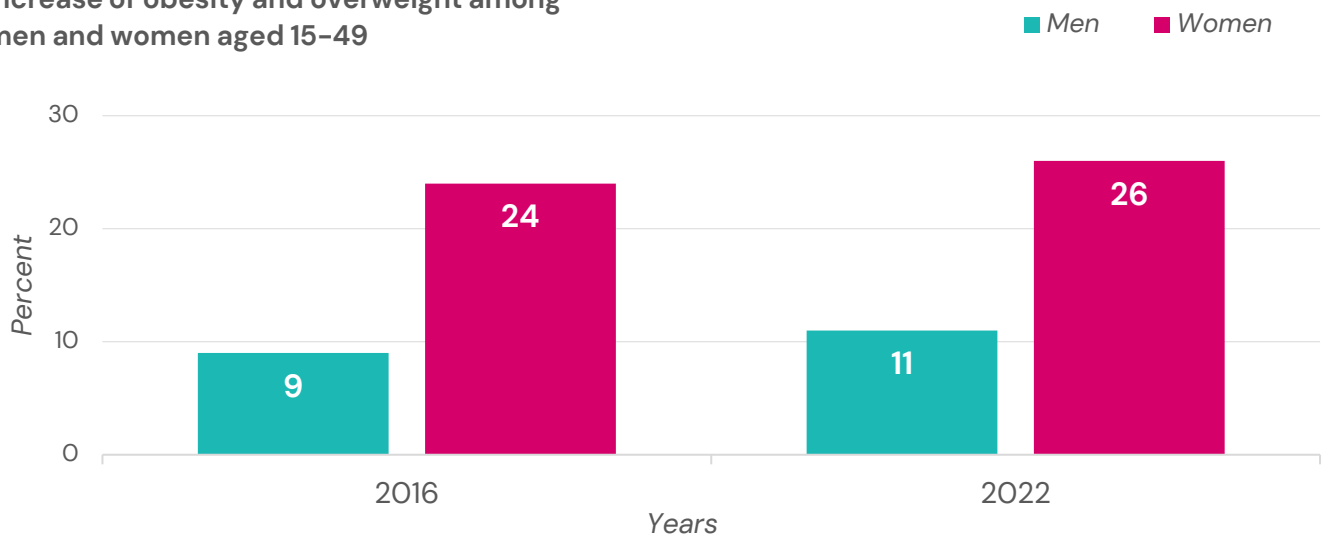


Figure 2: Obesity trends among men and women aged 15–49 in Uganda.
Source: UBOS and ICF, 2018 and 2022

In Uganda, NCDs significantly affect public health and the economy. More than 33% of total deaths in Uganda are attributable to NCDs, while every Ugandan's probability of dying prematurely from one of the four main NCDs (cancers, CVDs, diabetes, and chronic respiratory illness) is 22% (WHO, 2019). Alarming, 85% of all early NCD-related deaths occur in low- and middle-income countries, where resources are already scarce (WHO, 2019). These premature deaths are mostly caused by modifiable risk factors including tobacco use, poor diet, physical inactivity, and harmful alcohol intake.

Uganda shows limited progress towards achieving diet-related NCD targets (Mannar et al., 2023), particularly in addressing the prevalence of obesity, hypertension, and diabetes (World Health Organization, 2019). For instance, diabetes is estimated to affect 5.6% of women and men, while estimates suggest an increase in cancer incidence from 27,410 new cases in 2012 to 35,968 cases in 2022. This disease burden will continue to rise unless immediate action is taken to manage modifiable risk factors, such as overweight and obesity.



2

Factors associated with overweight, obesity, and diet-related NCDs in Uganda

The worrying rise in overweight and obesity rates among the Ugandan population has coincided with an increase in diet-related NCDs. Several factors are contributing to this trend, including urbanization, lifestyle changes, and a lack of regulatory measures on food marketing and labelling.

2.1. Urbanization, nutrition transition, and lifestyle changes

As urban areas expand, dietary patterns shift from traditional, nutrient-rich foods to energy-dense, processed options that are high in fats and sugars and low in fruits, vegetables, wholegrains, fibre, and micronutrients – leading to increased caloric intake (Ikudayisi, 2020; Kyomuhendo & Adeola, 2021).

