CGIAR BETTER DIETS AND NUTRITION

Diet & Nutrition Profile: Tanzania

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Background

Poor nutrition, suboptimal diets, and low fruit and vegetable (F&V) intake are key preventable risk factors for non-communicable diseases (NCDs) globally.[1,2] From 2022 to 2024, the CGIAR Research Initiative on Fruit and Vegetables for Sustainable Healthy Diets (FRESH) designed and began implementation of an end-to-end approach to increase F&V intake and improve diet quality, nutrition, and health, while also enhancing livelihoods, empowering women and youth, and mitigating environmental impacts.[3] Now under the CGIAR Science Program on Better Diets and Nutrition (BDN), implementation of the FRESH approach continues with the aim of addressing barriers to the desirability, affordability, accessibility, and availability of diverse, safe, and sustainable F&V in low- and middle-income countries (LMICs). Tanzania is one of the four original priority countries implementing this end-to-end approach to increase intake of F&V and other perishable nutrient-rich foods.

The aim of this brief is to describe the nutrition and diet landscape in Tanzania and highlight relevant programs, strategies and policies.

Tanzanian context

Tanzania has a population of over 61 million, with nearly two-thirds residing in rural areas.[4] However, rapid rural-to-urban migration is shifting this demographic balance. By 2030, an estimated half of the population will live in urban areas.[5] Economic disparities remain widespread, with 45% of Tanzanians living below the poverty line.[6] Food inflation has affected the cost of meeting basic food needs, impacting the affordability, accessibility, and availability of food for Tanzanians. From 2017 to 2022, the cost of a healthy diet increased by 23%, from $2.2 to $2.7 (USD), while the number of people unable to afford a healthy diet increased by 14%, from 43 million to 49 million, which is nearly 75% of the population.[7] Rural areas are particularly affected, facing higher food costs than urban areas.[8] Tanzania has a high burden of malnutrition, driven in part by suboptimal diets.[9] Malnutrition is the top risk factor for death and disease in Tanzania.[10]

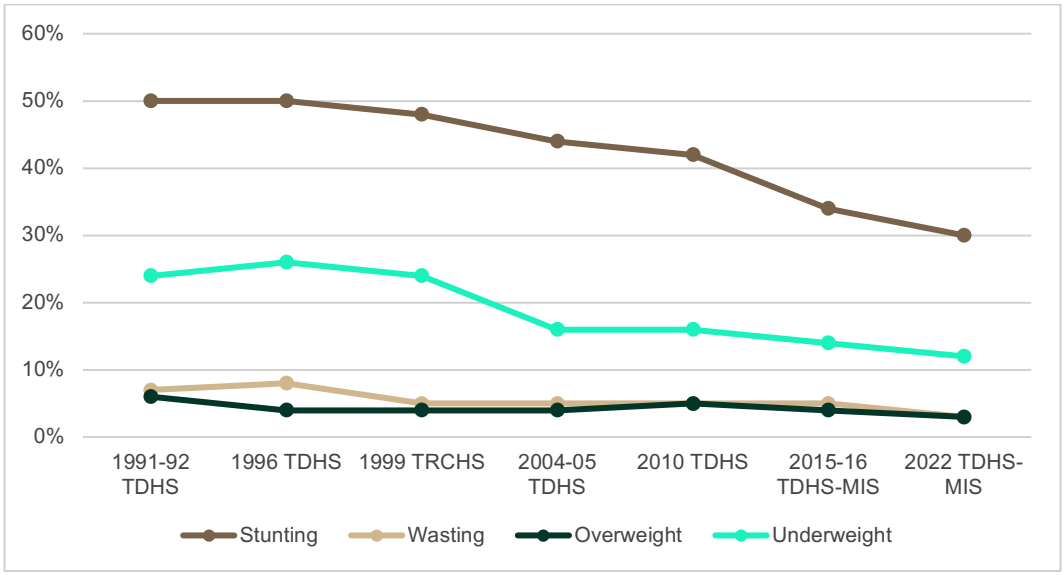
Nutritional status

Tanzania is facing a double burden of malnutrition, with the coexistence of undernutrition, anemia, and micronutrient deficiencies on one hand, and overweight/ obesity on the other.[9,11] Like in most LMICs, nutrition problems in Tanzania are exacerbated by factors such as changing diets and food environments, population growth, poverty, limited nutrition knowledge, and rapid urbanization.[12 13]

