

FOOD-BASED

DG



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Acronyms

ACRONYM Full name

AGI Association of Ghana Industries

CSIR Council for Scientific and Industrial Research

FBDG Food-based Dietary guidelines

FDA Food and Drugs Authority

FRI Food Research Institute

GES Ghana Education Service

GHS Ghana Health Service

GRA Ghana Revenue Authority

GTB Ghana Tourist Board
GWC Ghana Water Company

INFORMAS International Network for Food and Obesity / Non-communicable

Diseases (NCDs) Research, Monitoring and Action Support

ISD Information Services Department

MoE Ministry of Education

MoFA Ministry of Food and Agriculture

MoF Ministry of Finance

MoI Ministry of Information

MLF Ministry of Lands and Forestry

MoFAD Ministry of Fisheries and Aquaculture Development

MGCSP Ministry of Gender, Children and Social Protection

MLGRD Ministry of Local Government and Rural Development

MoTI Ministry of Trade and Industry

MTTT Multi-sectoral Technical Task Team

MoYS Ministry of Youth and Sports
NCD Non-Communicable Disease

RWSP Rural Water and Sanitation Program

WHO World Health Organization

UN United Nations

VSD Veterinary Services Directorate





Background

Following a comprehensive assessment of the local and global evidence by a multi-sectoral technical task team (MTTT), of the nutrition and health situation in Ghana, a national food-based dietary guidelines (FBDG) has been published to guide food and dietary decision-making by and for people living in Ghana. The FBDG document is for healthy persons aged 5 years and above, living in Ghana. It recommends eating diets that address undernutrition as well as limit consumption of nutrient-poor calorie-dense foods which increases risk of obesity and non-communicable diseases.

The Ghana FBDG are intended to be used by both lay and technical members of society. However, in Ghana, the conditions necessary to enable successful use of the FBDG are not in place. There is no question that what people eat is driven by what is available and accessible in their environment. There is, therefore, a need to create a food environment that supports and complements the recommendations in the FBDG. In 2019, a group of food systems experts used the INFORMAS Food-EPI process to assess the national policy environment to promote optimal diets. This process identified key policy and legislative gaps that needed to be addressed to ensure a health-promoting food environment ¹.

Alongside the FBDG that have been published, the government of Ghana has published this Food Systems Guidelines which recommends actions for creating an optimal food environment. These recommendations are not intended for use by individuals and families. Instead, they are intended to be used by government agencies, civil society organizations, communities, local government authorities, private sector, and all relevant stakeholders who work at community, institutional, and policy levels to enable compliance to the FBDG. Therefore, the Food Systems Guidelines are aligned with the recommendations in the FBDG.

The Food Systems Guidelines was inspired by the guiding principles which were established early in the process for developing the Ghana FBDG. These include 1) the need to ensure food production diversity, as a basis for promoting dietary diversity, 2) enabling market access to healthy food, 3) enhancing value chains, deliberately, to minimize food waste and to maximize benefits along entire value chains, and 4) building leadership and capacity to support stronger food systems approach to dietary improvement. Further, the Food Systems Guidelines are motivated by Ghana's commitment to Food Systems strengthening as expressed at the highest level of governance in Ghana's Food Systems and Investment Plan,² as well as the national commitment statement presented by the President of Ghana during the UN Food Systems Summit in 2021.³

The Food Systems Guidelines are a synthesis of technical recommendations from multiple processes focused on addressing the food and nutrition security challenges of Ghana. These include the outcomes of the: 1) situational analysis and evidence review that informed the development of the FBDG⁴, 2) nationwide stakeholder consultation on food systems that preceded the UN Food Systems Summit, and 3) extensive discussions by the FBDG's Multi-Stakeholder Technical Task Team (MTTT). Subsequently, the draft Food Systems Guidelines have been reviewed by MTTT members as well as by key stakeholders, including technical experts from the Food and Agriculture Organization.

²Planting for Food And Jobs. 2017

³President Akuffo Addo's Statement at UNFSS https://www.ghanamissionun.org/statement-by-president-akufo-addo-at-the-united-nations-food-systems-summit/

⁴Special Issue publication on Situation Analysis https://www.ajfand.net/Volume22/No2/index.html#gsc.tab=0



How to use the Food Systems Guidelines

Aligned with each one of the 13 FBDG recommendations, there are 13 corresponding recommendations in the Food Systems guidelines. These recommendations include evidence-informed actions that may be implemented by local or central government actors as well as actors outside of government, including civil society and private sector. The recommendations constitute a menu of options for stakeholders to consider. These recommendations will constitute a starting point for the multisectoral, multilevel discussions towards implementation of the Ghana dietary guidelines. Stakeholders are therefore encouraged to utilise the recommendations not as fixed actions but as a basis for informed action. There are clusters of related actions that are specified under separate recommendations. The table below maps these common recommendations to ensure they can be easily identified.

