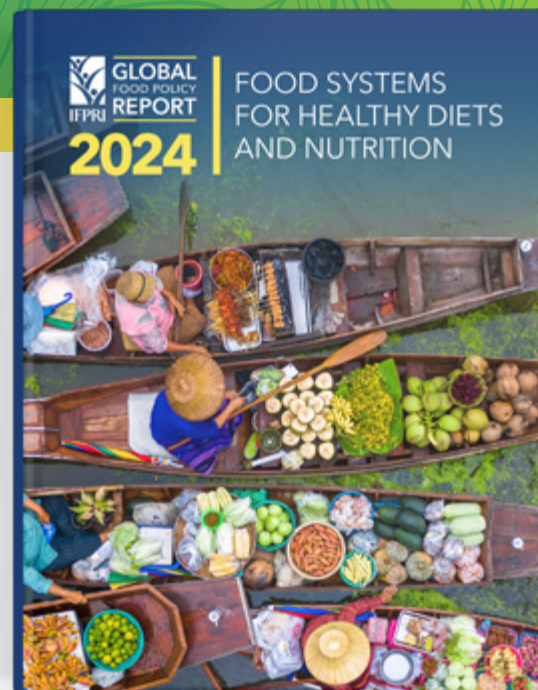


FOOD SYSTEMS FOR HEALTHY DIETS AND NUTRITION

MAY 2024

Hunger, food insecurity, and unhealthy diets underpin many critical public health challenges, including all forms of malnutrition and diet-related noncommunicable diseases (NCDs). These health outcomes, in turn, have short- and long-term impacts on the well-being and productivity of human populations worldwide. In low- and middle-income countries (LMICs), progress has slowed in reducing hunger and undernutrition, while overweight and obesity has rapidly increased worldwide. Many countries now face a double burden of malnutrition – meaning that undernutrition and micronutrient deficiencies coexist with overweight and obesity, or diet-related NCDs, within individuals, households, and communities, and across the life course. At the same time, climate change is imposing new challenges on our food systems, including on the supply and nutritional content of our foods.

These complex, interconnected challenges have brought global attention to the urgent need to transform our food systems in ways that ensure sustainable healthy diets are achievable for everyone. In the 2024 Global Food Policy Report, IFPRI researchers and colleagues review what we know about approaches across the food system to address demand, affordability, accessibility, and availability constraints to achieving sustainable healthy diets and the challenges and opportunities going forward. Drawing on a wealth of evidence built over the years by IFPRI and colleagues, the report highlights the need for meaningful actions that are interlinked and supported by good governance to achieve sustainable healthy diets for all.



SUSTAINABLE HEALTHY DIETS

Healthy diets provide the nutrients needed for an active, healthy life. They include a diversity of foods – fruits, vegetables, legumes, nuts, whole grains, and varying amounts of animal-source foods (ASFs). Healthy diets limit consumption of foods high in sugar, salt, and fat, and provide high concentrations of nutrients, fiber, and other protective elements. The foods that make up a healthy diet vary with local food availability, cultural context, and individual preferences. Individual physiological characteristics, including age, physical activity, and conditions such as pregnancy or lactation, also determine nutrient requirements.



A SNAPSHOT OF PRESENT CHALLENGES

Globally, between 691 and 783 million people – more than 9 percent of the population – faced hunger in 2022.¹

Micronutrient deficiencies impact more than half of children under five and two-thirds of adult women.²

Overweight and obesity is on the rise globally: 43 percent of adults are overweight and 16 percent are obese, more than double the rate 30 years ago.³

An estimated 2-3 billion people, many of them in Africa and South Asia, cannot afford a healthy diet.⁴

Unhealthy diets are the leading risk factor for non-communicable diseases,⁵ which are responsible for more than 73 percent of deaths globally.⁶

Food system activities contribute around one-third of global greenhouse gas emissions.⁷

¹ Food and Agriculture Organization of the United Nations (FAO), "Hunger and Food Insecurity," accessed April 1, 2024. www.fao.org/hunger/en/

² Our World in Data, Micronutrient Deficiency, accessed April 1, 2024. <https://ourworldindata.org/micronutrient-deficiency>

³ WHO, "Obesity and Overweight," accessed April 1, 2024. www.who.int/en/news-room/fact-sheets/detail/obesity-and-overweight

⁴ D.D. Headey, K. Hirvonen, and H. Alderman, "Estimating the Cost and Affordability of Healthy Diets: How Much Do Methods Matter?" IFPRI Discussion Paper 2179, IFPRI, Washington, DC, 2023.