In children under five years of age, stunting prevalence decreased by 20 percentage points over a span of 30 years, from 50% in 1992 to 30% in 2022 (**Figure 1**). However, the prevalence remains high, and with the population increase, the absolute number of stunted children has increased. Geographical disparities exist, with higher stunting prevalence in Tanzania Mainland than in Zanzibar (30% vs. 18%), and in rural compared to urban areas (33% vs 21%).[9] Stunting is also an issue among adolescents (10-19 years old), with nearly one third (32%) stunted in Tanzania Mainland.[11] Paradoxically, some regions such as Southern highlands that have high wealth and food security also have a high prevalence of stunting.[14] Underweight prevalence among children under five years of age has reduced by half from 24% to 12% while wasting and overweight prevalence, which are both low, have not changed. Although low overall, children under five years of age in Zanzibar have a higher wasting prevalence than those on the mainland (8% vs 3%).

Among women of reproductive age (WRA), underweight prevalence has remained stable over time (**Figure 2**).[16] The prevalence of underweight among adolescents (15-19 years) and adults (20-49 years) is higher among males than females (**Figure 3**).[9]

Figure 1: Trends in nutritional status of children under 5 years in Tanzania, 1991–2022[1,9,15,16]



Note – TDHS: Tanzania Demographic and Health Survey; TRCHS: Tanzania Reproductive and Child Health Survey; MIS: Malaria Indicator Survey

The prevalence of overweight and obesity has not changed among children under five years of age. However, there has been a significant increase in the prevalence of overweight and obesity among WRA (**Figure 2**).[15] By 2022, one in three adult women (20-49 years) and 17% of female adolescents (15-19 years) was overweight or obese in Tanzania (**Figure 3**); higher than in most African countries.[9,17] Among WRA, the prevalence is higher in Zanzibar than in Tanzania Mainland (46% vs 36% for adult women and 16% vs 12% for adolescents) and among women in urban compared to rural areas (50% vs 28% for adult women and 20% vs 9% for adolescents).[9] Lastly, women are more likely to be overweight or obese compared to men (**Figure 3**).

Figure 2: Trends in nutritional status of women of reproductive age in Tanzania, 1991–2015/16[15]