| # | Recommendation | Potential Lead Agencies |
|---|---|--|
| | It is recommended that central government ministries, departments, and agen | cies should consider: |
| 1 | Prioritizing and supporting increased diversification of food production, especially prioritising fruits, vegetables, legumes and animal source foods. ^{1,2} This can be done by including these foods as part of public food-based programs such as school meals, and other institutional feeding programs. | MoFA, MoFAD, farmers associations, Academia, MoF, MoIF |
| 2 | Prioritising investment in the agri-food and fisheries/aquaculture sectors to enhance all year round productivity and affordability of nutrient-rich foods (fruits, vegetables, legumes, and animal-source foods. ² | MoFA, MoFAD, farmers associations, Academia, Private Sector |
| 3 | Using targeted subsidies to enhance capacity of food systems actors to add to/maintain the productivity, nutritional value, and value of nutrient-rich foods, especially fruits, vegetables, legumes, and animal source foods. Typical subsidy interventions may include: Increased fair-trade opportunities for farmers, Reduced risks linked with cultivating highly perishable foods, Support grants for processing perishable foods with longer shelf-life (without creating obesogenic foods), Targeted input subsidies for farmers focusing on nutrient-rich foods, Increased affordability and unhindered access to inputs needed to produce such foods Technical/agronomic support to farmers, etc). | MoFA, MoFAD, farmers associations, Academia, MoF |
| 4 | Investing in appropriate and effective technological solutions that enhance value along the value chain and enable longer-term storage and transportation of nutrient-rich perishable foods (particularly fruits and vegetables), over longer distances. To complement this strategy, a national plan for efficient food transportation is needed. ² This plan should consider investments in a feasible cold-chain system for perishable foods (e.g., horticultural produce). | MoFA, MoFAD, farmers associations, Academia, private sector, MRH, MESTI, CSIR, MoF |
| 5 | Creating an enabling environment that incentivizes investment in nutrient-rich perishable food value-chains by private sector. These may include: Fiscal incentives in the form of tax incentives or reduction Subsidies to attract/maintain investment in value chains that focus on nutrient-rich foods. Food labelling policies that enable consumers to make informed choice Public food procurement policies Context-appropriate nutrient-profiling model/system that enable classification of food based on their nutrition value. | MoFA, MoFAD, farmers associations, Academia, private sector, MoTI, MoH, MoF, FDA |





¹Laar et al, 2020. https://pubmed.ncbi.nlm.nih.gov/32565610/

| # | Recommendation | Potential Lead Agencies |
|----|--|---|
| | It is recommended that central government ministries, departments, and agenc | cies should consider: |
| 6 | Targeting vulnerable population subgroups such as young children, adolescent girls, women of reproductive age. Such policies and initiatives including school feeding and Livelihood Empowerment Against Poverty (LEAP) should be promoted and expanded as a vehicle for delivering nutrient-rich foods to the most vulnerable and include nutrition education. ⁵ | MoFA, MLGRD, MoYS, Academia, MoGCSP, MoFAD |
| 7 | Implementing of fiscal policies such as taxation of unhealthy highly processed, ultra-processed foods can contribute to reducing their consumption. Such taxation can be complemented by using the proceeds of the tax to subsidize and incentivise nutrition-sensitive agri-food investment in order to increase supply and access to nutrient-rich, diverse, foods. ⁵ | MoTI, GRA, Academia, AGI, FDA, MoF |
| 8 | Implementing and monitoring policies, standards, and initiatives that ensure food safety for both processed and unprocessed foods that are marketed and promoted to persons living in Ghana. ⁷ | FDA, Academia, Consumer protection, MoFA, MoFAD |
| 9 | Institutionalizing school gardening and nutrition education and with practical aspects of gardening as part of the core basic and secondary education curricula for all schools. | MoE, GHS, GES, MoFA, Academia |
| 10 | Developing and implementing school meals guidelines, ⁸ recipes, and standards based on the national Food-based dietary guidelines. ⁹ | MoE, GHS, GES, MoFA, Academia |
| 11 | CSupporting and encouraging households to produce, store and use a diversity of nutrient-rich foods including fruit, vegetables, and legumes; and raising small ruminants, poultry and micro scale fish farming (aquaculture) in homes, and neighbourhoods. Particular attention is needed for promoting and supporting urban and peri-urban food production systems. 10-12 | MoFA, MFAD, MLGRD, Academia |
| 12 | Leveraging schools as a platform for nutrition education that involves school gardens where there is training on food production, storage, and utilization. School gardening, raising of small ruminants and poultry; mushroom production, snail rearing, etc can be part of School Food and Nutrition Education. ¹³ | MoE, GHS, GES, MoFA, Academia, MLGRD |

⁵Ghana Food System Strategy and Investment Plan, 2023-2027

⁷Ghana Public Health Act 2012. https://www.fao.org/faolex/results/details/en/c/LEX-FAOC136559/#:~:text=Ghana-,Public%20Health%20Act%2C%202012%20(Act%20No.,to%20provide%20for%20related%20matters

^{*}https://linkscommunity.org/assets/PDFs/fao_nutrition-guidelines-and-standards-for-school-meals_a-report-from-33-low-and-middle-income-countries.pdf

 $^{^{9}}$ Ministry of Food and Agriculture, University of Ghana. Ghana Food-Based Dietary Guidelines.

