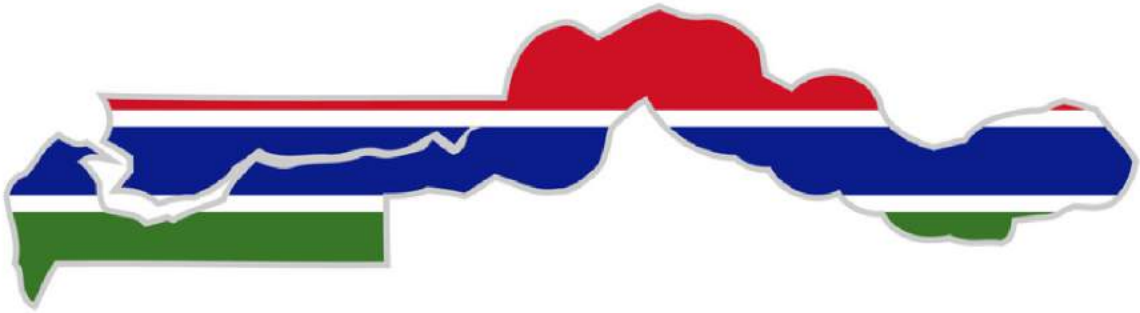


The Gambia:

National Food-Based Dietary Guidelines - 2023

FOOD-BASED DIETARY GUIDELINES

Food and Agriculture Organization of the United Nations

Table of Contents

LIST OF ACRONYMS

ANR	Agriculture and Natural Resources
BFCI	Baby-Friendly Community Initiative
BFHI	Baby-Friendly Hospital Initiative
CPA	Consumer Protection Alliance
CRR	Central River Region
DHR	Directorate of Health Research
DHS	Demographic Health Survey
DLS	Department of Livestock Services
DPS	Deputy Permanent Secretary
FAO	Food and Agriculture Organization
FBDGs	Food Based Dietary Guidelines
FSQA	Food Safety and Quality Authority
FTS	Food Technology Services
GBoS	Gambia Bureau of Statistics
GCCPC	Gambia Competition and Consumer Protection Commission
HCU	Health Communication Unit
IMAM	Integrated Management of Acute Malnutrition
IYCF	Infant and Young Child Feeding
LBW	Low Birth Weight
MAD	Minimum Acceptable Diet
MICS	Multiple Indicator Cluster Survey
MoA	Ministry of Agriculture
MoBSE	Ministry of Basic and Secondary Education

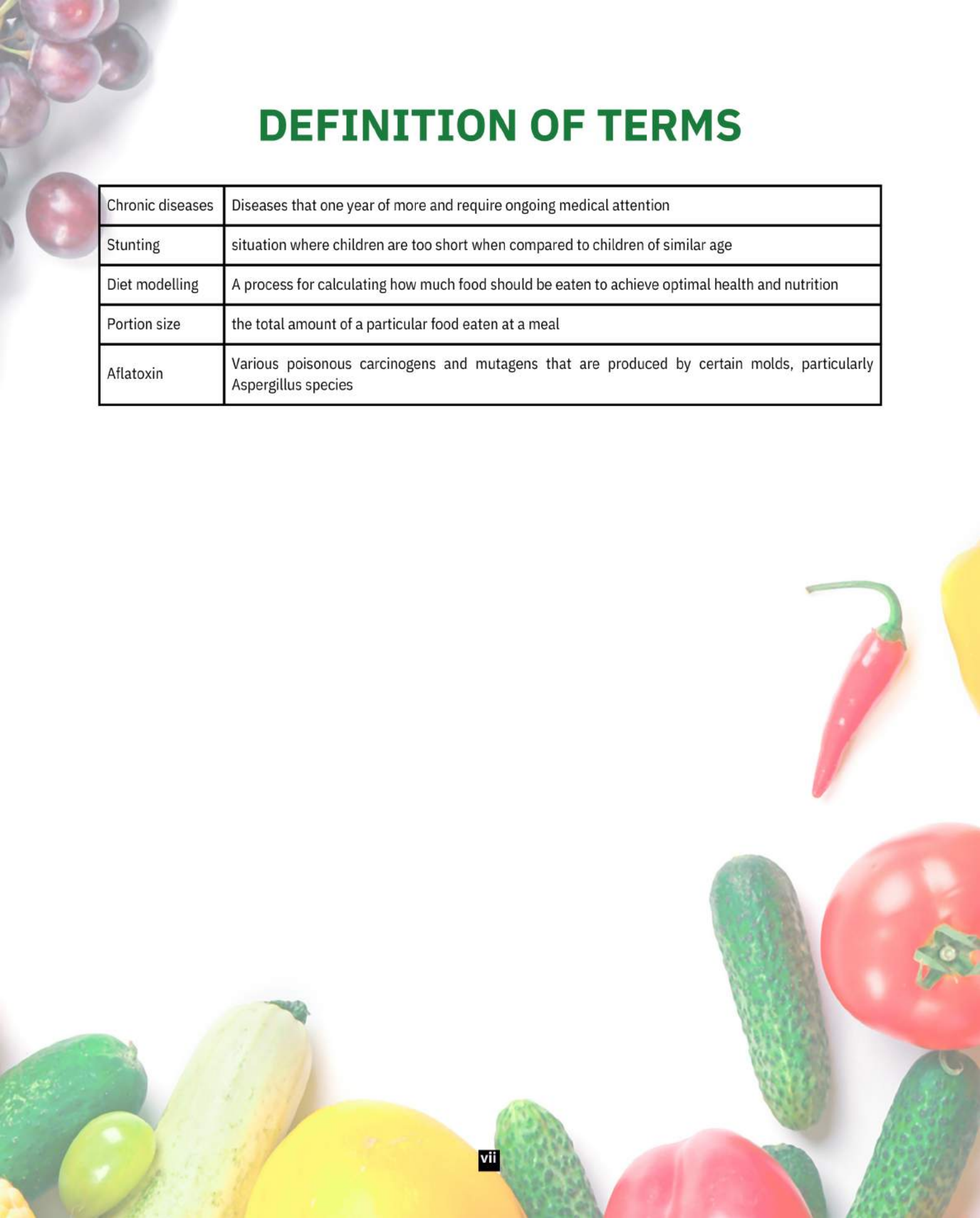
MoH	Ministry of Health
MRCG@LSHTM	Medical Research Council Unit The Gambia at the London School of Hygiene and Tropical Medicine
MTTT	Multi-stakeholder Technical Task Team
NACP	National AIDS Control Programme
NaNA	National Nutrition Agency
NBR	North Bank Region
NBRE	North Bank Region East
NBRW	North Bank Region West
NCD	Non-Communicable Disease
NGO	Non-Governmental Organization
NNP	National Nutrition Policy
PMTCT	Prevention of Mother To Child Transmission
PS	Permanent Secretary
PSC	Project Steering Committee
RMNCAH	Reproductive, Maternal, Neonatal, Child and Adolescent Health
RWEAP	Rural Women's Empowerment in Agriculture Program
SBCC	Social and Behavioural Change Communication
SHNU	School Health and Nutrition Unit
SMART	Standardized Monitoring & Assessment of Relief Transitions
TCP	Technical Cooperation Programme
UN	United Nations
URR	Upper River Region
WCR	West Coast Region
WCR1	West Coast Region 1
WCR2	West Coast Region 2
WHO	World Health Organization

DEFINITION OF TERMS

Term	Definition
Diet	The food and drink we usually consume.
Balanced diet	The combination of the correct types and amounts of food we eat.
Breastfeeding	A way of feeding a baby directly with milk from a woman's breast.
Diet diversity	Different food groups selected as part of meals and refreshments.
Nutrients	A substance that provides nourishment essential for the maintenance of life andfor growth.
Food	Food is any substance consumed to provide nutrition support and energy to an organism.
Food systems	The food system involves the production, processing, transport, and consumption. Issues concerning the food system include the governance and economics of food production, its sustainability, the degree to which we waste food, how food production affects the natural environment and the impact of food on individual and population health
Key messages	Main points of information that you want your audience to know and to understand
Calories	Calorie is the Unit of dietary energy released from energy-giving foods
Serving	Quantity of food suitable for, or served to one person
Malnutrition	Malnutrition is a condition where the body fails to perform its functions because of inadequate supply of nutrients
Meal	An occasion when food is eaten, or the food that is eaten on such an occasion
Food safety	The process of handling, preparing, storing and using food in ways that prevent food-borne diseases
Disease	An illness or deviation from normal physical, mental or emotional health
Health	A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity
Food taboos	Prohibitions or restrictions on certain foods or drinks, often dictated by religious or cultural beliefs
Colostrum	The first of milk from the breast after giving birth, rich in elements that protect infants against diseases

DEFINITION OF TERMS

Chronic diseases	Diseases that one year of more and require ongoing medical attention
Stunting	situation where children are too short when compared to children of similar age
Diet modelling	A process for calculating how much food should be eaten to achieve optimal health and nutrition
Portion size	the total amount of a particular food eaten at a meal
Aflatoxin	Various poisonous carcinogens and mutagens that are produced by certain molds, particularly Aspergillus species



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Foreword by the Minister for Health

Addressing malnutrition has never been easy due to its complex and multifaceted nature. It is becoming increasingly clear that efforts to end malnutrition require multisectoral interventions with strong sectoral coordination. As such, the development and implementation of country-specific Food-Based Dietary Guidelines (FBDGs) are the method recommended by FAO/WHO to be undertake for the process of communication about healthy eating. FBDGs are a science-based tool to guide public food and nutrition, health and agricultural nutrition education programmes, and to foster healthy eating habits and lifestyle. They provide recommendations on foods, food groups and dietary patterns to ensure intake of the required nutrients by the general public, and to promote overall health and prevent chronic diseases. They also take into account sustainable food systems (i.e. agriculture, environmental impact of food production, food safety), and other social behaviours that have an impact on health by acting as policy documents to guide program development and implementation.