⁵ F. Branca, A. Lartey, S. Oenema, et al., "Transforming the Food System to Fight Non-communicable Diseases," *BMJ* 364 (2019): 1296.

⁶ GBD 2017 Causes of Death Collaborators, "Global, Regional, and National Age-Sex-Specific Mortality for 282 Causes of Death in 195 Countries and Territories, 1980-2017: A Systematic Analysis for the Global Burden of Disease Study 2017," *Lancet Global Health Metrics* 392, 10159 (2018): 1736-1788.

⁷ M. Crippa, E. Solazzo, D. Guizzardi, F. Monforti-Ferrario, F.N. Tubiello, and A. Leip. "Food Systems Are Responsible for a Third of Global Anthropogenic GHG Emissions," *Nature Food* 2, 3 (2021): 198-209.

Today, less than half of the world’s population consumes diverse diets that include enough fruits, vegetables, and other nutritious foods. For many people, these nutrient-dense foods are unaffordable, not readily available, or not preferred for a variety of reasons. In LMICs, diets are rapidly evolving to include higher consumption of ultra-processed foods (UPFs), a shift that has resulted from changing livelihoods and lifestyles, as well as the increased availability and marketing of these often inexpensive foods. Overconsumption of ASFs also continues to grow in some regions of the world, though many vulnerable populations who could benefit from nutrient-dense ASFs cannot access or afford sufficient quantities of these foods.

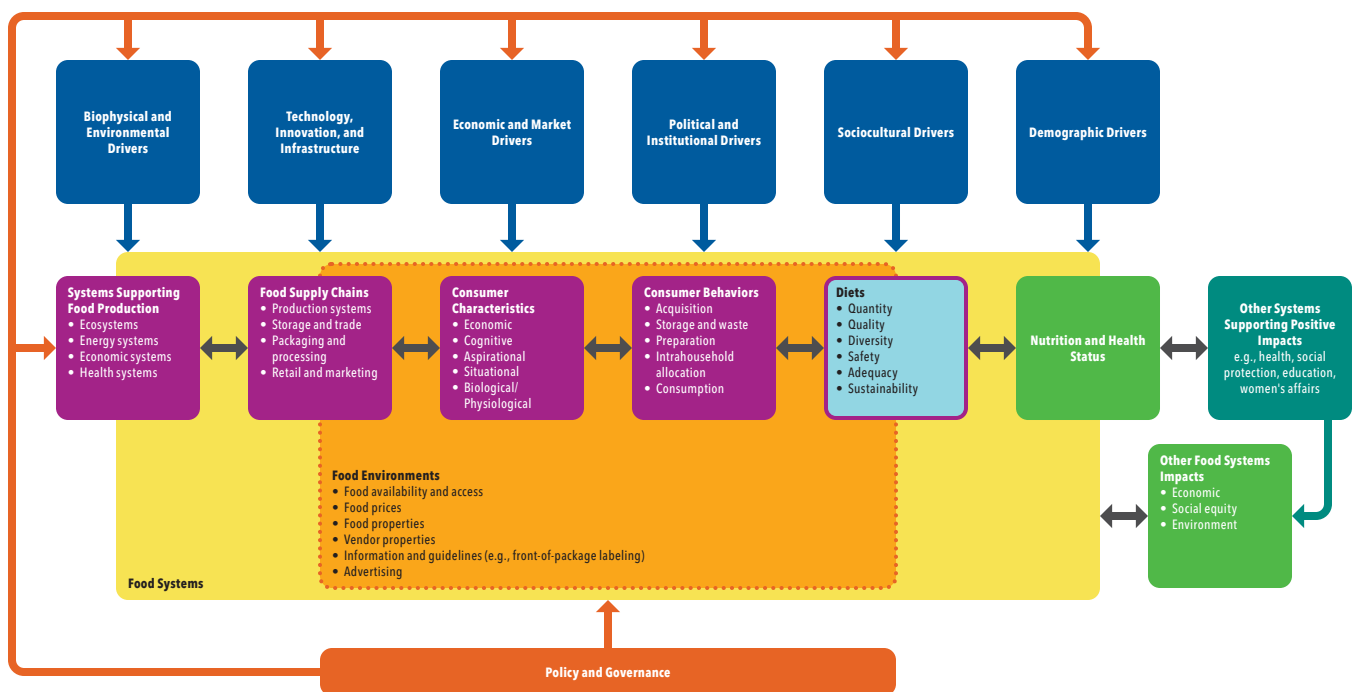
In addition to being healthy, diets should also be environmentally sustainable. Agriculture and other food systems-related activities are estimated to contribute around one-third of global greenhouse gas emissions, and they often negatively affect land quality, water use, and biodiversity. Thus, the environmental footprint of food production and dietary choices requires greater consideration. At the same time, climate change and natural resource degradation impact our food supply and the nutritional content of crops, requiring greater attention to the development of adequate agricultural