¹⁰ Marquis et al, 2018 https://pubmed.ncbi.nlm.nih.gov/30332542/

¹¹Passareli et al, 2020 <u>https://pubmed.ncbi.nlm.nih.gov/32652012/</u>

¹²Bushamuka et al, 2005 <u>https://journals.sagepub.com/doi/pdf/10.1177/156482650502600102</u>

¹³FAO School Food and Nutrition Framework https://www.fao.org/3/ca4091en/CA4091EN.pdf

| # | Recommendation | Potential Lead Agencies | |
|----|--|---|--|
| | It is recommended that central government ministries, departments, and agencies should consider: | | |
| 13 | Promoting increased production and year-round supply of diverse fruits for local consumption and for the export market. ¹⁴ | MoFA, Farmers associations, Academia, MESTI, CSIR, MLF | |
| 14 | Supporting fruit production industries in a way that leverages best practice horticulture technologies to enhance productivity. These technologies include greenhouse farming systems, irrigation systems that enable year-round cultivation, access to improved seeds and other inputs, and technical/agronomic support. There is need to invest in introduction of technologies (both indigenous and novel) and strategies that stabilize supply by reducing the huge losses and wastes and nutrient losses occuring along the fruit value chain. | MoFA, Private sector, Academia, Farmers associations, MESTI, CSIR | |
| 15 | Promoting nutrition-sensitive value addition to extend the shelf-life of fruits (while maintaining/enhancing nutritional value), including minimal to moderate processing of fruits, enhanced storage and transportation of fruits. ¹² Such actions should be intentional about not creating obesogenic foods. | AGI, MoFA, Farmer associations, Private sector, Academia, CSIR | |
| 16 | Providing subsidies for fruit value chain actors to sustain productivity, and to reduce cost of production, transportation, and marketing in the fruit value chain; this intervention should aim to develop and sustain businesses that promote fruit value chain profitability (while maintaining or enhancing their nutritional value (as well as enhancing affordability of fruits. ¹¹ | MELR, AGI, MoFA, Private sector, Academia, MoF | |
| 17 | Promoting cultivation of a variety of fruit trees/plants in homes, public institutions (schools, hospitals, prisons, etc) and community spaces (parks, avenues, community centres, etc) ¹² | MoFA, Academia, GES, MoE, MESTI, MLF, MLGRD | |
| 18 | Developing effective and functional value chain management systems that delivers fruits to consumers at affordable price. ¹² | MoFA, Academia, Private sector, MLF, CSIR | |
| 19 | Institutionalizing inclusion of fruits as part of all food service and catering for state-, regional, and local-government sponsored events and programs. | MLGRD, Media, MoI | |
| 20 | Promoting fruit consumption as part of a healthy diet; promoting fruits as a nutrient-dense food group as part of health promotion programs and other social interventions. ¹⁶ Also, there should be consideration for institutionalizing inclusion of daily fruit supply as a component of the national school meals programs (Ghana School Feeding Program) at all levels of basic and high school education system. | Media, GHS, Consumer protection, MoGCSP | |



¹¹Passareli et al, 2020 https://pubmed.ncbi.nlm.nih.gov/32652012/

¹²Bushamuka et al, 2005 <u>https://journals.sagepub.com/doi/pdf/10.1177/156482650502600102</u>

 $^{^{\}rm 14}\text{MOFA},\,2017.$ Planting for Food and Jobs.

¹⁵Harris et al, 2023 <u>https://link.springer.com/chapter/10.1007/978-3-031-15703-5_6</u>

¹⁶FAO 2021 <u>https://www.fao.org/3/cb5725en/cb5725en.pdf</u>

| # | Recommendation | Potential Lead Agencies |
|----|--|---|
| | It is recommended that central government ministries, departments, and agend | cies should consider: |
| 21 | Institutionalizing a national fruit day, which can serve as an opportunity for communication and promotion of the importance of fruits. Include fruits as a required component of all government-funded food services (LEAP program, Prison rations, in-patient hospital meals, catering for public events, etc) | MoFA, Academia, GES, MoE, MESTI, MGCSP, GHS, MLF |
| 22 | Supporting the Food and Drugs Authority to establish, monitor, and enforce appropriate hygiene standards in the fruit value chain, including standards for transportation, storage, handling, vending, and serving fresh or processed fruits. These standards should be enforced at all levels. ¹⁷ | FDA, GHS, GSA, Academia, MoTI, MoFA |
| 23 | Supporting the Food and Drugs Authority to establish and implement a traceability system for fruits to enable food safety audits and tracking. This traceability system should be monitored and enforced by the FDA and relevant regulatory and standards agencies. ¹⁸ | FDA, GHS, GSA, Academia, MoTI, MoFA |
| 24 | Requiring all markets and vendors of fruits to comply with existing food safety standards for handling fruits, including ensuring appropriate transportation, handling, storage, hygienic packaging, and display in markets. ¹⁴ | MLGRD, Private sector, Media, Academia, MoFA, MLGRD, FDA |
| 25 | Spelling out additional mandate of the Food and Drugs Authority to regulate and enforce food safety standards for both non-processed fresh produce and processed foods sold in markets supermarkets, food service organizations, and all other food vending locations. | FDA, GHS, GSA, Academia, MoTI, MoFA, MLGRD |

¹⁸FAO, 2017 Food Traceability guidelines https://www.fao.org/3/17665EN/i7665en.pdf



 $^{^{\}rm 14}\text{MOFA},\,2017.$ Planting for Food and Jobs.