The Nutrition Unit of the Directorate of health Promotion and Education under the Ministry of Health, coordinated the development of these FBDGs in partnership with implementing sectors, international nutrition development partners, UN agencies, academia, NGOs, media, and civil society organizations. The development of this FBDGs is in line with the National Nutrition Policy and its strategy and the mission of the national Food and Nutrition Council. The FBDGs is aligned with The Gambia Government Health Strategy in its effort to tackle malnutrition, anaemia and iodine deficiency especially for preschool children, adolescent girls, pregnant and lactating women by providing evidence-based information. These FBDGs will guide consumers, nutritionists, educators, healthcare providers, health and agriculture extension workers, and other actors who work towards improving the nutritional status of individuals and the population at large.

Furthermore, the guidelines contain eleven (11) key messages and an additional recommendation for children under five years. This will help the general public to make healthier food choices and maintain healthy lifestyles. Out of the 11 key recommendations, six focus on healthy dietary practices, three aims to limit the consumption of certain food groups, one promotes physical activity and a final recommendation on optimal feeding of infants and young children below five years, for their healthier growth and development. The actual implementation of the guidelines will require the active involvement of multiple sectors.

Finally, I would like to thank all food and nutrition implementing sectors as well as development partners for their participation in and contributions to the development of the guidelines. We hope the key messages and explanatory tips will foster healthy lifestyles.

Dr. Ahmadou Lamin Samateh
Hon. Minister of Health, The Gambia

CHAPTER 1

BACKGROUND AND OVERVIEW OF THE GAMBIA FBDGS

1.1 Health and Nutrition Situation in The Gambia

In the Gambia, malnutrition remains a major public health problem that affects the most vulnerable groups - women and young children. According to the Demographic and Health Survey2019-20 report, the prevalence of anaemia among women decreased from 60% in 2013 to 44% in 2019, and the proportion of women who are thin decreased from 17% in 2013 to 14% in 2019, whilst the proportion of people who are overweight or obese increased from 23% to 36% over the same period. The overall prevalence of Iron deficiency (ID) and Iron deficiency Anaemia (IDA) are 59.0% and 38.2%, respectively. Percentage of children (6-59 months) that received vitamin A supplements in the past 6 months was 33.7% male and 28.7% female. The proportion of children (6-59 months) who received vitamin A in the Urban and Rural area were 27.0% and 37.9% respectively.

Approximately 50% of children were anaemic and the prevalence of anaemia found in non-pregnant women was 50.9%, and for pregnant women 56.8% (GMNS, 2018). The Maternal Mortality Ratio has improved over the years, but it still remains unacceptably high at 289 per 100,000 live births. Low birth weight is also reported to be at 10% (DHS, 2019-2020). The prevalence of undernutrition in children under five has slightly decreased. The Gambia National Demographic and Health Survey report showed that 25% of children under 5 years old were stunted in 2013, and 18% in 2019. This report also showed that 12% of children were wasted in 2013 and 5% in 2019. Furthermore, underweight was reported among 16% of children under 5 years old in 2013 and 12% in 2019. This situation shows that stunting and underweight prevalence have continued to decrease. The prevalence of wasting has declined far more than stunting and underweight, however, more effort is required to combat these challenges (DHS, 2019/2020).

Data that was collected from eight senior secondary schools in Banjul and Kanifing Municipal Councils, (Region One), revealed that majority of the students (68.5 %) had normal body weight, and (23%) were underweight, (7.7%) were overweight and (0.7%) obese. Underweight was more prevalent among the male students than the female students 37.3% and 15%, respectively (Tunkara-Bah et al 2021).

The country has made significant strides in addressing micronutrient deficiencies. However, there still remains a challenge.

1.1.1 Risk factors on health and nutrition challenges associated with diet in The Gambia

The rate of undernutrition may be associated with location, wealth status, educational level, and maternal nutrition. Evidence has also shown that aflatoxin may have small but significant effect on the growth of Gambian infants (GMNS, 2019). Similarly, about a quarter of school-age adolescents are underweight. Adolescents, particularly early-adolescent girls and boys are more likely to be shorter, lighter and leaner than expected.

Overweight and anaemia among women of reproductive age are high (36% and 44%, respectively). Both may be dependent on location and socio-economic status. A systematic review of the risk factors for cardiovascular diseases in The Gambia identified hypertension prevalence at between 18.3% and 29%. The rate is higher in rural areas compared with urban. The higher prevalence of hypertension in rural areas could be associated with poverty and a lower level of education (National Non-Communicable Diseases Strategy, 2022). The Gambia Micro-Nutrient Survey in 2018 revealed the prevalence of hyperglycaemia among non-pregnant women to be 7.4% (NaNA, 2019). The Gambia Demographic Health Survey 2019-2020 suggests that only 21% of males and 25% of females (aged between 15 and 59 years) had ever had their blood glucose measured by a healthcare worker with the majority of the tests occurring in the 12 months before the survey (National Non-Communicable Diseases Strategy, 2022).

1.1.2 Food consumption, dietary patterns, and nutrients intake in The Gambia

Based on a recent national food consumption survey (NaNA, 2022), most households consumed rice (99%) followed by bread (97%) and vegetable oil (91.4%) and most of these households purchased their own food. In addition, the country produces only about 50% of its national requirements of food staples, with the rest being acquired through imports.

The practice of breast feeding is high (98%), with a median duration of 20.4 months and male children were 0.1% more breastfed than female children. Exclusive breastfeeding prevalence increased from 47% to 54% in 2019 and its practice is higher in rural areas (DHS, 2019).

Initiation of breastfeeding within one hour of birth is low (36%). Early initiation of breastfeeding is most commonly practiced in Janjanbureh (53%) and least common in Brikama (26%) (DHS, 2019).

The consumption of a diversified diet is low (20%) amongst children 6 – 23 months with Minimum Acceptable Diet at 14% among children age 6 – 23 months. Children age 6 – 23 months are mostly fed with grains (86% among breastfed children and 96% among non-breastfed), and (meat, fish and poultry 42% among breastfeeding children and 71% among non-breastfeeding) (DHS, 2019).

Average daily meals for adults are 3 meals per day, and breakfast is likely to come from street vendors. Average calories intake per day is 2,135 kcal/per capita, with rural calories of 2,611 ± 848 kcal and urban calories of 2,295 ± 660 kcal with most of it coming from carbohydrates (61%) (Food Consumption Survey Report, 2021). Vitamin-A rich vegetables and tubers and vitamin A rich fruits were consumed by three-quarters of households (FAOSTAT 2014). Similarly, vegetable oil was found to be widely consumed in The Gambia (91.4%) (GNMS,2018).

A study conducted in eight senior secondary schools in region 1 revealed that the frequency of eating carbohydrate rich food (cereals and tubers – cassava and potato), sweets, biscuits and/or cakes was very common among students, whereas fruits and vegetables were not frequently consumed (Sey-Sawo et al., 2023).

1.1.3 Dietary behaviors and food-related habits (knowledge, attitudes, and practices) in The Gambia

Influence of culture, tradition, religious prohibitions, widespread taboos, food myths, etc. on food consumption

In rural Gambia, notably in URR and WCR, food taboos limit consumption of nutrient-rich foods by women during pregnancy and breastfeeding. For example, among the Fulani ethnic group, some food items such as eggs, bananas, pepper, bitter tomato and cat-fish are believed to affect newborns' health, to prolong labour, or cause health problems to mother (Pérez and García, 2013). Similarly, breastfeeding women do not eat green leafy vegetables, liquids and hot foods for the infant's welfare. Other taboos identified relate to breastfeeding-colostrum which is perceived by some ethnic groups to be impure and unsafe to be given to an infant, despite evidence of its importance for infant health (Sey-Sawo and Tunkara-Bah, 2016).

Social and ecological barriers to achieving healthy diets

Adolescent nutrition and health are shaped by socioeconomic, cultural and local environmental factors. Adolescent diets are influenced by:

- Household wealth, which includes receipt of remittances.
- Affordability of different food items.
- Seasonality and abundance of nutrient-rich green leafy vegetables.
- Abundance of fruits, especially during the rainy season.
- Gender norms, including differences in opportunities afforded to girls, and mother-led decision-making.
- Cultural ceremonies and school holidays.

Desirable food preparation and storage methods

Hygienic practices in relation to food preparation (washing utensils, cleaning the kitchen, washing hands with soap and water, washing all raw fruits and vegetables before eating) and storage was observed to be low in a study done in NBR and CRR (WFP & NaNA, 2014).