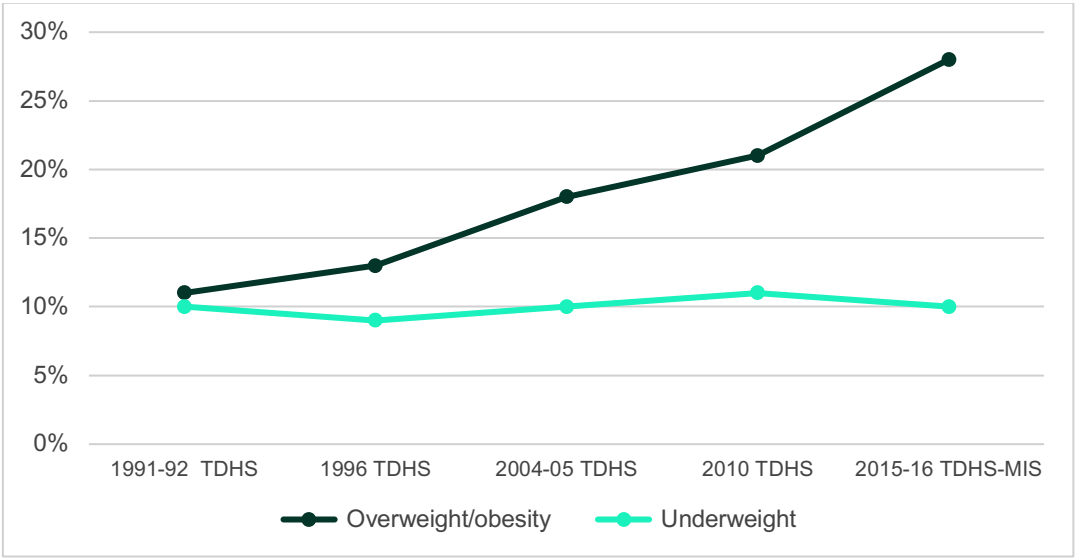
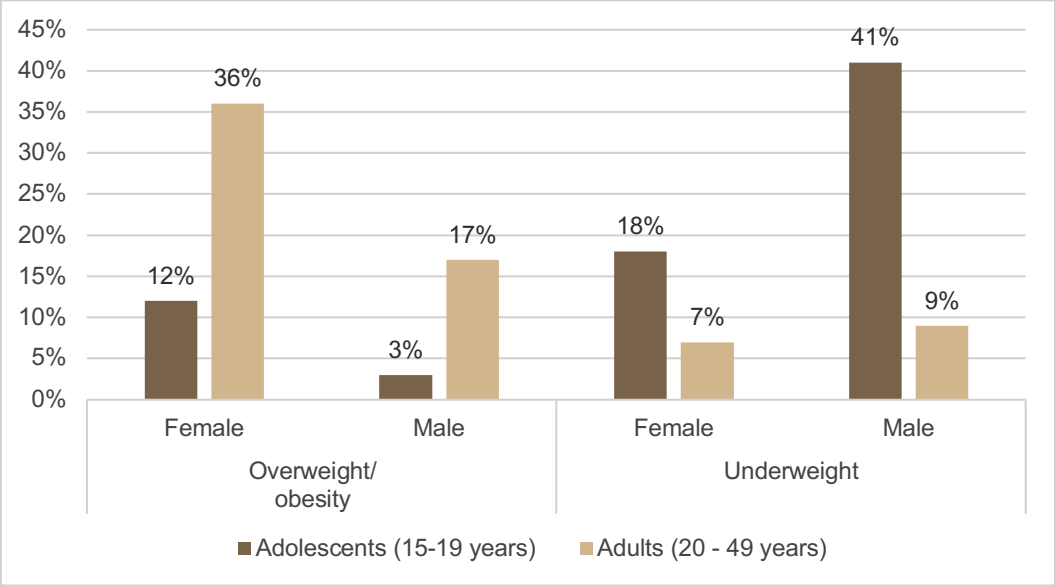


Figure 3: Adolescent (15-19 years) and adult (20-49 years) nutritional status in Tanzania, 2022[4]



Anemia and micronutrient deficiencies

Anemia is highly prevalent in Tanzania, affecting 59% of children 6-59 months and 42% of WRA.[9] The main causes of anemia are malaria infection and iron, folate, and vitamin B12 deficiencies. The 2022 DHS reported that anemia prevalence was higher among children who tested positive for malaria (83%) than those who tested negative (57%). Other causes include intestinal worms, haemoglobinopathy, and sickle cell disease.[9] Anemia prevalence has consistently remained high over the last decade and is more common among pregnant women (56%) than non-pregnant women (40%), and in Zanzibar (60%) compared to Tanzania Mainland (41%).[4] Among children, the prevalence of anemia also varied by age. A nationally representative study (2020) in Tanzania Mainland found that while the overall anemia prevalence among school-age children (5-16 years) was 32%, the prevalence was much higher among adolescents 15–16 years (55%).[18]