¹⁷FDA. National Food Safety Policy

Eat a variety of vegetables everyday

| # | Recommendation | Potential Lead Agencies |
|----|--|--|
| | It is recommended that central government ministries, departments, and agen | cies should consider: |
| 26 | Developing and implementing policies and programs which promote increased productivity and supply of diverse vegetables all year round. | MoFA, Farmers associations, Academia, CSIR |
| 27 | Strengthening vegetable value chains by investing in vegetable production systems that leverage best practice horticulture technologies to enhance productivity (while maintaining or enhancing their nutritional value) including greenhouse farming systems, irrigation systems that enable year-round cultivation, and access to improved seeds, other inputs, and technical/agronomic support. ¹² | MoFA, Farmers associations, MoTi, Academia, Private Sector, CSIR |
| 28 | Investing in technologies and strategies that reduce the huge losses and wastes that occur in vegetable value chains. These technologies may include value addition (including processing of vegetables), while maintaining or enhancing their nutritional value. ¹² | MoFA, Farmers associations, Academia, MoTI, Private sector, CSIR |
| 29 | Strengthening vegetable producers' technical capacity for improved vegetable handling and safety, including agro-chemical use in the vegetable value chain, while maintaining or enhancing their nutritional value. | MoFA, Farmers associations, Academia, MoTI, Private sector, MESTI, MLGRD |
| 30 | Promoting vegetable gardening in homes, schools, and other institutions (e.g. prisons, hospitals, etc.) to complement vegetable supply in schools ¹⁰ as well as making school gardings a part of school food and nutrition education programs | MoFA, Farmers Associations, MoGCSP, Academia, MoE, GES, GHS, MLGRD |
| 31 | Providing subsidies for vegetable value chain actors, including subsidies for inputs, irrigation, cold chain transportation, technology for cold storage, processing, nutrition-sensitive value addition, distribution and marketing. ¹² | MoFA, Farmers associations, MoGCSP associations, Academia, MoE, GES, GHS, MLGRD, MoF |
| 32 | Establishing a traceability system for vegetables to enable food safety audits and tracking. This system should be monitored and enforced by relevant regulatory and standards agencies | MoFA, Farmers, FDA, Academia, MoE, GES, GHS, Academia |
| 33 | Using all government communication platforms to disseminate messages on increasing consumption of a variety of vegetables as part of a healthy diet | GHS, ISD, GES, Media, Academia, MMDA's |
| 34 | Establishing a certification standard for serving vegetables by food service institutions (schools, hospitals, restaurants, etc). This system should be monitored and enforced by appropriate regulatory and standards agencies. 15 | FDA, GSA, Academia, MLGRD, GTB |

¹⁰ Marquis et al, 2018 https://pubmed.ncbi.nlm.nih.gov/30332542/

¹⁵Harris et al, 2023 https://link.springer.com/chapter/10.1007/978-3-031-15703-5_6



¹¹Passareli et al, 2020 <u>https://pubmed.ncbi.nlm.nih.gov/32652012/</u>

¹²Bushamuka et al, 2005 <u>https://journals.sagepub.com/doi/pdf/10.1177/156482650502600102</u>

| # | Recommendation | Potential Lead Agencies |
|----|---|---|
| | It is recommended that central government ministries, departments, and agenc | ies should consider: |
| 35 | Empowering, resourcing and retooling the Food and Drugs Authority to enable it exercise its mandate to cover non-processed fresh foods, including vegetables (e.g. vegetables sold in open markets, supermarkets, food service organizations) | FDA, GSS, Academia, MLGRD, MoTI, GRA, MoFA |
| 36 | Requiring all markets and vendors of vegetables to comply with existing food safety and handling standards while transporting, handling, processing, packaging and display vegetables in markets. ¹⁴ | FDA, GSS, Academia, MLGRD, MoTI, GRA, MoFA |