1.1.4 Non-Food Behaviour Patterns

Physical activities remain low, with only 12 – 14.6% of the adult population (25 – 64 years) engaged in any form of leisure time activity. This was found to be more vigorous in males than females in both rural and urban settings, but qualitative data suggest that depending on the type of physical activity, females in rural areas occupied with farming and other household chores are more physically engaged than males. Adolescent physical activities in rural Gambia include walking or cycling to school, playing football and farming. Adolescent engagement in physical activity is influenced by gender, seasonality, cultural ceremonies and, to some extent, the availability of digital media (MNS, 2019).

Alcohol consumption remains low in the general population at 2.3% (Koller & Agyemang, 2020).

Smoking is observed to be more prevalent in males than females, with a prevalence in men ranging from 16 - 42.2%. A higher prevalence is observed in the rural areas compared to urban areas (Koller & Agyemang, 2020). Secondary school students aged 20 years were also found to be smoking (19.8% ever smoked). ***Shisha smoking is also common*** in young people (8.1%) and relatively prevalent among girls (Jallow et al., 2017).

Exposure to smoke: The major sources of cooking fuel in households are firewood and charcoal which accounts for 59.8% and 31.7 % respectively of total cooking energy (WHO, 2017).

Second-hand tobacco smoke exposure: At home, 33.7% of students were exposed to tobacco smoke and 61.8% were exposed to tobacco smoke inside enclosed public places (WHO, 2017).

Drinking water: The percentage of households using an improved source of drinking water increased slightly from 91% in 2013 to 95% in 2019/20 (WFP & NaNA, 2017).

Handwashing with soap and water and Sanitation: Proportion of households with basic facility for handwashing (handwashing facility with water and soap) is low at 30.7%, whilst the proportion of households with an improved sanitation facility increased from 61% in 2013 to 72% in 2019/20 (WFP & NaNA, 2017).

1.2 Why it is necessary to develop Food-Based Dietary Guidelines (FBDGs) for The Gambia?

Dietary guidelines provide advice on what to eat and drink to meet our nutritional needs, promote health and prevent diseases. They are developed and written for a professional audience, including policymakers, healthcare providers, nutrition educators, and nutrition programme officers. It is also useful for lay audiences to use as a guide. What people eat and drink have an impact on their health. Given the high rates of chronic diseases, the science that informs the Food-Based Dietary Guidelines is examined through the lens of health promotion and disease prevention. This means that priority has been placed on studies that examine the relationship between diet and health across all life stages, in men, women, adolescents and children from diverse racial and ethnic backgrounds, who are healthy or at risk of chronic diseases. This scientific underpinning makes the Food-Based Dietary Guidelines relevant to the population, and an important tool for health professionals, policy makers, and many other professionals. The Guidelines provide a customizable framework for healthy eating that can be tailored and adapted to meet personal, cultural and traditional preferences in The Gambia. This Food-Based Dietary Guidelines will be use to:

- Contribute in the reviewing and updating national nutrition policy and programs
- Support nutrition education efforts
- Guide sub-national and national health promotion and disease prevention initiatives
- Inform various organizations and industries.

1.3 Goal and Objectives of the FBDGs

1.3.1 Goal

The National Food-Based Dietary Guidelines seeks to promote a healthy, well-nourished, and well-informed population, for improved health and nutritional status of the general population.

1.3.2 Specific Objectives

- To promote increase access to adequate supply of nutrient-rich foods through sustained demand creation for the production and consumption of diverse, locally available foods.
- To promote healthy eating behaviours and lifestyles by creating awareness on factors associated with optimal nutrition and health including physical activity, food environments, personal hygiene, increased consumption of fruits and vegetables and reduced intake of salt, sugar and fats.
- To reduce the burden of diet-related risk factors of non-communicable diseases by promoting optimal health and nutrition practices especially among high-risk population groups, women and urban dwellers in particular.
- To enhance the harmonization, coordination, implementation and monitoring of diet-related health indicators, across the food system to safeguard the availability of optimal diets in a sustainable manner.
- To create an enabling environment for improved dietary practices through advocacy for policies which ensure improved food quality from production to consumption.

1.4 The Guiding Principles considered in the development of The Gambia's FBDGs

Food security: Food insecurity is still high in pockets of the Gambian population, in both urban and rural areas. The Gambian FBDGs seeks to ensure improved availability, access, utilization, and stability of nutritious and healthy foods that meet the needs of the general population.

Diverse food value chain: Domestic food production is low and is supplemented heavily by imports from other countries. The FBDGs aims to ensure efficient provision of a diverse and variety of food from both domestic and imported foods for human consumption.

Value addition: While domestic food production is not sufficient to meet the needs of the population, much food is still wasted, from the farm to the plate. The FBDGs seeks to promote value addition of food to ensure year-round availability, to break the seasonal availability of essential food items such as fruit and vegetables.

Market linkages/access: Inadequate market for domestically produced food adds to the challenges of food waste. Hence, market-control measures that enable efficient delivery of locally-produced food to consumers will help reduce food waste and improve access to food.

Capacity strengthening: The FBDGs implementation is expected to encourage capacity building and knowledge sharing among relevant stakeholders.

Cultural sensitivity: Dietary recommendations and promotions should respect the socio-cultural diversity in the general population.

Evidence-based: Recommendations of the FBDGs and its implementation should be based on established evidence.

Climate resilience and sustainability: The Gambia is highly vulnerable to the effects of climate change. Food systems will be affected in a number of ways including projected reductions in crop yields, livestock diseases, higher frequency of dry spells and drought. The FBDGs should seek to promote a sustainable, healthy and safe food system for better human and environmental health.

1.5 Policy framework and programmes relevant to diets and nutrition in The Gambia

Health and nutrition

The National Nutrition Policy (NNP 2018 – 2025) highlighted 12 priority areas covering different aspects of nutrition with strategies for their implementation across all sections of the population. These include improving maternal nutrition; promoting optimal infant and young child feeding; improving food and nutrition security at the national, community and household levels; improving food standards, quality and safety; preventing and managing micronutrient malnutrition; diet-related Non-Communicable Diseases; caring for the socio-economically deprived and nutritionally vulnerable; nutrition and infectious diseases; nutrition in emergencies and nutrition surveillance; and research. Most of these nutrition priority areas are being implemented as part of the routine MoH and NaNA programmes. Specifically, infant and young child feeding (IYCF), Baby Friendly Hospital Initiative (BFHI), Baby Friendly Community Initiative (BFCI), prevention of mother to child transmission (PMTCT) of HIV, Social and Behavioural Change Communication (SBCC), Integrated Management of Acute Malnutrition (IMAM) are implemented by NaNA and MoH. Like the NNP, the National Reproductive, Maternal, Neonatal, Child and Adolescent Health Policy (RMNCAH 2017 – 2026) highlighted the improvement of infant and maternal nutrition, the provision of nutrition information and counseling for pregnant women and improvement of the nutritional status of children by promoting comprehensive nutrition interventions. Meanwhile, the National Health Policy (2021 – 2030) intends to address malnutrition, unhealthy and risky behaviors, food safety and environmental factors such as outdoor air pollution, household air pollution, drinking water contamination, occupational exposure to hazardous materials, lead exposure, and built environments that discourage physical activity and reduce regional disparities in health outcomes.

Agriculture, fisheries and food security

The Gambia National Agricultural Investment Plan - Food and Nutrition Security (2019 – 2026) and the Agriculture and Natural Resource Policy (2017 – 2026) aims to reduce poverty; enhance food, income and nutrition securities; improve resource and livestock development; enhance rural water supply and sanitation; develop financial markets; community empowerment; and production and value chain promotion. Although the contribution of the fishing sector is small, great importance is attached to its development because of its huge potential to make a significant contribution to national socio-economic development. In particular, the sector is the third largest food production sector after agriculture and livestock and plays a significant role from a nutritional standpoint, as fish is the main source of animal protein in the diets of most Gambians. There are also projects and programmes geared towards improving food security and nutrition in The Gambia through food fortification and adapting agriculture to climate change. Most of the projects and programmes are ongoing, while others have phased out. For quality assurance, The Gambia Standards Bureau has developed standards for various foodstuff, including nuts, cereals/grains, water, processed foods, meat and fish, dairy products and a number of other food items.

Trade

National trade policies highlight the need for diversification of local production, promote value chain development in the fisheries sector, and put in place mechanisms for sustainable and viable fisheries exploitation. The Gambia Consumer Protection Act 2014 deals specifically with issues surrounding protection of consumer rights and obligations of suppliers.

Education

The education policies highlighted school feeding program/canteen schemes, school gardening, health and nutrition education, hygiene and sanitation, deworming and micronutrients supplementation programs as priority areas.

Social Protection

The Gambia Social Protection Policy (2015 – 2025) its accompanying implementation plan identified priority areas such as cash transfers, school meal programmes, health fee waiver as key. Additionally, the Social Protection Fund also provides universal access to essential services such as health, education, housing, water and sanitation. Cash or in-kind social transfer is meant to ensure income security, food security, adequate nutrition, and access to essential services.

Economic development

The National Employment Policy and Implementation Plan (2019 – 2024) highlights the need to promote agriculture-driven industrialization. This is expected to yield improved agricultural productivity and job creation. These programmes are ongoing as part of routine government development plan.

Women's development

The Gambia National Gender Policy (2010 – 2020) and Gender and Women Empowerment Policy (2010 – 2020), though outdated, sought the improvement of the nutritional status of vulnerable groups, particularly pregnant and lactating women, girls and boys, as well as the elimination of food taboos and eating habits that negatively impact the nutritional status of women and children.