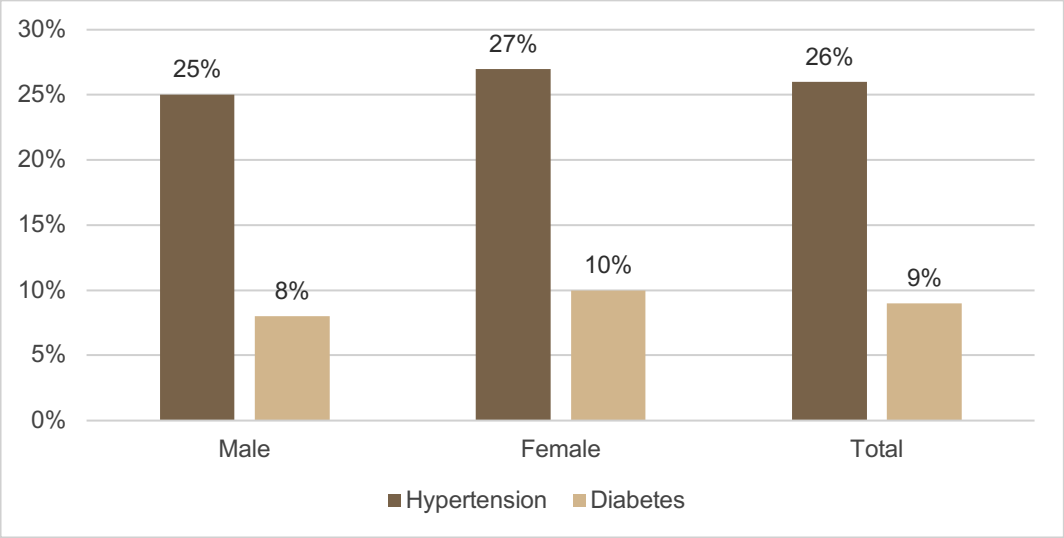
The 2010 DHS found that 33% of all children aged 6-59 months and 37% of WRA had vitamin A deficiency (VAD). VAD in WRA was higher in urban than rural areas (40% and 36%, respectively) but similar in urban and rural children (32% and 33%, respectively). A recent study found that 36% of WRA had insufficient iodine intake, likely due, in part, to suboptimal use of iodized salt (50% in all households).[19]

In addition to national surveys, the few studies that have assessed micronutrient deficiencies have used non-representative samples. For example, a study assessing 420 pregnant women in rural Southern highlands of Mbeya found that the prevalence of folate and vitamin B12 deficiencies were 24%, and 10%, respectively.[20]

Non-communicable diseases

NCDs accounted for 34% of Tanzania's premature deaths in 2019, with hypertension and diabetes being two of the leading causes (**Figure 4**).[21] According to the 2022 DHS, the prevalence of hypertension among WRA and men aged 15-49 years was 11% and 10%, respectively.[4] Findings from the 2012 Tanzania STEPS survey indicated that hypertension and diabetes affected 26% and 9% of adults 25-64 years, respectively.[22] In Tanzania, a combination of lifestyle factors, such as inadequate F&V intake (97%), high triglyceride levels (34%), alcohol consumption (30%), overweight and obesity (26%), and high cholesterol (26%) are contributing to the high prevalence of NCDs.[22]

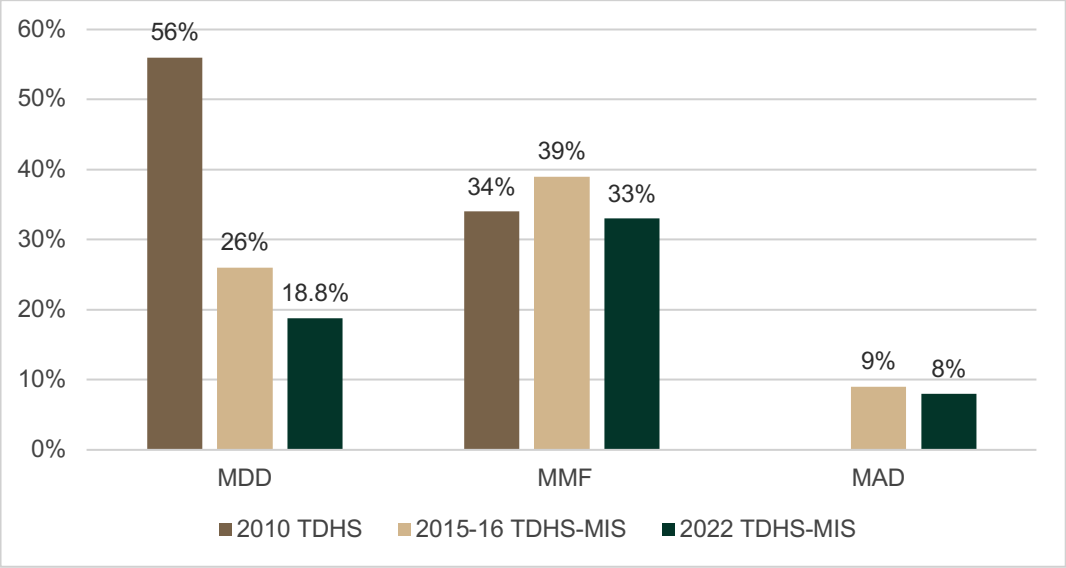
Figure 4: Hypertension and diabetes prevalence in Tanzanian adults in 2012[22]