| # | Recommendation | Potential Lead Agencies |
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| | It is recommended that central government ministries, departments, and agend | ies should consider: |
| 37 | Promoting increased production and access to legumes, pulses, and nuts (including indigenous and underutilised legumes such as Bambara, black gram, locust beans. There is a need to increase production and year-round supply of diverse legumes, especially production sites in the northern and middle belt regions to stabalize the market price of legumes, pulses and nuts. ³ | MoFA, Farmers associations, Academia, MLGRD, Private Sector, CSIR |
| 38 | Supporting legume production and processing through enabling access to subsidies for inputs, irrigation, transportation, technology for storage, processing, value addition, distribution, and marketing similar to the cocoa sector. This should be done while maintaining or enhancing their nutritional value. | MoFA, Farmers associations, Academia, MLGRD, MoTI, MoF |
| 39 | Supporting nutrition-sensitive local innovation and value addition in legume value chains (including processing legumes into nutritious products for local consumption and export markets). | MoFA, Farmers associations, Academia, MLGRD, MoTI, Private Sector, CSIR |
| 40 | Empowering regulatory agencies (including the Food and Drugs Authority) to establish a traceability system for legumes, pulses, and nuts to enable food safety audits and tracking. This system should be monitored and enforced by relevant regulatory and standards agencies. ¹⁵ | FDA, GSS, Academia, MLGRD, MoTI, GRA, MoFA |



Eat a variety of animal-source foods everyday

| # | Recommendation | Potential Lead Agencies |
|----|---|---|
| | It is recommended that central government ministries, departments, and agend | ries should consider: |
| 41 | Investing in interventions that sustainably increase production and productivity of animal source foods. These investments should include context-appropriate implementation science studies to better understand technologies for enhanced productivity of local livestock rearing using the free-range system, particularly for poultry, small ruminants, and non-tree forest products (e.g. grasscutter, rabbit, snail, etc). Studies are also needed on the impact of the recommended practices on climate, water security, and overall environmental footprint of food systems in Ghana. | MoFA, MoFAD, MoF, Academia, CSIR |
| 42 | Supporting entrepreneurs engaged in sustainable animal-source food production (e.g., poultry, fish and aquaculture value chains) through incentives and capacity building. These activities should focus on maintaining or enhancing the nutritional value of these foods. | MoFA, MoFAD, MLGRD, Academia, Private sector, CSIR |
| 43 | Strengthening the capacity of food standards and regulatory agencies to enforce existing standards on transporting, handling, and vending of livestock and source foods, especially at markets, cold stores, abattoirs, etc. There is also need for establishment and/or enforcement of national standards for regulating amount of fats in animal source foods, both fresh and pre-packaged. | FDA, GSA, Academia, MLGRD, MoTI, GRA, MoFA-VSD |
| 44 | Households should be supported (with inputs and technically) to raise poultry and small ruminants at home for food, where possible. | MoFA, farmers associations, academia, MLGRD, MoTI |



Recommendation 6: Use healthy fats, oils and oily seeds in moderation

| # | Recommendation | Potential Lead Agencies |
|----|--|---|
| | It is recommended that central government ministries, departments, and agen | cies should consider: |
| 45 | Establishing and implementing a classification scheme for food service vendors/providers by production classes (large, medium, and small scale) as a basis for enforcing regulatory requirements. | MoFA, Academia, MLGRD, MoTI, FRI |
| 46 | Building the capacity of key stakeholders involved in implementation of recommendations related to fats and oils in food service vendors/providers. | MLGRD, FDA, GSA, Academia, GRA, GHS |
| 47 | Promoting and supporting increased production and access to foods that are rich in poly-unsaturated fatty acids (eg groundnut, soy bean, cashew nuts, musk melon seeds). | MoFA, Academia, MLGRD, MoTI, CSIR |
| 48 | Regularly monitoring markets to ensure that oils and oil products on the markets comply with and meet the profile indicated on their labels, including fortification standards. | MoFA, Academia, MLGRD, MoTI, FDA |
| 49 | Promoting increased access to fish and seafood, especially those which are rich in poly-unsaturated fatty acids. | MLGRD, FDA, GSA, Academia, GRA, GHS, Media, MoFAD |
| 50 | Establishing and enforcing appropriate standards on levels of fats/oils in food products that are high in fat or preserved using oil. There is also need to develop and monitor the use of saturated fatty acid sources including Palm oil, shea butter and coconut oil consumption in order to meet global recommendations (ie less than 10% of calories from saturated fatty acids). | MLGRD, FDA, GSA, Academia, GRA,CSIR |
| 51 | Regulating and monitoring ready-to-eat food service with respect to standards on healthy fats and oils consumption. | MLGRD, FDA, GSA, Academia, GRA |
| 52 | Requiring medium and large institutional food service providers (including schools, universities, hospitals, prisons) to comply with meal service standards that include specification of amount and type of fat/oil used in commercial food preparation. | MLGRD, FDA, GSA, Academia, GRA, GTB |
| 53 | Requiring food service vendors/providers including restaurants (chain restaurants, franchises, local restaurants), and multi-national food companies, to declare the type, and amount of fat or oil (i.e. amount per serving) of foods on the menu | MLGRD, FDA, GSA, Academia, GRA,GTB |
| 54 | Requiring small-scale food vendors to declare the types of fat/oil used in preparing the meal on their menu boards (e.g. Okro stew with palm oil). | MLGRD, FDA, GSA, Academia, GRA, GTB |