Population

Relevant policies on population highlight the enhancement of integrated rural and urban development, decentralization of primary health care delivery mechanisms, supporting farmers to boost food production, ensuring compliance with food and feed safety and quality requirements, improving food crop storage, processing, and distribution to ensure adequate nutritional status for all population segments.

Poverty Reduction

The Poverty Reduction Strategy: 2007-2011 aimed to enhance the capacity and output of productive sectors such as Agriculture, Fisheries, Industry, Trade, Tourism and Infrastructure, and emphasize the productive capacities of the poor and vulnerable populations. Additionally, the policy highlighted mainstreaming cross-cutting issues such as Gender, Youths, HIV/AIDS, Nutrition, and Environment into the development process. Priorities for nutrition in the policy included strengthening partnerships with the private sector and civil society; improving nutrition service delivery through the health system and communities.

1.6 Overview of The Gambia FBDGs

Against the backdrop of persisting undernutrition, micronutrient deficiencies, emerging and rising overweight and obesity with other intermediate risk factors of diet related NCDs in The Gambia, it is important to promote healthy eating habits to address the double burden of malnutrition in the country.

This document is expected to serve as a guide for nutrition education and adoption of healthy practice for the general public. The document is easily readable and understandable to the general public and gives recommendations to individual consumers as well as other actors in the food system. It is a practicalwayof assisting people to reach appropriate and evidence based dietary goals.

Furthermore, FBDGs are focused on recommendations on foods as compared to nutrients. This is because food has a social dimension including cultural and family meanings, thus is tailored and can be adapted to meet personal, cultural and traditional preferences.

1.6.1 Priority issues intended to be addressed by the FBDGs

At the end of the evidence review exercise, stakeholders from multiple sectors prioritized the following as the key food and nutrition issues of focus for the food-based dietary guidelines for The Gambia: Stunting in children (under-five); Food insecurity; Maternal and child anaemia; Infant and young child feeding; Overweight, Non-Communicable Diseases and lifestyle; Water Sanitation and Hygiene; and Food safety.

Further evidence identified the following as cross-cutting factors that should be considered across formulation of recommendations for all the priority areas indicated above: Sustainability; Communication; Diversity; Partnership; Coordination.

1.6.2 The Food Groups of the National FBDGs

The Food Based Dietary Guidelines (FBDGs) for the Gambia is based on healthy diet made up of seven food groups:

Food Group		Common foods in the food group
	Staples	commonly consumed staple foods in the Gambia are wheat bread, rice, millet, cassava, Irish potatoes, and sweet potatoes, coos and sorghum
	Vegetables	commonly consumed vegetables in the Gambia include tomatoes, carrots, cabbage, onions, cucumber, aubergine/ garden egg, bitter tomatoes. Commonly consumed leafy vegetables include sorrel, "Keren Keren", sweet potato, moringa, baobab leaves, cassava leaves and spinach
	Fruits	commonly consumed fruits in the Gambia include Saba senegalensis (kabba), baobab, Detarium senegalense (ditakh), Jujube (saedaim/tomborong), Valvet tamarind (solom solom/ko-sitto), etc
	Legumes and nuts	commonly consumed legumes and nuts in the Gambia include beans, groundnut, cashew nut, green peas etc.
	Animal-sourced Foods	commonly consumed legumes and nuts in the Gambia include beans, groundnut, cashew nut, green peas etc.
	Fats and Oil	commonly consumed in the Gambia include vegetable oil, palm oil, butter, margarine, mayonnaise, cheese, meat-fat, "Ghee (fenneh)", ghee oil.

CHAPTER 2
THE FBDGS DEVELOPMENT PROCESSES

2.1.1 National FBDGs Steering Committee and Multi- stakeholder Technical Task Team (MTTT)

A project steering committee (PSC) comprising of heads of institutions in the area of food, nutrition, health and academia was formed to oversee the activities of the FBDGs MTTT throughout the project. The PSC is spearheaded by Permanent secretary 1 (PS) of Ministry of Health and their maiden meeting was in 2019 before the start of the project implementations.

A stakeholder analysis was carried out in 2019 during a one-week retreat to identify and map out key stakeholders and their functions, develop a roadmap to guide the development of the FBDGs, as well as development of terms of reference for the local and international consultants.

The national multi-sectoral task team (MTTT) formed comprised of representatives from various government institutions, NGOs and UN partners. The main role of the MTTT was to coordinate and guide the development and implementation of the national FBDGs.

2.1.2 Evidence Review and Situational Analysis

The MTTT formed an Expert Review Team (ERT) consisting of 12 people to lead the evidence review process. Members of the ERT were further divided into sub-groups and each sub-group was assigned a review topic to focus on during an extended period of two months.

The entire evidence review process was guided by an international consultant who provided a working template for the extraction of literature from various sources. The process included a thorough desk review of existing documents such as government agency reports, survey reports, policy documents, legislations, standards, and peer-reviewed publications. The findings of the evidence review were compiled and validated by MTTT members at a workshop held at Tendaba Camp between the 15th and 19th March, 2021. In addition to the desk review, relevant literature was considered as and when they became available throughout the FBDGs development process.

2.1.3 Diet modelling

Data on caloric intake, and prioritized nutrients was obtained from existing evidence and used as basis for diet modelling that was conducted using an FAO excel solver modelling tool. An energy target of 2500 kilocalories was utilized. The modelling prioritized Calcium, Iron, Zinc and Vitamin A. Modelling aimed to reduce both undernutrition and overnutrition.

2.1.4 Development of Key Messages and Recommendations

Based on evidence and in consultation with MTTT members, The Gambia FBDGs development team arrived at six food groups, notably; staples, animal-sourced foods, vegetables, fruits, legumes and nuts, and fats and oils. Key messages/technical recommendations were developed for each food group at individual and food system levels. The MTTT also brainstormed on appropriate food images and other pictorials to accompany the key messages, which were adapted to the local context.

After this process, the messages/recommendations developed were reviewed and validated by MTTT and other key stakeholders.

2.1.5 Pretesting of key messages and pictorials

The key messages were pretested for their clarity and to avoid ambiguity. Five (5) regions were selected for this exercise and included a mix of rural, peri-urban and urban settlements. Data collectors were trained by an expert consultant to conduct the pretesting exercise. Communities were identified in the following regions (CRR, NBRW, NBRE, WCR1 and WCR2) based on geographic and demographic characteristics where both the key messages/recommendations and images were pretested. Four focus group discussions were done in each community for the following age groups; adolescent male, adolescent female, adult male and adult female, totaling 80 focus group discussions. These discussions were recorded using audio recorders. Focus group discussions were conducted in both rural and urban settings of the selected regions.

EAT A DIVERSE DIET FOR A HEALTHY LIFE

Key message relating to consuming a diverse diet:

"Eat food that comes from all the six food groups, everyday"

Tips to meet this recommendation:

- For each meal, include at least four of the six food groups.
- The six food groups are staples, fruits, vegetables, legumes and nuts, animal source foods, fats and oils.
- Select a variety of foods within each food group, regularly.
- Increase consumption of fruits, vegetables, whole grain cereals, legumes and nut.
- Limit intake of fats.

Reasons for eating a diversified diet

- A diversified daily meal will provide adequate nutritional needs.
- A diversified meal will prevent malnutrition and ensure good health by strengthening the immune system.

Consumption of these foods should be guided by the following portion sizes for the food groups in Table 1

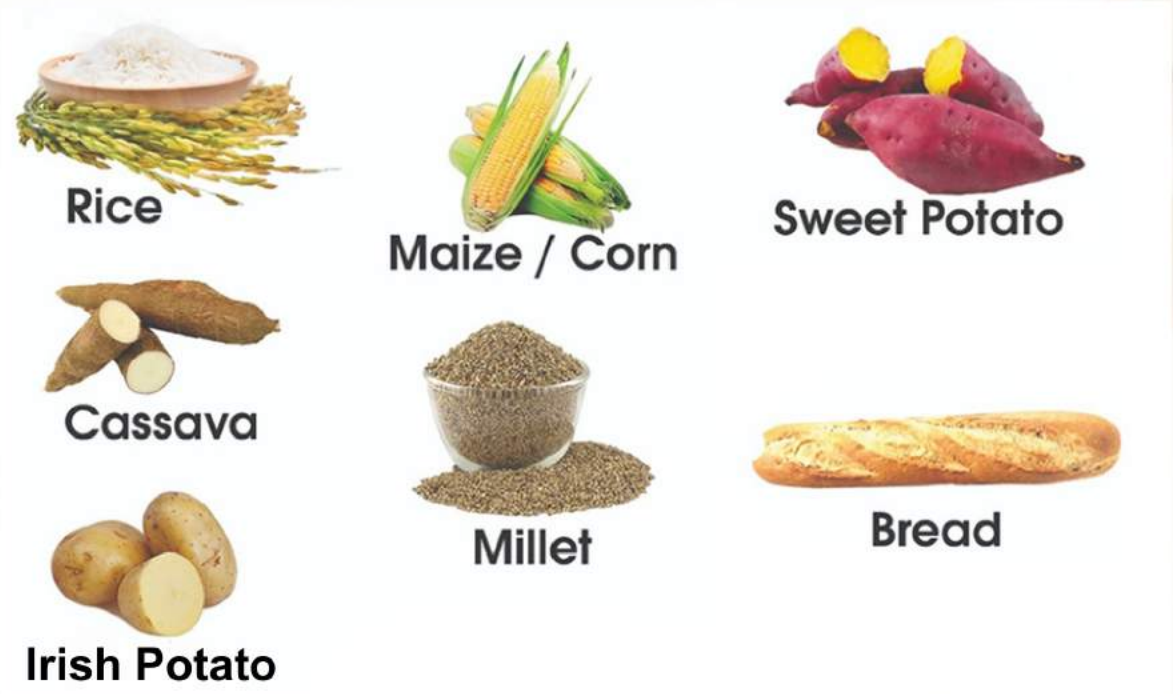
Table 1: Food groups and recommended portion sizes