Dietary patterns

Based on DHS data, diets are generally suboptimal in children aged 6-23 months and in WRA. Between 2015 and 2022, infant and young child feeding (IYCF) practices deteriorated. The proportion of children meeting minimum dietary diversity (MDD) declined from 26% to 19%, and the proportion meeting minimum meal frequency (MMF) declined from 39% to 33%. However, the proportion meeting minimum acceptable diet (MAD) stayed relatively stable (**Figure 5**). Studies conducted in different contexts in Tanzania have demonstrated that complementary foods are often given before the recommended 6 months of age, and children's diets are dominated by starchy foods.[9,23] Across East Africa, Tanzania recorded the lowest prevalence of young children meeting MMF at 35%, compared to Kenya (67%) and Uganda (40%).[24] At the same time, only 25% of WRA in Tanzania consume diverse diets (5 out of 10 food groups).[4]

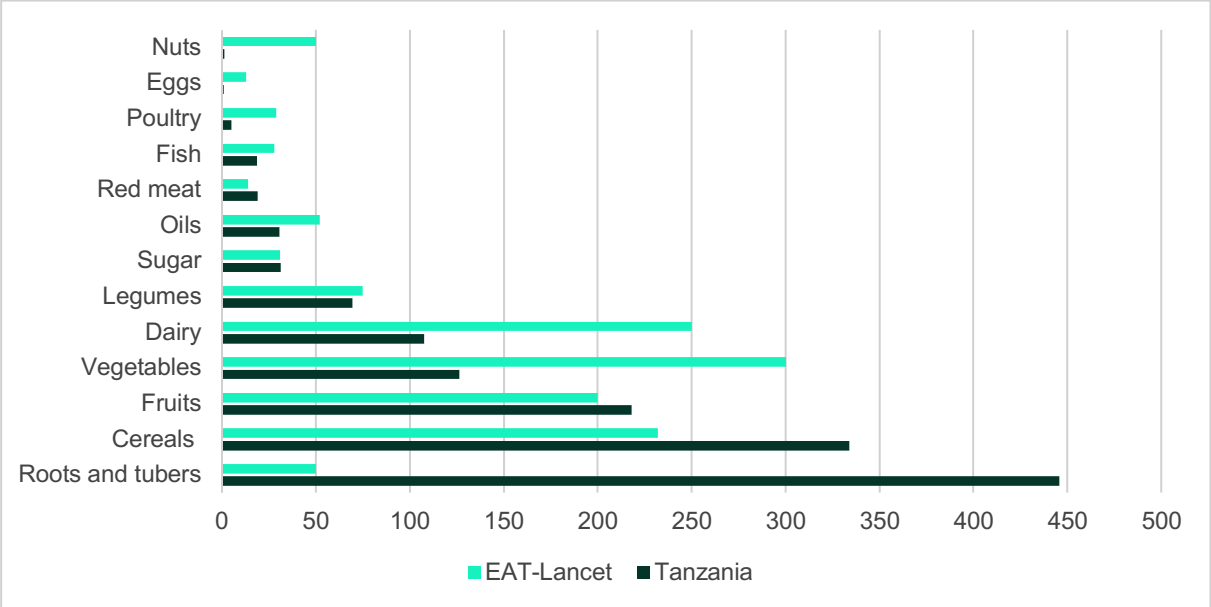
Figure 5: Trends in infant and young child feeding (IYCF) practices in children 6-23 months in Tanzania, 2010 –2022[9,15,16]