| | Recommendation | Potential Lead Agencies |
|----|--|--|
| | It is recommended that central government ministries, departments, and agenc | ies should consider: |
| 55 | Requiring bakeries and vendors of baked goods and pastries (bread, pies, cookies and similar products) to declare the fat content and type on the labelling of their foods. However, small-scale bakeries should only indicate the type of fat used. | MLGRD, FDA, GSA, Academia, GRA, Private Sector |
| 56 | Requiring institutional medium and large-scale food producers and vendors selling fried foods such as chips (flour dough), fried plantain, and similar fried products to declare the fat content and type on their food foods. However small-scale producers/vendors should only indicate the type of fat used | MLGRD, FDA, GSA, Academia, GRA, Private sector |

| # | Recommendation | Potential Lead Agencies |
|----|--|--|
| | It is recommended that central government ministries, departments, and agenc | ies should consider: |
| 57 | Increasing production and year-round supply of diverse biofortified whole grains, roots, tubers, and plantains | MoFA, Private sector, Academia, CSIR |
| 58 | Investing in value chain management (storage, transportation, processing, etc) of biofortified foods to ensure year-round supply and affordable access to whole grains and coloured roots and tubers, and to maintain their nutritional value. | MoFA, Private sector, Academia, Commodity Exchange, MoF |
| 59 | Promoting consumption of biofortified foods through behaviour change communication, and use in government-funded food procurement and that comply with the Food-based dietary guidelines. | MLGRD, FDA, GSA, Academia, GRA, GHS, Media, MoI |
| 60 | Prioritising the use of biofortified foods in government-funded food programs including institutional feeding (schools, hospitals, prisons, welfare programs, etc.) | MoFA, Private sector, GES, GHS, MoH, MoGCSP |
| 61 | Investing in nutrition-sensitive value-addition for products made using biofortified foods. | MoFA, Private sector, GES, GHS, MoH, |

| # | Recommendation | Potential Lead Agencies | |
|----|--|---|--|
| | It is recommended that central government ministries, departments, and agenc | ies should consider: | |
| 62 | Establishing and enforce policies and strategies that limit consumption of sugar-sweetened beverages and foods. These strategies may include: Nutrient profiling of pre-packaged foods; Mandatory labelling of prepackaged foods. Nutrition education in different settings | MLGRD, FDA, GSA, Academia, GRA, GHS, Media, MoTI | |
| 63 | Enforcing regulations and standards on marketing of pre-packaged foods with added sugar, especially marketing that targets children | MLGRD, FDA, GSA, Academia, GRA, GHS, Media | |
| 64 | Ensuring all commercial vendors use iodized salt for preparing food for human and animal consumption, in compliance with national on salt iodization standards ¹⁹ | FDA, GHS, MoTI, WIAD, Salt producers and marketers, GRA | |
| 65 | Developing and enforcing policies that limit exposure of children to inappropriate marketing of unhealthy foods. | MLGRD, FDA, GSA, Academia, GRA, GHS, Media, MoTI | |

| | Recommendation | Potential Lead Agencies | | | | |
|----|--|--|--|--|--|--|
| | It is recommended that central government ministries, departments, and agencies should consider: | | | | | |
| 66 | Developing a national physical activity policy and strategy which outlines national physical activity aims, and initiatives and mainstreamed across all government programs. | MoH, GHS, MoT, Media, | | | | |
| 67 | Establishing and enforcing installation of walkways and cycling lanes along streets/roads. There is need to establish and regulate the use of reserved and protected walkways and cycling lanes for the indicated purpose. | MoYS, MLGRD, Media, GES, MoF | | | | |
| 68 | Developing standards for school environments to promote physical activity. These may include schools operating certification/license that is linked with compliance to standard environment and resources necessary for physical activity (eg, playground, basic physical activity equipment). | MoYS, MLGRD, Media, GES | | | | |
| 69 | Establishing minimum physical activity environment standards for schools, communities, and workplaces in their jurisdictions. | MoYS, MLGRD, Media, GES | | | | |
| 70 | Designating spaces (such as public parks and recreational centers) in residential communities, which promote Physical activity. This will require identifying and protect safe physical activity infrastructure (eg such as public parks and recreational centers). Also, there is need for enforcing regulations on the recommended spaces between buildings and streets/roads intended for walkways. | MoYS, MLGRD, Media, GES | | | | |
| 71 | Enforcing and monitoring implementation of physical education as part of school curricula. District and municipal assemblies should establish a monitoring system to ensure enforcement of physical education in schools. Also integrating physical activity as part of recreational activities. | MLGRD, GSA, Academia, GRA, GHS, Media. GES | | | | |