FOOD GROUP	SERVINGS	AMOUNT (GRAMS/DAY)
Staples	6	526.1
Vegetables	3	347.8
Fruits	1	127.3
Legumes and Nuts	2	132.3
Animal source food	1	119.5
Fats and oil	2.5	16.1
Discretionary Foods	0.5	52.7

STAPLE FOODS

Key message relating to consuming staple foods

"Eat a variety of staple foods every day"



Tips to meet this recommendation:

- Eat about six servings of staple foods in a day.
  - A serving of boiled white rice is equivalent to half full of the locally cooking Skimmer (chunwarr)
  - A serving of cooked steamed millet (cheereh) is equivalent to one full cooking Ladle (mbatou or calama) made in The Gambia.
  - A serving of bread (senfurr) is equivalent to three quarter loaf of bread.
  - A serving of bread (tapalapa) is equivalent to half loaf of bread.
- When eating staples, include tubers like cassava, potatoes etc and a variety of whole grain cereals as part of a healthy diet.
- Prioritize the consumption of bio-fortified foods (bio-fortified pearl millet, orange fleshed sweet potato, iron-rich cowpea) and fortified staples (rice and flour).
- Prioritize consumption of whole grain cereals as part of your diet.

Reasons for eating staples

- Staples are a major source of energy needed for all activity.
- Staples rich in fiber (Oats and wheats) prevent constipation.

Box 1: Food system recommendations for staples

➡ Increase staple crops production and productivity through:
- irrigation systems (including drip, surface) to enable year-round farming.
- promotion and support of mechanization along the entire food value chain.
- ensure sustained supply of quality seeds, stems and tubers throughout the country.
- promotion and support the cultivation of climate-smart, pest-resistant and salt tolerant staple food crops.
- establishment of context-appropriate cold chain management system to maintain the shelf-life of foods.
- establishment and support of community food storage systems.
- capacity building of farmers to ensure safe storage of produce.
- advocacy for increased private sector investment in the cultivation of rice to meet local needs.

➡ Reduce post-harvest losses along the entire food value chain by:
- enhancing the capacities of farmers relating to food processing and preservation.
- employing best agronomical practices.
- creating linkages between production sites and markets.
- improving access routes from production sites to markets.

➡ Support early warning systems to reduce risk of disasters on farmers and farming systems.

➡ Promote consumption of whole grain cereals (maize, different varieties of millet, rice, etc.)

➡ Implement standards for processing whole grain rice.

VEGETABLES

Key message relating to vegetable consumption:

"Eat a variety of vegetables including dark green leafy vegetables, every day"

Tips to meet this recommendation:

- Increase eating of vegetables as part of a healthy diet.
- Eat at least three servings of a variety of vegetables, daily.
  - A serving of cooked "kereng kereng" is equivalent to one full Ladle (calama/mbatou) made in The Gambia.
  - A serving of onion is equivalent to one medium size onion.
  - A serving of tomato is equivalent to three small size tomatoes.
  - A serving of carrot is equivalent to one medium size carrot.
  - A serving of lettuce is equivalent to one bunch of lettuce.
  - A serving of garden egg is equivalent to size of a small peak milk tin.

- Choose and eat a variety of available vegetables.
- In the absence of fresh vegetables, frozen and dried vegetables should be prioritized over canned vegetables.
- Wash vegetables, thoroughly, under safe and clean running water.
- Avoid soaking vegetables in water during washing and before using for meals.
- Avoid overcooking vegetables.
- Use home preservation methods such as drying or freezing for in-season vegetables.

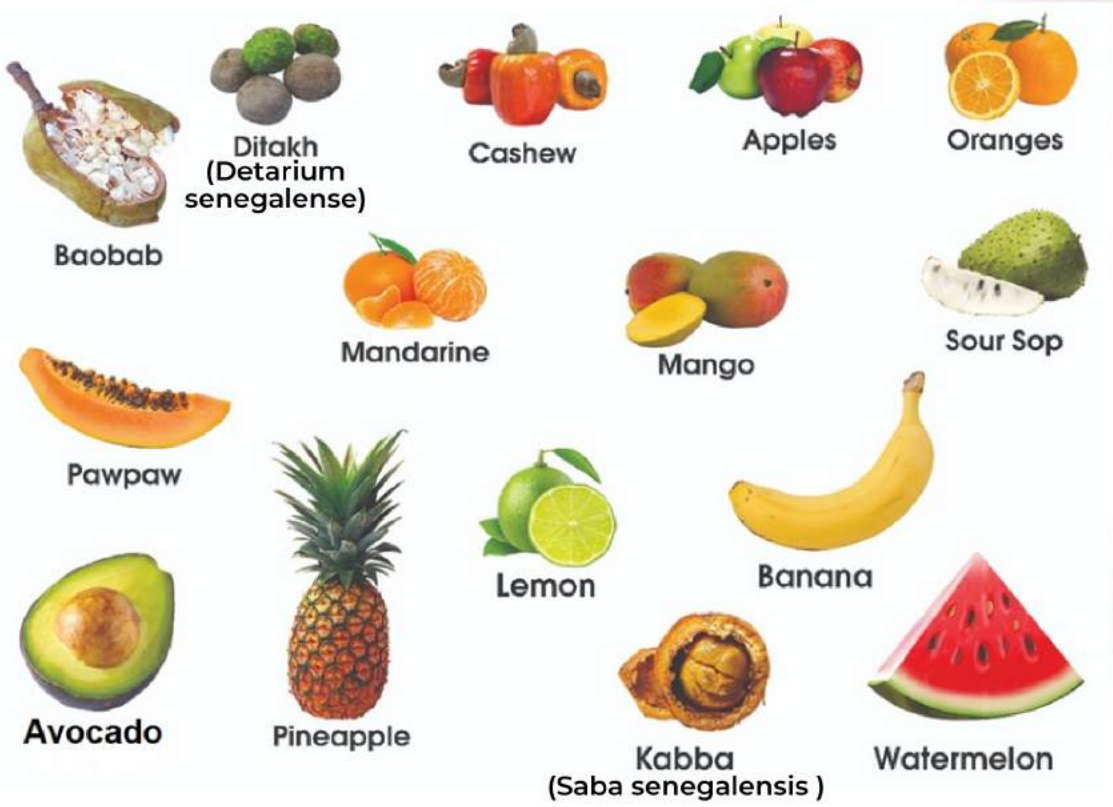
Key message relating to vegetable consumption:

- Fruits and vegetables are rich sources of micronutrients (vitamins and minerals) which are essential nutrients for the body. The amount of each nutrient depends on the type of fruit or vegetable. For example, citrus fruits including oranges and lemons are rich in vitamin C which facilitates the absorption of essential micronutrients (e.g., Iron).
- Fruits and vegetables are also an important source of antioxidants, fiber and other phytochemicals which are health promoting and reduce the risk of developing certain diseases.
- They are also relatively low in calories and thus, contributes to lowering the risk of overweight and obesity.
- The production of most fruits and vegetables is also associated with less negative environmental effects making them more sustainable to the environment.

FRUITS

Key message relating to fruits consumption:

"Eat a variety of fruits that are available, every day"



Tips to meet this recommendation:

- Increase eating of all types of fruits including wild fruits e.g. saba senegalensis as part of a healthy diet.
- Eat at least one servings of fruit every day.
  - A serving of peeled mango is equivalent to top slice (half) of medium size (450g) "mango jurr".
  - A serving of orange is equivalent to One small size (184g) orange unpeeled.
  - A serving of saba senegalensis is equivalent to one small size (122g) kabba.
  - A serving of banana is equivalent to one medium size banana.
  - A serving of avocado is equivalent to One small size (255g) of avocado including seed and skin.
  - A serving of Pawpaw is equivalent to half-filled white "ebbeh" bowl.
  - A serving of apple is equivalent to one medium size unpeeled apple of 145g

- Prioritize eating whole fruits.
- When they are not in season, minimally processed fruits such as dried fruits and fruits made into juice) are useful alternatives.
- If you take fruit juices, drink 100% fruit juices rather than those with added sugar.
- Limit the consumption of sweetened processed fruits and juices.
- Wash fruits under clean running water before eating.

Box 2: FOOD SYSTEM RECOMMENDATIONS FOR FRUITS AND VEGETABLES

The key food system level considerations to meet the recommendations for fruit and vegetables consumption in Gambia are detailed below:

- Encourage fruit and vegetable production.

1. Encourage win-win agreements with good monitoring systems between government and private sector investors.
2. facilitate access to certified seeds and arable lands.

