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T20 POLICY BRIEF

Task Force 01

FIGHTING INEQUALITIES, POVERTY, AND HUNGER

Food-Based Dietary Guidelines: A Powerful Tool to Deliver the Sustainable Development Goals

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Abstract

Food-based dietary guidelines (FBDG) are country-level policies aimed at addressing public health and nutrition-related issues using strategies based on local dietary patterns. The Food and Agricultural Organization and the Intergovernmental Panel on Climate Change emphasise the socio-political relevance of these guidelines and their role in guiding healthy dietary patterns from sustainable food systems, a target of Sustainable Development Goal 2. Despite their influence, global analyses of FBDGs reveal that the majority of the countries do not integrate ecological sustainability, nor do they provide adequate nutritional information that can promote healthy and sustainable food choices. Current FBDGs also largely promote high consumption patterns of animal-sourced foods. While animal products represent an important nutrient source in some countries, intensive animal agriculture also contributes to some of the most urgent problems we face in the areas of health, environment, social justice, and animal welfare, as well as to the emergence of zoonotic pandemics. Member countries of the Group of 20 (G20) can become front-runners by providing sustainable dietary recommendations based on the latest scientific evidence. This policy brief has identified five main aspects to be considered in the revision of FBDGs to support the development of sustainable, balanced, and inclusive FBDGs.

Keywords: Food-Based Dietary Guidelines, Sustainable Development Goals, Nutrition Policy, Plant-Based Diets

Introduction

Background on food-based dietary guidelines

Food-based dietary guidelines (FBDGs) are country-level policies aimed at addressing public health and nutrition-related issues using strategies based on local dietary patterns (WHO, 1998). FBDGs can be a vital tool to promote health and prevent malnutrition and chronic disease by informing individual dietary choices, medical and nutrition education, and public feeding schemes (Kraak *et al.*, 2022; Herforth *et al.*, 2019).

The Food and Agricultural Organization (FAO) of the United Nations (UN) and the Intergovernmental Panel on Climate Change (IPCC) underscore the important socio-political relevance of these guidelines and their role in guiding healthy dietary patterns from sustainable food systems, a target of Sustainable Development Goal (SDG) 2. However, the majority of the countries do not integrate ecological sustainability, nor do they provide adequate nutritional information that can promote healthy and sustainable food choices (James-Martin *et al.*, 2022; Klapp *et al.*, 2022; Springmann *et al.*, 2020). Since there are many similarities in dietary recommendations worldwide, it is possible to compare country-specific FBDGs to identify general gaps and opportunities (Herforth *et al.*, 2019; Klapp *et al.*, 2022).

FBDGs may integrate sustainability concepts by providing recommendations for increasing plant-based food consumption and reducing the amount of animal products from diets (James-Martin *et al.*, 2022; Klapp *et al.*, 2022; Springmann *et al.*, 2020). Simultaneously, integrating more plant-based options into FBDGs increases the inclusivity of the ethical, ecological, religious, and economic aspects that play a role in people's food choices (Klapp *et al.*, 2022).

FBDGs in the G20 context

All member countries of the Group of 20 (G20) have national FBDGs, making them a powerful information-based tool towards achieving the SDGs and influencing millions of people's food choices. However, most G20 countries are lagging in integrating health and sustainability goals into national FBDGs (James-Martin *et al.*, 2022; Klapp *et al.*, 2022; Springmann *et al.*, 2020).

The majority (90%) of G20 countries are high-income (HIC) or upper-middle-income countries (MIC). The consumption of animal products is often driven by increasing income (FAO *et al.*, 2023), reflected across the economic spectrum of the G20 member countries. According to Miller *et al.* (2022), in 2018, Russia, China, Japan, and South Africa were the top G20 consumers of unprocessed red meats, while Germany, Russia, and Brazil had the greatest appetite for processed red meats. Conversely, India, a lower MIC member of the G20, had the lowest consumption patterns for both unprocessed and processed red meats.

Current G20 national FBDGs still largely promote and drive high consumption patterns of animal-sourced foods. More people in the G20 countries are shifting to plant-rich diets and consuming plant-based alternative products for reasons relating to health, ecology, religion, and ethics (Kraak *et al.*, 2024). It is important to provide science-based information, enabling them to make empowered decisions for healthy, sustainable living (Klapp *et al.*, 2022).

This policy brief aims to guide the G20 FBDGs to be more inclusive of plant-based dietary patterns.

Recommendations

The G20 has the potential to be a front-runner by providing sustainable dietary recommendations based on the latest scientific evidence. As with other government policies, FBDGs are often inspired by countries that have updated their guidelines according to the latest scientific evidence. We recommend that FBDGs should:

1. Provide inclusive food groups.

Inclusive food groups are an important part of a balanced FBDG (Klapp *et al.*, 2022). Many FBDGs still include exclusive meat food groups, which are those that only include animal-based foods with no mention of plant-based foods or alternatives, implying that meat is an essential and irreplaceable part of a healthy diet. This practice conflicts with current evidence and promotes the consumption of potentially cancer-causing meat products that, at the same time, tend to have a high carbon footprint. Moreover, many religions have a long tradition of following a form of vegetarian diet, and religious restrictions often relate to the consumption of meat and other animal-based products, including majorities in all major religious groups (Chouraqui *et al.*, 2021).

An example of inclusive food groups with animal- and plant-based foods merged into a “protein” group can be found in the Canadian FBDGs (Health Canada, 2019). Canada updated its guidelines in 2019 to include meat, fish and dairy in the protein group alongside fortified soya drinks, tofu, pulses, nuts and seeds, recognising that protein should be obtained from a variety of different foods.