Read food labels and nutrition information

| # | Recommendation | Potential Lead Agencies | | | | |
|----|--|---|--|--|--|--|
| | It is recommended that central government ministries, departments, and agencies should consider: | | | | | |
| 72 | Mainstreaming all government and stakeholder communication on food and nutrition. Accurate and simple messages and communication on food label use, as well as information on what constitutes a healthy diet should be enforced. | Media, GHS, MLGRD, MoI | | | | |
| 73 | Establishing and strengthening enforcement of existing regulations and standards on food labels that are currently under global guidance and best practices on food labelling (informed by the Codex Alimentarius guidelines). This should include communication on food labelling (front of package, back of package, etc.) to all population groups, including children. | Media, GHS, MLGRD, FDA, MoTI, GES, Academia, CSIR | | | | |
| 74 | Establishing and implementing labelling standards for Ready-to-eat foods, including foods served through restaurants, or other public food service outlets. Standards are also needed for menu boards of restaurants/chop bars. | MLGRD, FDA, GSA, Academia, GRA, GHS, Media, CSIR | | | | |
| 75 | Requiring all pre-packaged food industry stakeholders (producers, importers, marketing agencies, distributors, etc) to recognize their accountability (through established mechanisms and/or sanctions) for ensuring that the labels of food products in their value chains comply with FDA food labelling standards | MLGRD, FDA, GSA, Academia, GRA, GHS, Media, FRi, MoI | | | | |
| 76 | Providing a standard easy-to-read label format for producers. All food and beverage product labels should follow a simple and comprehensible format established by the FDA | MLGRD, FDA, GSA, Academia, GRA, GHS, Media, Private Sector, FRI | | | | |
| 77 | Adapting, implementing and ensuring compliance to WHO guidelines on marketing of food to children, promotion to children and use of children for food promotion. | MLGRD, FDA, GSA, Academia, GRA, GHS, Media | | | | |
| 78 | Enabling food regulatory/standards agencies to prioritise use of audio/visual approaches for communicating food label information on food products, rather than text | MLGRD, FDA, GSA, Academia, GRA, GHS, Media | | | | |
| 79 | Require all food manufacturers to state on food labels, the quantity (in percentage), of ingredients or category of ingredients used in the manufacture or preparation of a food product. | MLGRD, FDA, GSA, Academia, GRA, GHS, Media | | | | |
| 80 | Developing a consistent, simple, clearly-visible system of labelling should be established for menu boards of food service restaurants (including fast food chains) to enable consumers assess the nutrient quality and energy load of the foods and meals on sale. | MLGRD, FDA, GSA, Academia, GRA, GHS, Media | | | | |



| # | Recommendation | Potential Lead Agencies | |
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| | It is recommended that central government ministries, departments, and agenc | ies should consider: | |
| 81 | Establishing safe levels of key ingredients (salt, fat, saturated fat, trans fat, added sugar) in processed food in line with global best practices and standards. | MLGRD, FDA, GSA, Academia, GRA, GHS, Media | |
| 82 | Establishing food composition standards for processed foods with respect to the content of the nutrients of concern (trans fats and added sugars in processed foods, salt in bread, salt in snacks etc) | MLGRD, FDA, GSA, Academia, GRA, GHS, Media, FRI | |
| 83 | Establishing food composition targets/standards for out-of-home meals in food service outlets (such as fast-food joints, food kiosks, check-check joints, restaurants, and other local food vendors) for the content of the nutrients of concern (e.g. trans fats, added sugars, salt, saturated fat, saturated fat in commercial frying fats/oils) | MLGRD, FDA, GSA, Academia, GRA, GHS, Media, GTB | |
| 84 | Creating behaviour change communication programs targeting the general public (across all ages) as well as frontline workers in health, agriculture, and other food systems actors | GHS, FDA, GES, MLGRD, MGCSP, Academia | |
| 85 | Promoting the establishment and maintenance of cold chains for all relevant food value chains, especially fruits, vegetables, raw animal source foods, milk, etc. Supply of safe drinking water, in food outlets and markets will be a useful complement to these activities. | MMDA's, Private Sector, FDA, GWC | |

Drink water regularly

| | Recommendation | Potential Lead Agencies | |
|----|---|---|--|
| | It is recommended that central government ministries, departments, and agencies should consider: | | |
| 86 | Subsidizing the cost of potable water, particularly to low-income households. Actions to ensure availability and accessibility of potable water are warranted to ensure water security, especially for the most vulnerable and poor in society. Ensuring free access to potable water in public spaces (eg municipal facilities and buildings) should be considered as a basic provision. | Ghana water company, RWSP, MLGRD, MoGCSP, Consumer association, Municipal authorities, Parliament, MoF | |
| 87 | Ensuring behavior change communication should be implemented to promote optimal hydration; mainly through the drinking of unsweetened clean and safe water | GHS, Advertiser's association, FDA, NCD Alliance, MoI | |