- Strengthen support for the establishment and/or upgrading (fencing, water source, seeds, fertilizers) of community gardens, home gardens and orchards.
- Promote planting of diverse fruit trees in public places/spaces including schools, community centres, government offices, and farm lands.
- Encourage the planting of endangered plant and tree species that can be used as fruits and vegetables. Enforce existing legislation (Forestry Act 2018) that discourage indiscriminate cutting down of fruit trees.
- Advocate for increased access to and ownership of farm lands for women involved in horticultural production through the validation of the Land Policy and the enactment of the Land Reform bill.
- Develop and enforce standards for handling fruits and vegetables along the value chain, including agronomical practices, transportation, storage and markets.
- Invest in technologies and human capacities that reduce food loss during harvest, storage, packaging/labelling, transportation and marketing.
- Encourage investments in infrastructural, personnel and, skills transfer (capacity building) in food processing and preservation.

LEGUMES AND NUTS

Key message relating to the consumption of Legumes and Nuts

"Increase eating of a variety of legumes and nuts"

Dried Cashew Nuts

Red Beans

Coconut

Groundnuts

White Beans

Green Beans

Tips to meet this recommendation:

- Eat three servings of legumes and nuts every day.
  - A serving of roasted groundnuts with cover is equivalent to two full of an "attaya" glass cup.
  - A serving of grinded groundnut is equivalent to one full of medium size Skimmer (mbatou).
  - A serving of groundnut paste is equivalent to one full "attaya" glass cup.
  - A serving of roasted cashew nuts is equivalent to 35 pieces of roasted whole grain cashew.
  - A serving of boiled beans is equivalent to two full tablespoon.
- Sort legumes and nuts to remove stones and other solid particles, as well as spoiled ones.
- Cook beans thoroughly to reduce its gas-producing property.
- Avoid peeling beans before use.
- Roast or boil nuts thoroughly before eating.

Reasons for Eating Legumes and Nuts

- Legumes and nuts are high in protein, vitamins, and minerals.
- Nuts (e.g. groundnuts) are rich in healthy fats.
- Legumes and nuts help reduce the risk of having chronic diseases, e.g heart disease, diabetes.

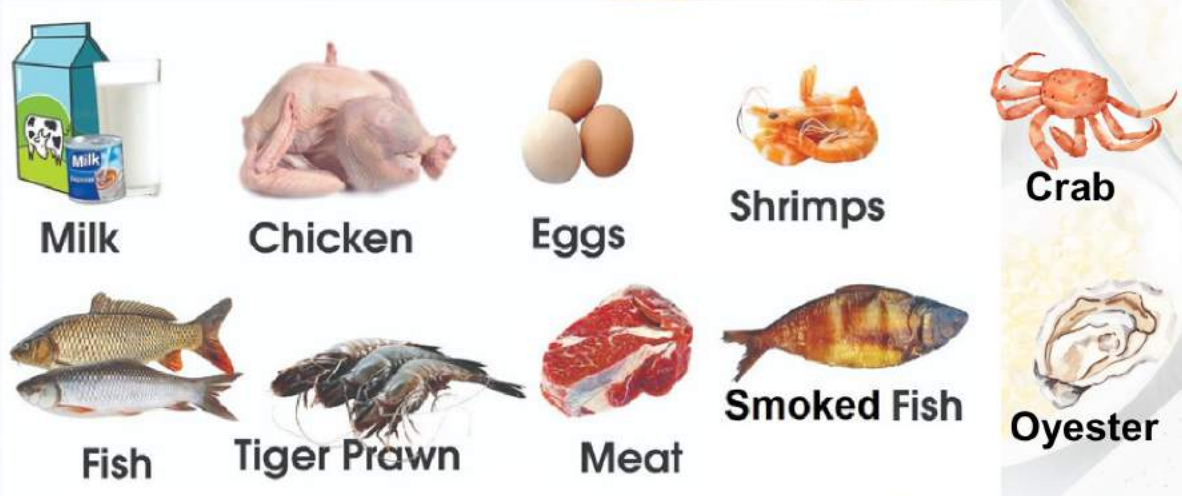
Box 3: Food system recommendations for legumes and nuts

- Increase production and processing of legumes and nuts.
- Enhance quality in the legume and nuts in the value chain.
- Ensure proper storage of nuts and legumes to protect from moisture.
- Use certified seeds.
- Land should be readily available for adequate production of legumes and nuts.
- Apply quality inputs and agronomic practices for better production and productivity.
- Apply and enforce food safety standards in legumes and nuts cooking and storage.

ANIMAL-SOURCED FOODS

Key message relating to the consumption of animal-sourced foods

"Eat a variety of foods from animal sources every day"



Tips to meet this recommendation:

- Eat one servings of animal source foods each day with 120g per serving.
  - A serving of cooked beef without bone is equivalent to six pieces of beef of the size of a match box.
  - A serving of cooked chicken without bone is equivalent to one big chicken leg.
  - A serving of cooked Bonga fish is equivalent to one big bonga fish.
  - A serving of cooked red snipper fish is equivalent to one medium size red snipper.
  - A serving of milk is equivalent to two "attaya" glass cup of milk.
  - A serving of shrimps is equivalent to 20 pieces of cooked shrimps.
- Different types of foods from animal sources should be included in daily diet and across meals. In particular, it is recommended to increase the intake of fish and fisheries product (e.g., fish, Shrimps, oysters, crabs, cockles etc.).
- Increase the intake of domestic animals (poultry, pigs, ruminants etc.) and their products (e.g. eggs, milk etc.) as part of the daily diet.
- Reduce intake of saturated fat; choose lean meat by removing excess fat from foods in this group.
- Reduce the intake of processed meat products (e.g. corned beef, sausage, etc.).
- Use healthy cooking methods such as boiling, steaming, grilling and roasting of foods from animal sources, and limit deep frying to minimize the intake of fats.

Reasons for eating animal-source foods

- Fish is high in protein, Omega-3 fatty acids and vitamins such as D and B2 (riboflavin).
- Fish is a good source of minerals such as iron, zinc, iodine, magnesium, potassium, calcium etc.
- Fish is low in saturated fat.
- Shrimps, oysters, crabs and cockles are high in protein, minerals and vitamins.
- Poultry and eggs are high in protein, vitamins, and minerals.
- Beef is reached in protein however, white meat e.g. chicken and fish are better

Box 4: Food systems recommendations for foods from animal sources

- Increase investment in infrastructure for fisheries, piggery, poultry, small ruminants, and other domestic animals for enhanced production of food from animal sources.
- Create farmers' access to inputs such as harvesting nets, fertilizers, lime, aerator, pastures, range, drinking points, stock routes, etc. through farmer organizations.
- Promote/support investment in sustainable fishing practices such as Aquaculture (Oyster farming, tilapia farming etc.), minimize illegal fishing, enhance fish stock, introduce hybrid culture species etc.
- Promote integrated farming involving livestock, fisheries and crops.
- Use appropriate technologies (for example cross breeding, artificial insemination etc.) to increase meat and milk production.
- Enhance a functional milk distribution system.
- Increase investment in processing and packaging of animal source foods.
- Strengthen fisheries value chain by investing in improved transportation, and storage facilities using investment models that are self-sustaining.

FATS AND OIL

Key message relating to the consumption of Fats and Oil

"Use fats and oil in moderation; limit eating fried and other foods prepared using fats and oils"

Vegetable/ groundnut Cooking oil

Butter

Cheese

Palm Oil

Tips to meet this recommendation:

- Do not exceed 6 servings of fats or oil as part of your daily diet
  - A serving of vegetable oil is equivalent to one tablespoon.
  - A serving of palm oil is equivalent to one tablespoon.
- Choose fats that are liquid at room temperature, (e.g. groundnut and soybean oil, sunflower).
- Limit use of unhealthy oils that are solid at room temperature (coconut, palm kernel, palm oil, butter, cheese, mayonnaise, meat-fat, "Ghee (fenneh)", ghee oil).
- Trans fat is found in high amounts in highly processed foods, fried foods, pastries, commercial baked foods, microwave popcorn, biscuits/cookies, margarine etc.
- Prioritize non frying methods of preparing foods such boiling, grilling and steaming

Reasons for consuming oil in moderation

- Fats and oils are concentrated sources of energy (i.e., has twice more energy than starch or sugar) needed for growth and development of hormones and tissues.
- Fats contain and facilitate the absorption of fat-soluble vitamins such as vitamin A, D, E and K
- Eating the right type and quantity of fats and oils will prevent risk factors (e.g. obesity, overweight, dyslipidemia) for NCDs (e.g. Hypertension, diabetes, cancer).
- Fats and oils should be consumed in moderations to prevent the risk factors for NCDs