technologies and infrastructure to ensure the availability of nutritious foods necessary for healthy diets.

Sustainable healthy diets, as defined by the Food and Agriculture Organization of the United Nations and World Health Organization, promote all dimensions of an individual’s health and well-being, and are accessible, affordable, safe, and equitable while being culturally acceptable and causing low environmental pressure and impact. Ensuring sustainable healthy diets for all the world’s people is possible only if diets are considered within the wider context of the whole food system, from the farm to the consumer, and its links with numerous other sectors, from education to infrastructure.

The High Level Panel of Experts on Food Security and Nutrition (HLPE), the science-policy interface of the United Nations Committee on World Food Security, has developed a food systems framework to provide a holistic, multisectoral understanding of food systems that makes healthy diets one of the key goals of food systems transformation, along with economic growth, social equity, and environmental sustainability. In this report, we adapted the HLPE framework to highlight the centrality of consumers, their behaviors, and their food environments, as well as food supply chains, in determining diets, and show that the quality,

A CONSUMER-FOCUSED FOOD SYSTEMS FRAMEWORK FOR SUSTAINABLE HEALTHY DIETS



Source: Adapted from High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, *Food Security and Nutrition: Building a Global Narrative Towards 2030* (Rome: 2020).

quantity, diversity, safety, and adequacy of diets are key drivers of nutrition and health outcomes.

By prioritizing diets as a critical entry point for tackling all forms of malnutrition and diet-related NCDs, this framework allows us to consider the wide range of possible policies and actions to meet realistic, measurable goals for food systems transformation. It also highlights the need for food systems actors to coordinate with other systems to address many of the underlying determinants of nutrition, such as health, social protection, education, and women's empowerment. Multiple solutions have the potential to propel a shift toward sustainable healthy diets by addressing demand and food environment challenges, including approaches that promote changes in consumer behavior, measures to make healthy diets more affordable, fiscal policies that promote healthy foods over less healthy options, and other changes in food environments, such as marketing and retail strategies. On the supply side, increasing the availability and lowering the cost of foods that contribute to healthy diets through improvements in food supply chains is also essential.

SUPPORTING HEALTHIER FOOD CHOICES

Creating demand for healthy diets requires shifting both individual and collective preferences toward

nutritious foods. Actions designed to strengthen demand for sustainable healthy diets must be context specific. They should also account for relevant patterns and trends in cultural, social, economic, and food environments, as well as supply-side constraints.

Several approaches are promising. National food-based dietary guidelines offer practical guidance on specific food groups, nutrients, and diets appropriate to a specific country-level context. These guidelines can help consumers make healthy food choices, and they provide the basis for public education, labeling and advertising policies, and food production priorities.

Social and behavior change (SBC) interventions use technical, informational, and social platforms to provide education and behavioral models that support healthier diets. As stand-alone interventions, SBC efforts have had mixed results. However, adding SBC as a complement to other nutrition and diet-related programs is essential to increase the effectiveness of various multisectoral interventions that aim to generate demand for healthy diets. These include nutrition-sensitive agriculture and social protection programs. In addition, the design and targeting of SBC interventions must consider gender, as empowering women and increasing household access to nutritious food can also improve the diets of young children, who are especially vulnerable to malnutrition and poor development outcomes.



ADDRESSING THE HIGH COSTS OF HEALTHY DIETS

Affordability is a major constraint to healthy diets in LMICs. Several metrics exist to determine the cost of a healthy diet, but they all indicate that these diets are unaffordable for at least 2 billion and perhaps more than 3 billion people, many of them in South Asia and Africa. Better understanding of the scale and scope of the affordability problem will require national and subnational monitoring of healthy diet affordability, including of food prices and wages.