Studies indicate that the prevalence of overweight and obesity is particularly pronounced among urban populations, where economic development increases access to unhealthy food options (Ochola & Masibo, 2014). Urban populations also often experience reduced physical activity levels due to sedentary jobs and lifestyles, and limited access to physical activity spaces, further exacerbating the risk of obesity and associated NCDs (Amugsi et al., 2017). The dietary transition to energy-dense, processed foods is particularly pronounced among women, who face unique societal pressures that can influence their dietary choices and health outcomes (Amugsi et al., 2017).

2.2. Ineffective food systems governance for NCD prevention

Poor food systems governance in Uganda is a significant driver to the obesity epidemic and the rise of diet-related NCDs, including, lack of regulations on marketing of unhealthy foods, particularly those targeting children and adolescents (World Health Organization, 2023). Advertisements targeted at children often blur the lines between marketing and entertainment (Dia et al., 2021).

Uganda lacks comprehensive food-based dietary guidelines for educating the public on healthy eating practices, balanced diets and preventing diet-related NCDs (Kaur, 2022; Laar et al., 2022). Furthermore, the absence of front-of-pack (FOP) nutrition labelling means consumers are unaware of the nutritional content of their food (Kleef & Dagevos, 2015).



3

The impact of overweight, obesity, and diet-related NCDs on desired food system outcomes

If the trend of overweight, obesity, and diet-related NCDs persists, achieving desirable food system outcomes, such as food security, nutritional quality, sustainability, and economic viability, will be at risk.

The food system's economic viability is closely linked with public health (Willett et al., 2019). NCDs impact both people's health and socioeconomic development by reducing quality of life, increasing healthcare costs, and decreasing productivity. The burden disproportionately affects vulnerable populations, worsening health disparities in access to health services.

Major NCDs in the European Union are estimated to cause economic losses of nearly 2% of GDP (Vandenberghe & Albrecht, 2020). In Sub-Saharan Africa, this impact is likely to be higher due to weaker healthcare systems, rising NCD prevalence, limited resources for prevention, and slower economic growth highlighting the significant economic burden on already strained economies (Dalal et al., 2011; Ndumwa et al., 2023).

Diet-related NCDs squander economic resources that could enhance food security. High healthcare costs for treating obesity and related disorders put a pressure on national budgets, as seen in other countries (Mayega, 2014; Wang et al., 2011), limiting the ability of the Government of Uganda to invest in sustainable agriculture and food security initiatives (WHO, 2016). Addressing these issues requires a transition towards more sustainable agricultural practices and food consumption patterns that prioritize environmental and human health (Herrero et al., 2023).

4

Challenges in implementing the prevention of overweight, obesity, and diet-related NCDs in Uganda

Uganda faces growing challenges in addressing overweight, obesity, and diet-related NCDs due to limited resources, weak regulatory frameworks, and socio-economic disparities. These barriers hinder effective interventions, requiring more robust strategies to promote healthier lifestyles and strengthen the country's health systems.

4.1. Development of food-based dietary guidelines

Developing comprehensive dietary guidelines is crucial in addressing overweight, obesity, and NCDs. Such guidelines provide practical advice on a balanced and nutritious diet aligned with national health goals (Tetens et al., 2020) and promote the consumption of diverse foods, including fruits, vegetables, wholegrains, lean proteins, and healthy fats, whilst reducing the intake of high-calorie, low-nutrient foods. However, developing and disseminating these guidelines requires substantial resources and coordination. Limited funding has slowed the development process. The. Additionally, Uganda lacks a comprehensive food composition table, which would have facilitated the creation of more contextualized guidelines. The Food-Based Dietary Guidelines are anticipated to be completed by the end of 2024, after which an implementation plan will need to be developed to ensure their widespread adoption across the Ugandan population.

4.2. Food and nutrition laws

Uganda currently lacks a food and nutrition law, although drafting legislation has started and is awaiting presentation to Parliament. Such legislation can establish a legal framework to promote public health through food safety regulations, nutrition labelling, and quality standards (Fortin, 2022; Jones et al., 2019). Laws requiring nutrition information on food packaging helps consumers to make informed choices, while other laws can support initiatives to improve food security and access to healthy foods.



However, establishing food and nutrition laws is a challenge, particularly in low-resource settings like Uganda, where strong legal frameworks and enforcement mechanisms are often lacking.