The 2022 DHS survey indicated that a higher percentage of urban dwellers (children and WRA) consumed diverse diets than rural dwellers: 26% vs. 16% for children 6-23 months, and 38% vs. 18% for WRA.[4] F&V intake is suboptimal in Tanzania, with 40% of children aged 6-23 months having consumed no vegetables or fruit over the past 24-hour period.[4] The proportion was higher among rural than urban children (44% vs. 31%, respectively). Nearly all (97%) adults aged 25-64 years ate less than 5 servings of F&V per day, according to the 2012 STEPS survey.[21] A study in South-Eastern Tanzania assessing 7,953 participants found 82% of participants above 15 years of age did not meet the recommended daily F&V intake.[25]

In addition, population-level food supply data indicates a higher supply of roots/tubers and cereals (in comparison to the EAT Lancet Guidelines), with a limited supply of other nutrient-dense foods such as vegetables and legumes (**Figure 6**).[26]

Figure 6: Average per capita food supply in Tanzania (grams/person/day)[26]



National guidelines, programs, and policies

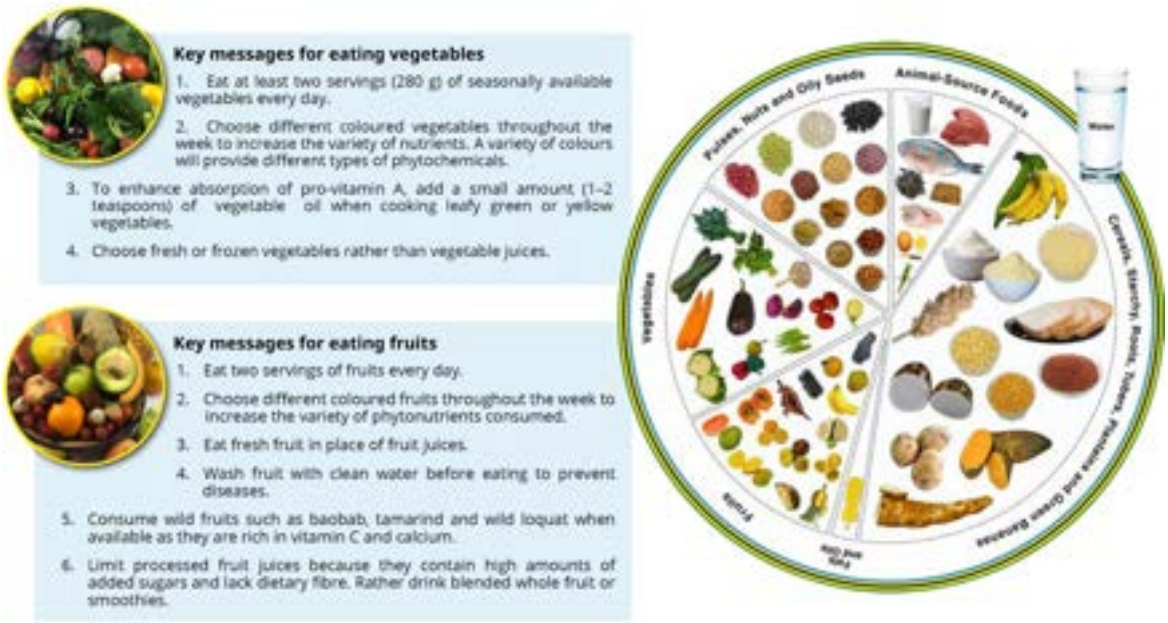
Tanzania has made several national commitments to promote food and nutrition security, tackling issues from food availability and accessibility to addressing specific nutrient deficiencies. The nutrition policy landscape reflects a coordinated effort to address malnutrition at the national, regional, and local levels. Notably, the National Multisectoral Nutrition Action Plan 2021-2026 (NMNAP II) aims to achieve nutrition targets and reduce NCDs by strengthening linkages across sectors.[27] The NMNAP II outlines key interventions for improving nutrition, with several actions focused on enhancing diet quality. Recognizing the importance of addressing barriers throughout the food system, the plan includes specific activities aimed at increasing the accessibility and availability of F&V.