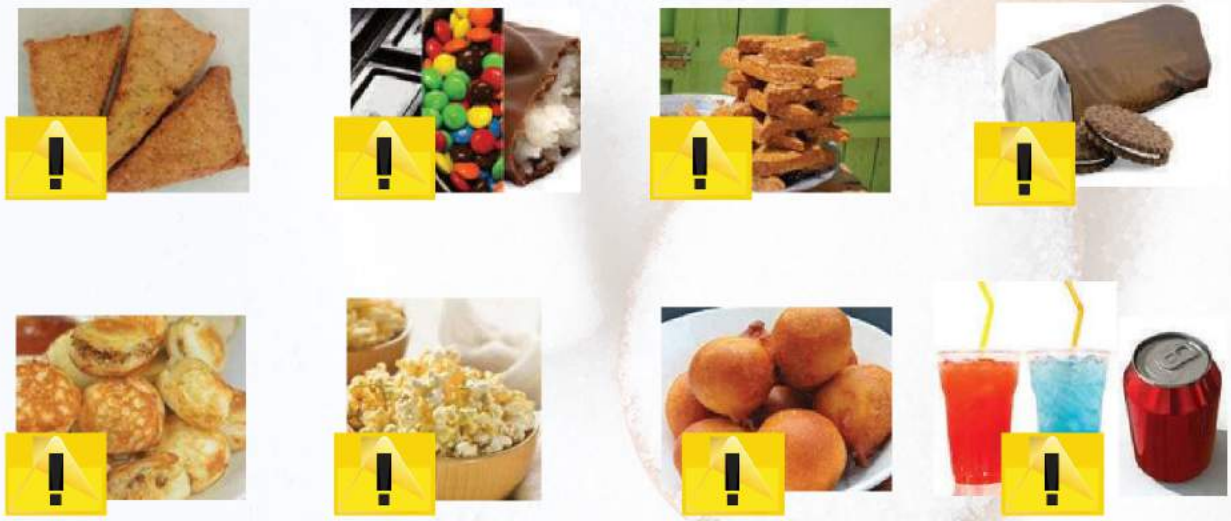
Box 5: Food system recommendation for fats and oil

- Improve production and productivity of oil producing crops such as sesame, groundnuts, soybeans etc
- Create an enabling environment for farmers who grow oil producing crops (sesame, groundnuts, soybeans)
- Support farmer and processor groups and associations with oil extraction machines
- Implement and enforce food labelling regulation on fats and oils
- Support the fortification of cooking oil
- Establish legislation/standards to regulate marketing and promotion of unhealthy fats and oils, especially those targeting children.

SUGAR AND SUGAR SWEETENED FOODS

Key message relating to the consumption of Fats and Oil

"Limit the intake of sugar, sweetened beverages, and foods and snacks that are high in sugar"



Tips to meet this recommendation:

- Limit the amount of sugar added to "attaya" and other hot beverages including tea, coffee, café touba, cocoa-drinks.
- Limit the amount of sugar added to locally-prepared sweetened-beverages such as "wonjo juice" (Hibiscus drink), baobab juice, ginger juice etc.
- Limit the amount of sugar added to porridges, puddings and paps.
- Limit the intake of sachet juices, fizzy drinks and processed fruit juices etc.
- Limit consumption of sweets and sugar-sweetened beverages especially among children.

SALT

Key message relating to the consumption of Salt

Use salt in moderation

A high salt diet leads to hypertension [high blood pressure], which can cause heart disease and stroke

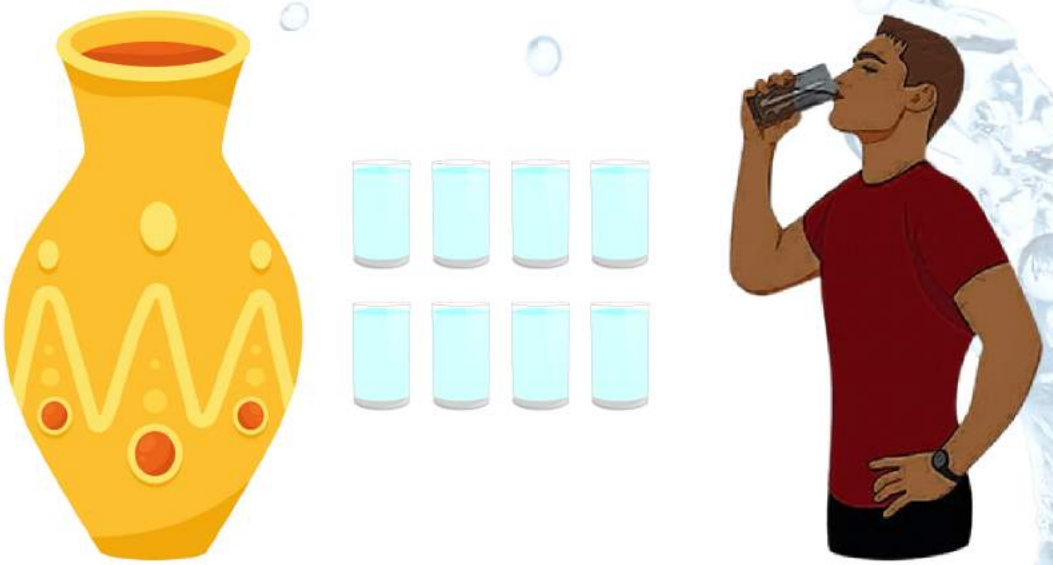
Box 6: Food system/ environment recommendations for sugar, sugar sweetened beverages and salt

- Introduce /implement taxes that aim to limit access and consumption of sugar and sugar-sweetened beverages.
- Establish policies that limit the advertisement and sale of sweets and sugary foods in and around schools.
- Establish policies/standards for added sugar used in industrially prepared foods such as labeling the amount of sugar contained in processed products.
- Establish standards/policies on labelling and advertising of foods high in sugar, and salt.
- Enforce the regulation on adequate fortification of salt with iodine.

WATER

Key message relating to drinking of water

"Drink at least 2 liters of water a day"



Tips to meet this recommendation:

- Males, adults and those working in hot environments need more water.
- Drink more water in the hotter season.
- Choose plain clean water over sweetened beverages such as carbonated drinks, juices, teas, etc.
- Drinking water should be obtained from safe sources. Safe water sources include tap water, bottled water, protected wells, etc.).
- If water is not safe, then it should be treated before use by boiling, chlorination, and/or filtration.

Reasons for Drinking water

- Drinking adequate clean and safe water keeps you hydrated and healthy.
- The World Health Organization (WHO) recommends that people consume between 50 and 100 liters of water per day to meet basic needs and avoid health concerns.

FOOD SAFETY

Key message relating to food safety

"Observe good hygiene practices or measures at all times when handling, preparing or eating food"

WASHING HANDS

WASH FOODS BEFORE USE

Tips to meet this recommendation:

- Always wash your hands very well with soap under running water:
  - before handling or preparing food
  - after using the toilet or cleaning a child
  - before and after feeding a child.
- Always cover food appropriately when not consumed.
- Promote the compliance to the national food safety guidelines
- Clean or wash cooking utensils before and after food preparation.

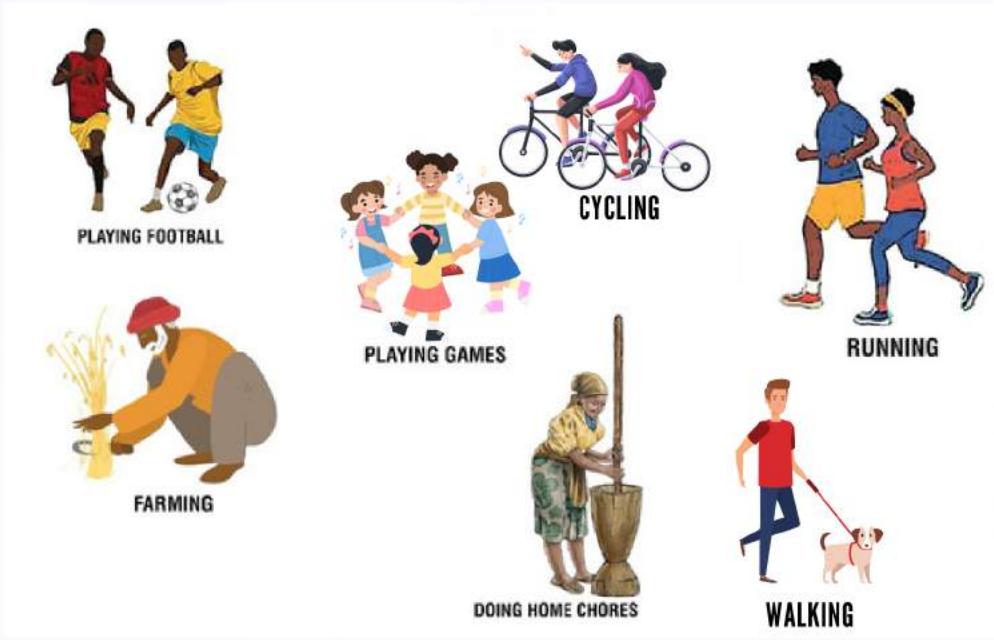
Reasons for applying food safety and hygiene practices

Observing hygiene measures prevents food contamination; thus, prevents food-borne diseases.

PHYSICAL ACTIVITY

Key message relating to Physical activity

"Be physically active as a way of life"



Tips to meet this recommendation:

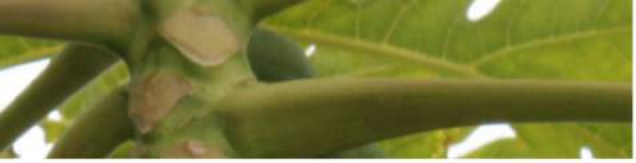
- Limit the amount of time spent sitting/lying down doing nothing.
- Limit the amount of time spent on sedentary activities (watching TV, playing video games, etc.) or sitting and working.
- Take short breaks in-between work to walk around.
- Increase physical activity duration by walking or cycling when moving to short destinations, instead of taking a taxi or a car.
- Adults and the elderly should spend a minimum of 30 minutes of aerobic activities (walking, jogging, cycling, etc.) on most days of the week (minimum of 5 days).
- Adults and elderly should engage in muscle strengthening activities for at least 2 days a week.
- Children should engage in about one hour per day of aerobic physical activity (walking, running, cycling, swimming, etc.) on all days of the week.