4.3. Regulating unhealthy food marketing

Evidence suggests that regulating unhealthy food marketing positively influences dietary behaviours. For example, (Boylund et al., 2022) found that policies to restrict food marketing can reduce children's unhealthy food purchases. Beyond protecting children, regulating unhealthy food marketing has broader public health implications by reducing the normalization of poor dietary habits (B. P. Kelly & King, 2015). By holding the food industry accountable for its marketing practices, the government fosters an environment that promotes healthier options and supports public health, helping to reduce obesity and related health issues.

However, regulating unhealthy foods marketing faces significant hurdles in Uganda (Twinomugisha, 2020). Unhealthy food products are aggressively marketed through various media channels, often targeting vulnerable groups such as children and adolescents (Barquera et al., 2018). Establishing and enforcing regulations to limit or ban advertising of high-calorie, low-nutrient foods requires robust legal and regulatory frameworks, which are challenging to implement. Moreover, evidence suggests that the influence of powerful food and beverage companies hinders efforts to effectively implement such regulations (Chopra et al., 2002; Clapp & Scrinis, 2017).

4.4. Physical activity initiatives

Physical activity initiatives in Uganda promote regular exercise to prevent overweight and diet-related NCDs. The Ministry of Health designates the second Sunday of July as a national day to promote awareness about the importance of physical activity and encourage Ugandans to embrace healthier lifestyles. Ugandans are encouraged to incorporate physical activity into daily routines through community sports events, fitness classes, and public awareness campaigns. Local governments often collaborate with non-governmental organizations (NGOs) to create safe spaces for exercise, such as parks and recreational facilities. However, inadequate infrastructure, limited access to organized sports, and socio-cultural barriers that discourage active lifestyles can hinder these efforts.

4.5. Employment of nutritionists and dieticians

As Uganda grapples with the rising burden of NCDs, the expertise of nutrition professionals is crucial in addressing public health challenges. Nutritionists and dieticians can provide tailored nutritional counselling and education, which research indicates can significantly impact individuals' health outcomes – particularly in managing weight and preventing obesity-related conditions. These professionals can also support community health programs and provide expert guidance for developing and implementing food policies and interventions.

Expanding the number of trained nutritionists and dietitians in different public and private establishments, such as schools, hospitals, and prisons is essential. Many Ugandan hospitals and health facilities have trouble recruiting sufficient healthcare personnel and many lack a resident nutritionist or dietician. A well-resourced nutrition workforce is crucial for creating effective health programs, conducting research, and evaluating the impact of dietary interventions on public health.

5 Trends and uncertainties in the management of overweight, obesity, and diet-related NCDs in Uganda

Key Trends

Trends help guide strategic decision-making by revealing emerging patterns, consumer preferences, and advancements in technology that shape activities and processes across various sectors. This section highlights key trends driving obesity, overweight, and the rise in NCDs, as well as the significant transformations currently reshaping Uganda's food system:

- **Population and urbanization growth:** This demographic shift are driving changes in food production, distribution, and consumption patterns (FAO, 2023).
- **Climate change:** Increased extreme weather events, such as droughts and floods, are disrupting agricultural productivity and threatening food security, requiring the adoption of climate-resilient agricultural practices (Mubiru et al., 2018).
- **Economic changes:** A burgeoning middle class are fuelling a shift towards more diverse, higher-quality diets (Walker et al., 2018). However, Uganda continues to grapple with the triple burden of undernourishment, micronutrient deficiencies, and increasing obesity.
- **Degradation of natural resources:** The loss of soil and water resources, threaten sustainable food production. The agricultural sector is a major employer, making it crucial to balance economic growth with environmental conservation to ensure long-term food security (Nabyonga et al., 2022).