Aligning with the NMNAP II, the Tanzania Mainland Food-Based Dietary Guidelines (FBDGs) manual (2023) provides recommendations for healthy eating tailored to the needs of different population groups.[28] The FBDGs promote dietary diversity by encouraging daily consumption of nutritious foods, including F&V (**Figure 7**). A pilot test of the FBDGs found the messages to be understandable and feasible for the general population.[29] No studies have been conducted since implementing FBDG messages to assess their impact on dietary behaviors.

Tanzania's comprehensive nutrition policies demonstrate a strong commitment to addressing all forms of malnutrition and NCDs. Efforts like the NMNAP II and FBDGs are supported by overarching health and agriculture policies, specifically, the Agricultural Sector Development Programme II (ASDPII), as well as partnerships between the private and public sectors.

Complementary initiatives, such as guidelines on school feeding and nutrition services have shown promise at the community-level. However, limited resources remain a barrier to scaling up programs for wider impacts.[30] Moving forward, continued investment in nutrition programs, alongside comprehensive monitoring of outcomes, will be crucial to achieving and measuring progress toward Tanzania's ambitious nutrition goals.

Figure 7: FBDG key messages for eating vegetables and fruits[28]



Adapted from the Tanzania Mainland FBDG, Ministry of Health, United Republic of Tanzania (2023)

Conclusions and recommendations

- Nutrition challenges persist, with high stunting prevalence among children and increasing prevalence of overweight and obesity among adults and adolescents, particularly WRA. Additionally, the prevalence of anemia is high, especially among children under 5 years of age and WRA.
- Across all population groups, diets are limited in diversity, dense in starchy staples, and low in fruit and vegetables. Coupled with low physical activity, this contributes to the rising prevalence of NCDs like hypertension and diabetes.
- In addition to continued implementation of existing effective programs and policies, new policy measures and multisectoral interventions designed to tackle the underlying drivers of poor-quality diets are likely needed to address the double burden of malnutrition facing Tanzania. Efforts should focus on addressing the desirability, affordability, accessibility, and availability constraints to healthy diets, as well as actions to address other risk factors for poor nutrition and health, such as increasingly sedentary lifestyles.
- While diverse strategies have been employed in Tanzania to combat malnutrition, broad awareness and knowledge of all forms of malnutrition and foods to combat this problem are needed. Additionally, these strategies need to be rigorously evaluated to determine what approaches are most effective.

Key messages

- In Tanzania, underweight, wasting, and stunting have declined over time. However, stunting prevalence among children under five remains high at 30%.
- Anemia prevalence remains high in women of reproductive age (42%) and children 6-59 months of age (59%). Micronutrient deficiencies are also of concern.
- Overweight and obesity prevalence is increasing among adults, particularly among women of reproductive age, and is influenced by dietary changes and sedentary lifestyles.
- Across all population groups, diets are limited in diversity, dense in starchy staples, and low in fruit and vegetables. In addition, the intake of ultra processed foods is increasing.
- Nearly 75% of Tanzanians (49 million people) are unable to afford a healthy diet.

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About BDN

The CGIAR Science Program on Better Diets and Nutrition (BDN) identifies, co-designs and tests consumer-oriented solutions to ensure sustainable healthy diets for all while enhancing livelihoods, social equity, and environmental sustainability. Through evidence-based research and collaboration, BDN supports country-led food system transformation in low- and middle-income countries. To learn more about BDN, please visit https://www.cgiar.org/cgiar-research-porfolio-2025-2030/better-diets-and-nutrition/.

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