Limit alcohol intake

| # | Recommendation | Potential Lead Agencies | |
|----|--|--|--|
| | It is recommended that central government ministries, departments, and agenc | ies should consider: | |
| 88 | Enforcing policies and standards regarding alcohol advertising, marketing and sale. This will include enforcing policy instruments (such as taxation, licensing, and standards) to regulate access and use of alcoholic beverages, especially for at risk groups such as those under age 18 years. | GHS, MoTI, Tourism Authority, GRA, FDA, MoYS, GTB | |
| 89 | Building capacity of institutions involved in regulating production, distribution and use of alcohol and alcoholic beverages. | GHS, FDA, GSA, Tourism Authority, MoTI, GRA, GTB | |
| 90 | Creating awareness about what constitutes harmful use of alcohol and how to limit use of alcohol as part of a comprehensive behavior change communication strategy. Awareness creation should also provide guidance on where to seek help for alcohol use problems. | GHS, Consumer association, NCD Alliance, Professional societies | |

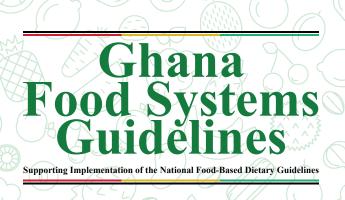


| | | | | | |
|--|--|--|---|--|---|
| | | 13. Limit Alcohol intake | | | |
| | | 12. Drink water regular- ly | | | |
| | | 11. Keep food safely and eat safe food | | | |
| | | 10. Read Food Labels and Nutri- tion infor- mation | | | |
| lations | | 9. Be physically active | | | |
| Table 1: summary of actions for the Food Systems Recommendations | endations | 8. Eat less frequent- ly foods and ingredi- ents high in sugar, fat and salt | | | |
| ⁷ ood Systems | Food -Based Dietary Guidelines Recommendations | 7. Eat a variety of whole, unpolished grains, cereals and tubers everyday | x | × | × |
| ns for the F | | 6. Use Healthy fats, oils and oily seeds in modera- tion | | | |
| mary of acti | | 5.Eat a variety of ani-mal-sou ree foods every-day | x | × | × |
| Table 1: sum | | 4. Eat a variety of legumes, pulses, and nuts everyday | x | × | × |
| π | | 3. Eat a variety of vegetables everyday | × | × | × |
| | | 2. Eat a variety of fruits everyday | X | × | × |
| | | 1. Eat a diverse and varied diet from the six food groups | × | × | × |
| | | Recommended actions | Support increased diversification of food production | Prioritise investment in agri-food & fisheries, aquaculture sectors to enhance productivity of nutrient-rich foods | Invest in appropriate and effective technological solutions that enhance value along value chains and enable longer-term storage and transportation of nutrient-rich perishable foods |

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| | 13. Limit Alcohol intake | | | | |
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| | 12. Drink water regular- ly | | | | |
| | 11. Keep food safely and cat safe food | | | X | |
| | 10. Read Food Labels and Nutri- tion infor- mation | | | | |
| | 9. Be physi- cally active | | | | |
| endations | 8. Eat less frequent- ly foods and ingredi- ents high in sugar, fat and salt | | | x | × |
| nes Recomm | 7. Eat a variety of whole, umpolished grains, cereals and tubers everyday | × | × | | |
| Food -Based Dietary Guidelines Recommendations | 6. Use Healthy fats, oils and oily seeds in modera- tion | | | × | × |
| | 5.Eat a variety of ani-mal-sou ree foods every-day | × | x | | |
| | 4. Eat a variety of legumes, pulses, and nuts everyday | × | × | | |
| | 3. Eat a variety of vegeta-bles every-day | × | x | | |
| | 2. Eat a variety of fruits everyday | × | × | | |
| | 1. Eat a diverse and varied diet from the six food groups | × | x | | |
| | Recommended actions | Including (food groups recommended to be eaten daily in the FBDGs) as a required component of all government-funded food services and institutional meal supply. | Linking local farmers to procurement of such foods (as above). | Enforcing food service standards | Enforcing regulations and standards on marketing of food high in fat, sugar and salt, especially marketing that targets children |

| | | 13. Limit Alcohol intake | × | |
|---|--|--|--|--|
| | | 12. Drink water regular- ly | х | |
| | | 11. Keep food safely and eat safe food | × | |
| | | 10. Read Food Labels and Nutri- tion infor- mation | × | |
| ations | | 9. Be physi- cally active | Х | |
| Recommend | endations | 8. Eat less frequent- ly foods and ingredi- ents high in sugar, fat and salt | × | |
| Food System | ines Recomm | 7. Eat a variety of whole, unpolished grains, cereals and tubers everyday | × | |
| Table 1: summary of actions for the Food System Recommendations | Food -Based Dietary Guidelines Recommendations | 6. Use Healthy fats, oils and oily seeds in modera- tion | × | |
| | | 5.Eat a variety of ani-mal-sou ree foods every-day | x | |
| Table 1: sum | Foo | 4. Eat a variety of legumes, pulses, and nuts everyday | x | |
| 2 | | 3. Eat a variety of vegetables everyday | х | |
| | | 2. Eat a variety of fruits everyday | × | |
| | | 1. Eat a diverse and varied diet from the six food groups | x | |
| | | Recommended actions | Including (food groups recommended to be eaten daily in the FBDGs) as a required component of all government-funded food services and institutional meal supply. Linking local farmers to procurement of such foods (as above). | |





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