Figure 3: A summary of the observed key trends in obesity, overweight, and NCD prevention in Uganda



Critical Uncertainties

Critical uncertainties refer to unpredictable factors that can significantly impact future scenarios and decision-making processes. These uncertainties arise from technological advancements, economic fluctuations, environmental changes, and social dynamics, which requires flexible, adaptive strategies to address them. Notable critical uncertainties in Uganda related to obesity, overweight, and the increase in NCDs include:

Critical uncertainties	Uncertainty variation	
Governance	Transparent and inclusive good governance becomes the norm.	↔ Poor governance, corruption, elite capture, and poor transparency dominate.
Resilience to climate, resource degradation, and diseases	The impacts of climate change are adequately managed to ensure food and nutrition security for all.	↔ Climate change causes regular and severe shocks to agri-food systems.
Dietary patterns	Most people are eating a healthy and environmentally-friendly, sustainably produced diet.	↔ Widespread consumption of low-nutrient quality and unsustainable diets driving poor health and environmental degradation.
Food prices/food environment	Food prices are stable and a healthy diet is affordable.	↔ Food prices are highly variable and many unable to afford a healthy diet.
Foreign and corporate influence	Uganda controls its own resources for the equitable benefit of its citizens.	↔ Control of Uganda's resources is increasingly dominated by foreign and corporate influences.
Trade	Uganda has open and reliable regional and global markets for food imports and exports.	↔ Geopolitics, climate change, and food insecurity lead to closed and/or erratic regional and global food markets.
Equity	Economic growth, policies, and social protection enhance equality and access to healthy diets.	↔ ^{DD} Economic development increases inequalities and urban slums, leaving many unable to afford healthy diets.
Business structure	Food production, distribution, and retailing are significantly carried out by a sector comprised of numerous micro-, small-, and medium-sized enterprises.	↔ ^{DD} Food production, supply, and retail are increasingly dominated by large-scale, consolidated agri-food businesses.

Figure 4: Summary of critical uncertainties and expected variations

6

Scenarios for the future prevalence of overweight, obesity, and diet-related NCDs in Uganda

In foresight, scenarios are structured narratives that describe plausible future developments, helping key stakeholders and policymakers navigate uncertainty and complexity. Within food system analysis, scenarios illustrate how factors – such as dietary patterns, business structure, and policy shifts – might impact food production, distribution, and consumption. Scenarios provide a framework for envisioning diverse futures and guiding strategic choices to align with long-term food sector sustainability goals.

From the list of uncertainties, dietary patterns and business structure (Figure 4) were selected to build the future food system scenarios (Figure 5), as they are most likely to shape governance and increase the risk of obesity, overweight, and diet-related NCDs. The two key uncertainties combine to create four distinct scenarios, each representing different potential futures based on how these uncertainties unfold. By crossing these uncertainties in a 2x2 matrix, as outlined by (Rhydderch, 2017), the framework allows for exploring various outcomes and preparing strategic responses based on the interplay of these critical factors in shaping future scenarios.