Unaffordability is the combined result of poverty and the relatively high cost of nutrient-dense foods, compared with calorie-dense staple foods. The cost of a healthy diet far exceeds the income of many of the world's poor, with more than 84 percent of the population in low-income countries and almost 68 percent in lower-middle-income countries considered "diet poor." Given the scale of the problem, it would cost at least \$1.3 trillion per year to provide the world's diet poor with enough cash to afford healthy diets.

Healthy diets can be made more affordable by accelerating pro-poor economic growth to catalyze more equitable growth and increase incomes. Across countries, there is evidence that well-targeted social protection programs can reduce diet poverty. In addition, realigning agricultural policies toward nutrient-dense foods and scaling up investment in transport, infrastructure, and logistics could reduce the relative price of these foods and increase their availability. However, addressing the problems of incomes and relative costs may not be sufficient to improve diets because of dietary preferences for more calorie-dense and nutrient-poor foods.

IMPROVING FOOD ENVIRONMENTS

The food environment is the context in which people choose what to eat, where to buy those foods, and where, when, and how to eat. In LMICs, these dynamic environments are undergoing dramatic changes due to urbanization, rural transformation, and associated shifts in consumer preferences. Food environments increasingly cater to, and even fuel, the growing preference for UPFs, while the availability and cost of fresh foods is affected by long supply chains, seasonal variability, and limited infrastructure. Less healthy food options are also promoted through food marketing,

which is often targeted to children and adolescents. These factors, along with food handling practices that can reduce food safety, all affect demand.

Policy interventions to make food environments more conducive to healthy eating include providing information incentives to consumers, such as food labeling, and fiscal measures to nudge consumers toward healthier diets, such as taxes. New approaches to shifting diets must address the emerging threats and opportunities created by the growing digital food environment. More research is needed on interventions that aim to change product offerings in retail settings, as well as possible policy actions to promote access to and demand for nutrient-dense foods.

LEVERAGING FOOD CROPS FOR BETTER NUTRITION

In combination with interventions to increase demand, increasing the year-round availability of nutritious plant-based foods will be essential to making sustainable healthy diets attainable for all. Crops that deliver energy and high concentrations of vitamins, minerals, phytochemicals, and dietary fiber are among the principal components of healthy diets. Yet consumption and access to these foods is inadequate among many poor and at-risk populations, and global availability is too low to support adequate levels of consumption. Moreover, the nutritional quality and availability of foods eaten in LMICs are projected to deteriorate because of climate change and unsustainable resource use.

Several strategies can increase the availability of nutritious plant-based foods. Investments in crop diversity can increase the accessibility and affordability of nutrient-dense plant-source foods. In addition, whole grains and "orphan crops" – locally produced crops that have been neglected in breeding programs or underused – can be promoted to fill nutritional gaps. Yet, the ultimate impact on diets will depend on the interplay with food environments and consumer demand.

Food fortification and biofortification of staple crops are also well-established strategies for addressing micronutrient deficiencies. They can offer an equitable and affordable means of delivering nutrients, especially to women, children, and other vulnerable populations. To reduce micronutrient deficiencies, biofortification, which enhances the micronutrient density

of widely consumed staple crops, can be readily integrated into existing cropping systems, and large-scale fortification of staple foods can be carried out during postharvest processing.

THE ROLE OF ANIMAL-SOURCE FOODS

Small quantities of ASFs – meat, fish, dairy, and eggs – can contribute substantially to diet quality and health. While global ASF consumption has been rising sharply in recent decades, this increase masks major differences across regions and even within countries. While consumption in high-income countries is often excessive, other populations would benefit from greater consumption of ASFs. These foods play a particularly important role in meeting higher nutritional needs in early childhood, adolescence, pregnancy and lactation, and old age. Although ASFs are an excellent source of high-quality protein and bioavailable micronutrients, these foods are unaffordable for many of the populations who would most benefit from consuming them.

Improving consumption in LMICs will require a combination of greater farm productivity and market efficiency to reduce prices, as well as an increase in household incomes. Food safety for these perishable products will also need to be addressed, especially in the informal markets that serve many LMIC consumers. In other regions, overconsumption of ASFs will need to decrease to reduce both diet-related NCDs and environmental impacts. Incorporation of ASFs into sustainable healthy diets will require consideration of their substantial environmental impacts, as well as understanding of the varying impacts among ASF products and production systems. Taken together, these shifts could benefit human health and lead to a more equitable distribution of ASFs produced within sustainable limits.