Reasons for Physical activities

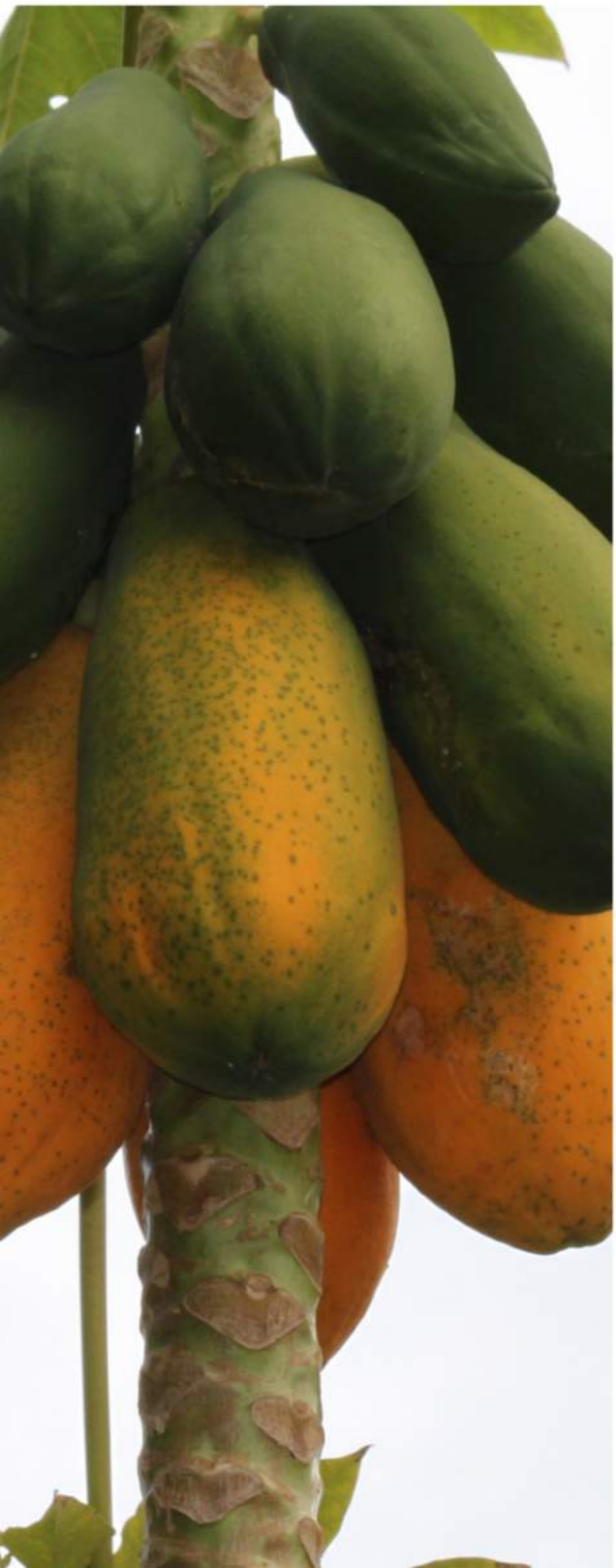
- Different types of activities constitute total physical activity. The main types of activities are those done for work, home chores, moving from one place to another, and play. All these different types of activities contribute to improving one's health.

Box 8: Environment recommendations for physical activity

- Work places should develop and implement health policies that promote physical activity. Example, work place physical activity policy.
- Government/local authorities should provide recreational facilities at public places to promote physical activity.
- Work places should be incentivized to provide facilities/resources for physical activity at the work site.
- Basic cycle schools should enforce physical education on the time table.
- Educational institutions across all levels should provide recreational facilities and encourage physical activity.
- Land use and urban planning policies should be consistent with promoting an active lifestyle.
- Promote walk-for-health initiatives across communities.



GENERAL RECOMMENDATIONS FOR IMPROVING FOOD SYSTEMS/ ENVIRONMENT



- Develop infrastructure (good road networks, transportation, cold stores) to improve storage and distribution of produced foods especially fruits and vegetables.
- Provide targeted inputs support (financial, logistic) for farmers involved in production of nutrient-rich foods (fruits, vegetables, legumes, nuts)
- Develop and implement behaviour change communication programs to promote awareness on:
  - optimal dietary practices and importance of eating healthier diets
  - increasing consumption of healthier food groups (fruits, vegetables, legumes, nuts)
  - the benefits and strategies for planting fruit trees and vegetable gardens in homes
  - how the food system works: from production, storage, transportation, marketing, preparation, and consumption
  - negative effects of excessive consumption of sugar and sugar-sweetened beverages and drinks
  - the practice and benefits of physical activity.

Recommendations for feeding children below five years

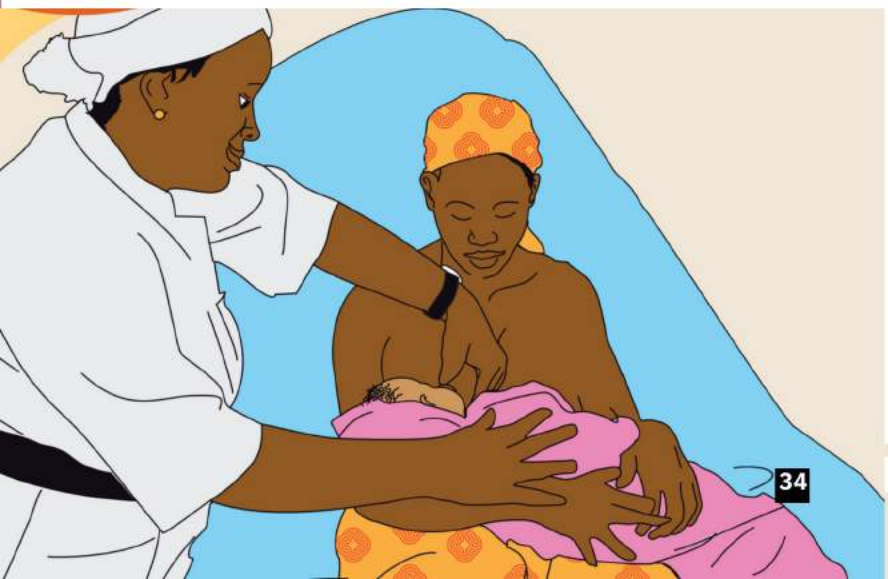
At birth: All children should be put to the breast within one hour after birth. Mothers should be supported by trained health workers to start breastfeeding immediately after delivery, including support to attach the baby to the breast. Avoid giving any fluids, formula, comforters/dummies while introducing the infant to the breast. Mothers should ask health workers for support, if they experience any difficulties with attaching the baby to the breast, or experience any challenges with positioning the baby to feed. Breastfeed the child during the day and during the night on demand; watch out for the child's indication of hunger and respond promptly to their hunger cues.

First six months: infants should be fed with only breast milk during the first six months of life frequently and promptly, on demand. Breast milk provides all the water and nutrients they need for optimal growth. No other fluids should be given in addition to breast milk unless it's medically indicated (syrups and other medication) Water should not be given to the baby during the first six months of life. Provide breast milk during the day and during the night, on demand and especially during hot seasons. You may express and store breast milk after the child has been fed to his/her satisfaction. Expressed breast milk can be used to feed the baby if the mother is unable or immediately not available to feed directly from the breast.

Complementary feeding

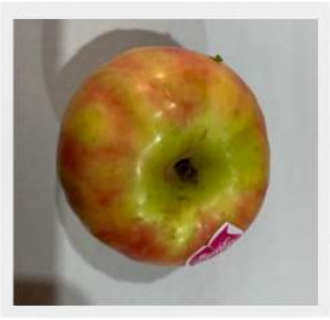
At six months: from sixth month, start introducing the child to liquid or semi-solid family foods.
Foods given to children from six months should:

- include diverse food groups from animal sources, fruits, vegetables, legumes and nuts, staples, and fats and oils.
- be rich in nutrients such as vitamin-A rich fruits and vegetables, animal source foods, legumes and nuts and other locally available bio-fortified foods. Add micro-nutrient supplement powders to complementary foods when advised/ available.
- be enriched (especially locally prepared porridges) with vegetable oil, butter, and groundnut paste, fish powder, etc.
- be prepared with little sugar; avoid feeding commercial foods with too much added sugar.
- not replace breastfeeding, breastfeeding should continue up to two years/ beyond.



CALIBRATION PHOTOS

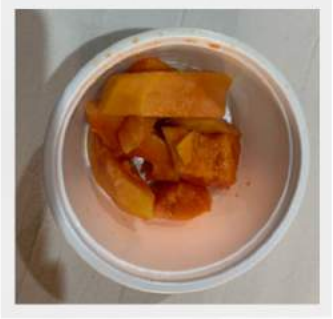








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