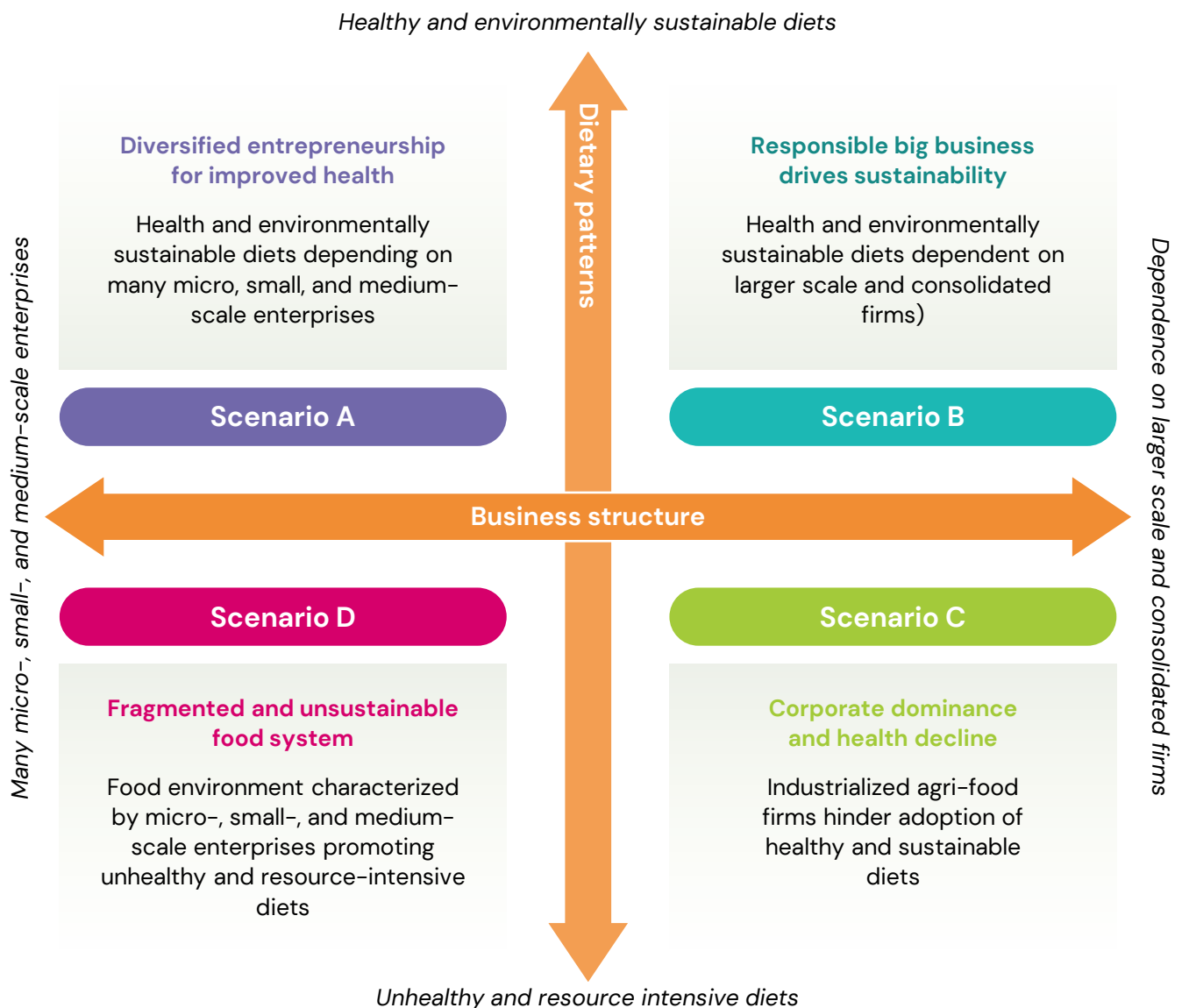


Figure 5: Scenarios for future planning

Dietary patterns

Scenario A: Diversified entrepreneurship for improved health

In this scenario, diversified micro-, small-, and medium-sized enterprises promote healthy and environmentally sustainable diets, improving the management of overweight, obesity, and diet-related NCDs. Most foods are purchased from markets, small shops, and some supermarkets that source from smaller enterprises – leading to increased access to fresh and nutritious diets, healthier eating habits, improved overall health, and enhanced sustainability. The viability of small enterprises also ensures a stable supply chain and fosters community resilience, mitigating the impacts of environmental degradation and price instability.

Scenario B: Responsible big business drives sustainability

In this scenario, large-scale agri-food businesses with strong sustainability commitments take the lead in promoting healthy and sustainable diets. Supermarkets, catering to wealthier consumers, prioritize offering affordable and sustainable food options and processed foods are reformulated to be healthier. As a result, more people adopt healthier diets, contributing to improved public health and reduced environmental impact.

However, the dominance of larger firms may challenge small enterprises, which often struggle to compete with the economies of scale and extensive resources of big businesses. These small enterprises might face financial difficulties, potentially leading to a decline in their presence in the market. Strategic support is crucial for small enterprises thrive, ensuring a diverse and resilient food system.

Business structure

In this scenario, a fragmented food system dominated by small enterprises offers unhealthy, resource-intensive diets, complicating efforts to manage obesity and diet-related NCDs. Efforts to ensure the availability of nutritious options are complicated, as the majority of food purchases occur in markets and small shops. As more people consume unhealthy foods, incidence of poor health, obesity, and related diseases increases which, compounded by widespread food safety issues, further undermines public health.

Small enterprises often lack the means or capacity to invest in healthier, more sustainable practices, which perpetuates the availability of unhealthy food options. Environmental degradation results in shocks and price instability, making it even harder for consumers to consistently access affordable, nutritious foods. Such volatility drives consumers towards cheaper, less healthy alternatives, intensifying the obesity epidemic and related health problems.

Scenario D: Fragmented and unsustainable food system

Scenario C: Corporate dominance and health decline

In this scenario, large-scale agri-food businesses dominate, promoting unhealthy, resource-intensive diets that worsen obesity and diet-related NCDs. Wealthier individuals purchase food from supermarkets, where processed and unhealthy foods are prevalent, increasing the risk of poor health outcomes.