GOVERNANCE FOR BETTER DIETS AND NUTRITION

Enabling environments for better diets and nutrition must include attention to leadership, governance, and political economy, including the interplay of diverse actors with an interest in shaping food systems outcomes for the future.

Sound governance is essential for implementing the broad range of policy interventions required to improve diet quality and nutrition. Bundling these different policy options is often the most effective approach, but that is not always feasible when state capacity is low. Substantial state capacity and positive political incentives are critical to meeting administrative needs for policy implementation and managing trade-offs across nutrition goals and other objectives. Government engagement with food companies and other interest groups likewise is shaped by state capacity and political incentives. Where powerful actors lack incentives to support policy implementation, policies are more likely to be contested. Along with the government and private sector, citizen engagement and grassroots movements can also play a transformative role in improving diets and nutrition. This engagement is most likely to flourish when governments are committed to ensuring civic space for such movements.

Governance can be strengthened in multiple ways. To ensure that policies for diets and nutrition are sustainable and scalable, policy analysis can be expanded to include an assessment of governance capacity. Governance constraints that limit capacity and the ability to navigate industry influence should be identified and addressed. In addition, governments should provide an enabling environment for citizen agency through policy transparency and government accountability, and for growth of successful grassroots movements that can support better diets and nutrition. In complex and ever-moving governance conditions, it is clear that leadership for better diets and nutrition must coexist in diverse sectors and be effectively deployed toward diverse positive outcomes.

CHALLENGES AND OPPORTUNITIES

A food systems approach for sustainable healthy diets offers many promising opportunities, but also entails a set of difficult challenges. Success will require a truly multisectoral approach that tackles the need for sustainable healthy diets from multiple directions and with “multi-duty” tools that address different forms of malnutrition and consider the wide range of factors that shape diets and their contributions to nutrition and health outcomes.

Achieving optimal consumption of diverse food groups to support sustainable healthy diets in various contexts and populations will also require a range of



context-specific policies and initiatives that focus on both demand and supply. While fruits and vegetables are universally recognized as essential to healthy diets, low consumption of these healthy foods is a global problem. The relatively high prices of nutritious plant-based foods, as well as ASFs, must be addressed to improve diets for low- and middle-income households. In addition, at all income levels, shifts in desirability away from unhealthy foods and toward healthy foods, such as fruits and vegetables, are urgently needed.

A critical challenge lies in managing the actions of diverse stakeholders and inherent conflicts of interest. Numerous trade-offs will need to be identified and negotiated, not only between interest groups, but also across critical development goals for well-being and sustainability. For example, although healthy diets are generally perceived to be more environmentally sustainable than unhealthy diets, the footprint of food systems is large, and there are likely to be trade-offs between optimal diets and sustainability goals.

Last, despite emerging efforts to improve data on food systems, publicly available information remains sorely lacking on what populations eat, where food is sourced from, drivers of people's food choices, characteristics of food environments and markets, and composition of food supplies. Well-tested methods, tools, and indicators as well as increased data collection are needed to analyze and monitor complex food systems

and their different components, including their environmental impacts. Improving the available evidence base can support LMICs in diagnosing diet and nutrition challenges and drivers, testing and scaling solutions, and monitoring progress. Urgent efforts are needed to support governments and other actors at all levels – from global to local – in using data and evidence to guide national nutrition plans, identify effective entry points for improving diets, set goals for their own food systems transformation efforts, and navigate trade-offs and conflicts of interest along the way.

Achieving sustainable healthy diets will require substantial investments in high-impact food systems actions. Global commitments to nutrition are strong, but the world is not moving fast enough to finance and deploy effective strategies to meet our nutrition and sustainability goals. Meeting these goals will be no small feat, but evidence from innovative food systems actions is emerging, and we must continue to build this evidence base. In our complex world, focusing on diets within the context of the broader food system can help guide these efforts. This year's report delves into recent evidence on what works, and what does not, to provide evidence-based recommendations at both the global and regional levels. The future of the world's most vulnerable people and of our planet depends on building our knowledge and putting it into action to transform food systems in ways that ensure sustainable healthy diets for everyone.

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This publication is based on the peer-reviewed report *2024 Global Food Policy Report: Food Systems for Healthy Diets and Nutrition*, published by the International Food Policy Research Institute.

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