2. Include recommendations to limit animal-based foods.

The overconsumption of animal-based foods is detrimental to individual and planetary health. According to Kraak *et al.* (2022), only 12 G20 member countries recommend limiting or avoiding processed meats and/or limiting meat intake. Member countries lacking specific reduction targets for processed meats include Argentina, Indonesia, Japan, the Republic of Korea, and the United States of America, despite evidence confirming that some of these foods increase the risk of cancer.

In 2023, Mexico updated its FBDG to tackle malnutrition and improve human and planetary health. This new version recommends increasing the consumption of plant-based foods to 90% of people's plates and reducing the consumption of red and processed meat products (SSA and Sader, 2023).

A revised German FBDG was published in 2024 (DGE, 2024), inspired by the model of the Planetary Health Diet (Willet *et al.*, 2019). Weekly recommendations for meat consumption have been lowered to a maximum of 300 g, and the weekly recommendations for dairy to a maximum of two portions.

3. Recommend healthy plant-based alternatives to animal-based foods.

Adopting a plant-centric diet can be facilitated by healthy plant-based alternatives with a similar taste and texture to their animal-based counterparts. The convenience of these alternatives is shown to facilitate the behaviour change process (Bianchi *et al.*, 2022). Nearly half (45%) of all FBDGs already mention plant-based alternatives to meat or dairy (Klapp *et al.*, 2022).

As the primary source of public education on food choices, FBDGs should empower the reader to discern which products are the healthiest options, such as preferring products with low salt, sugar, and fat content. FBDGs that aspire to be sustainable and

environmentally friendly should include context-specific information on plant-based alternatives.

4. Provide guidance on the broad spectrum of plant-based diets and how to meet key macro- and micro-nutrient intakes with plant-based food sources.

FBDGs should provide comprehensive advice on sources of protein, iron, calcium, zinc, and omega-3 from plant-based foods, as well as on sourcing vitamin B12. For example, the United Kingdom's FBDG provides advice on a broad spectrum of calcium sources:

Milk and dairy products, such as cheese and yogurt, are good sources of protein, calcium, and vitamins A and B12. This food group includes milk and dairy alternatives, such as fortified unsweetened soya, rice, and oat drinks, which also contain calcium. Other sources of calcium include green, leafy vegetables, calcium-set tofu, and bread.

FBDG United Kingdom (Public Health England, 2016)

5. Include a position on vegetarian diets and highlight the health and environmental benefits of plant-based dietary patterns.

Only 38 (40%) of 95 dietary guidelines had a position on vegetarian diets in 2022 (Klapp *et al.*, 2022), indicating an information gap on how to plan plant-forward diets well. Moreover, FBDGs should also highlight the health and environmental benefits of plant-based dietary patterns, as seen in South Africa and Brazil:

People choose to follow a vegetarian diet for a variety of reasons. Well-planned vegetarian diets can be both nutritious and healthy. These have been associated with a lower risk of heart disease, type 2 diabetes, obesity and certain types of cancer, and lower blood cholesterol levels.

FBDG South Africa (Vorster *et al.*, 2013)

Food supplies and dietary patterns based on rice, beans, corn, cassava, potatoes, vegetables, and fruits are socially beneficial. They encourage family farming and local economies, as well as living and producing in solidarity. They also promote biodiversity and reduce the environmental impact of food production and distribution. Reduced consumption and, thus, production of animal foods will reduce emissions of the greenhouse gases responsible for global warming, deforestation caused by the creation of new grazing areas for cattle, and intensive use of water.

FBDG Brazil (Ministry of Health Brazil, 2014)

These five recommendations are guiding principles that must be considered alongside local public health challenges, consumption patterns, and cultural traditions.

Scenario of Outcomes

Implementing balanced and inclusive FBDGs can help to alleviate some of the most urgent problems the world faces in the areas of health, environment, social justice, and animal welfare, as well as reduce the risk of the emergence of zoonotic pandemics such as COVID-19.

Food systems are responsible for about one-third of global greenhouse gas emissions, with beef and dairy consistently emerging as the food groups with the highest carbon footprints (IPCC, 2019). Since 2021, 15 G20 member countries have endorsed the COP26 Methane Reduction Pledge, which aims to cut methane emissions by 30% (Kraak *et al.*, 2022). Shifting to predominantly plant-based dietary patterns is vital to reducing methane emissions from the agricultural sector (Vegh-Gaynor *et al.*, 2023). In addition, livestock farming requires vast amounts of land and is a leading cause of land degradation, deforestation, and biodiversity loss (IPCC, 2019). Animals kept in intensive farming environments often live in unsanitary conditions countered with routine antibiotic use, increasing the risks for zoonotic disease emergence and antimicrobial resistance (AMR) (Mulchandani *et al.*, 2023; WHO *et al.*, 2021).

If the overconsumption of animal products is not effectively addressed in FBDGs, these problems will continue to worsen. Following a Planetary Health Diet (Willet *et al.*, 2019) approach that emphasises the consumption of plant-based foods in FBDGs will offer a significant opportunity to reach global environmental and health targets (Springmann *et al.*, 2020). In particular, significant evidence exists that plant-based diets can be used to prevent, manage, and, in some cases, reverse chronic non-communicable diseases (NCDs) such as obesity, type 2 diabetes, and heart disease (WHO, 2021), a target of SDG 3.

All the SDGs are directly or indirectly connected to sustainable and healthy food. Balanced FBDGs are suitable for everyone, regardless of religion, ethnicity, disability, economic status, or other diverse backgrounds. In this way, the guidelines are in line with the United Nations Sustainable Development Group (2024) principle of “Leave no one behind.”

Conclusion

FBDGs are vital country-level policies that guide contextually healthy and sustainable food choices. These policies are regularly revised to reflect the current scientific evidence. This policy brief has summarised five key recommendations for the further development of balanced FBDGs among the G20 countries.

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