Small enterprises struggle to compete and remain profitable, reducing access to healthier, locally-produced options. Environmental degradation, driven by unsustainable agricultural practices, leads to increasing shocks and price instability, limiting availability of nutritious foods.

7 Policy recommendations

These policy recommendations aim to be effective across all scenarios to create a resilient, sustainable food system that promotes healthier food production, reduces diet-related diseases, and enhances food security. Importantly, these policies steer Uganda toward a diversified approach where small and large enterprises contribute to public health and environmental sustainability, fostering foster collaboration, innovation, and responsible practices to benefit the entire population.



a) Support small and medium food enterprises to produce healthy foods

Supporting small and medium enterprises (SMEs) in the food sector is vital for creating a sustainable and diverse food system. The government, through the ministries of Trade, Agriculture, and Finance, should provide financial incentives, technical assistance, and training programs to help SMEs adopt healthier and more sustainable healthy food production practices.

Developing supportive regulatory frameworks can ease compliance with food safety standards, and collaboration among SMEs should also be encouraged to foster innovation and resource sharing. Investment in research and development will help SMEs innovate and improve their products. Monitoring and evaluating the impact of support programs ensures effective resource allocation and continuous improvement in promoting healthy food production. Raising consumer awareness and using technology to boost efficiency will further enhance SMEs' appeal. Such support can improve these enterprises' profitability and resilience, ensuring a stable supply of nutritious foods and reducing reliance on large-scale agri-food businesses.

b) Promote local and organic food production

Promoting local and organic food production helps reduce environmental degradation, improve food security, and enhance access to healthy diets. Uganda should invest in programs that encourage farmers to adopt organic farming practices and support local food markets. These can be achieved through initiatives such as:

- **Train farmers in organic farming** to improve soil health, reduce chemical inputs, and produce more nutrient-rich foods
- **Establish cooperatives** to empower smallholder farmers pool resources and access larger markets
- **Introduce tax breaks or subsidies** for organic farming
- **Enact public procurement policies** to prioritize local organic producers, enhancing local economies
- **Implement consumer education campaigns** to raise awareness about the health benefits of purchasing organic foods from local providers
- Leverage technology, like e-commerce platforms, to facilitate market access
- **Foster partnerships** between government, NGOs, and the private sector to create a comprehensive support system for local, organic food production



c) Regulate marketing of unhealthy foods

Regulating the marketing of unhealthy foods is crucial for improving public health in Uganda. The government should implement strict advertising guidelines to limit the promotion of high-calorie, low-nutrient products, especially to children. Australia and Chile have successfully adopted similar measures, restricting unhealthy food ads during children's viewing times and banning such ads in public spaces (Kelly, 2019; Trapp et al., 2022). These measures aim to create healthier food environments and reduce unhealthy food consumption among children, addressing the public health crisis associated with obesity and diet-related diseases.

d) Develop food-based dietary guidelines

The government should support the Ministries of Health and Agriculture to develop comprehensive food-based dietary guidelines tailored to Uganda's unique cultural and nutritional needs. These guidelines should provide clear, evidence-based recommendations on healthy eating patterns and portion sizes. Leveraging technology and digital platforms can aid in the widespread distribution of the guidelines, while public awareness campaigns can highlight the benefits of nutritious foods, promoting healthier eating habits to combat malnutrition, overweight, and obesity.

e) Improve food labelling

Uganda should strengthen its food labelling regulations to align with World Health Organization (WHO) recommendations. Clear and prominent FOP labelling enables consumers to make informed choices, reducing the consumption of unhealthy ingredients linked to NCDs.

The government should mandate the disclosure of critical nutritional information, such as calories, salt, sugar, trans fats, and saturated fats, on all pre-packaged foods using color coding or warning labels that quickly communicate health risks. Claims about health benefits of certain foods should also be strictly regulated, particularly for products high in sugar, salt, or unhealthy fats. Small businesses should receive technical and financial support from the government to ensure compliance with required standards and develop accurate labels.

Finally, food service establishments, including restaurants and fast food outlets, should be required to display nutritional information on their menus, to inform consumers about calorie, salt, sugar, and fat content.

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