

Diets and Food Safety

U.S. Government's Global Food Security Strategy Activity Design Guidance

This is one of several Activity Design Guidance documents for implementing the U.S. Government's Global Food Security Strategy. The full set of documents is at www.feedthefuture.gov and www.agrilinks.org.

Introduction

This document is intended to support the U.S. Agency for International Development (USAID) Missions to design programming that incorporates both improved diets and food safety objectives and technical approaches to achieve the U.S. Government's Global Food Security Strategy (GFSS) 2022–2026 goal to sustainably reduce global poverty, hunger, and malnutrition. Building on the U.S. Government's long-standing experience with nutrition and agriculture programming, this document describes best practices, clarifies concepts, recommends programming principles, and provides links to technical resources for diets and food safety.

Since the launch of the first GFSS in 2016, global recognition of the importance of working across food systems to drive broader, sustainable change has emerged. The food system encompasses the many integrated parts of food's journey from farm to table. The 2022–2026 GFSS emphasizes that Feed the Future investments will support greater integration across the three objectives by enhancing the production, affordability, and marketing of nutritious foods that reduce malnutrition and improve diet quality, countering the negative effects of dietary transitions, such as rising obesity and diet-related diseases.

The Bureau for Resilience and Food Security (RFS) developed the [RFS Food Systems Conceptual Framework](#) to illustrate how key elements of USAID's work come together as part of the food system, specifically: agriculture-led economic growth, water, nutrition, and resilience. This framework highlights how diets are the primary outcome of food systems, with income, health, nutrition, and environmental sustainability as secondary outcomes. Working across food systems to improve diets is a central focus of activities designed under the GFSS.

Diet quality is the key link between food security and nutrition. The previous decade has seen little progress in improving diets and, in 2020 alone, roughly 3.1 billion people could not afford a healthy diet. Poor diets are one of the greatest obstacles to human growth, development, and productivity. Poor diets—those low in fruits, vegetables, nuts/seeds, and whole grains, and high in processed meat and sugary drinks—are also associated with 25 percent of all deaths among adults. For children, stakes are

highest in the first two years of life, when insufficient dietary intake of nutrients can irreversibly harm a child’s rapidly growing body and brain. In low- and middle-income countries, only 18 percent of children under the age of two receive a diet that promotes proper growth and development.

The elevation of food systems within the GFSS led to an increased emphasis on food safety as an increasingly relevant development priority that underpins sustainable progress toward the GFSS, the Global Nutrition Coordination Plan, USAID’s Multi-Sectoral Nutrition Strategy (MSNS), and the United Nations Sustainable Development Goals (SDGs). To maximize investments and progress toward the GFSS objectives of inclusive and sustainable agriculture-led economic growth, strengthening the resilience of people and systems, and fostering well-nourished populations (especially women and children), activities should promote the adoption of improved food safety practices throughout the food system.

While GFSS Objective 3: A well-nourished population, especially among women and children, is supported by three intermediate results (IRs), this activity design guidance focuses on IR 7: Increased consumption of safe and nutritious foods, as this IR is primarily programmed through the agriculture and food system. While IR 8 and IR 9 complement IR 7 and are necessary to achieve a well-nourished population, they are typically addressed through different sectors. IR 8: Increased use of direct nutrition interventions and services, is intended to be programmed through the health system and IR 9: More hygienic households and community environments, is typically programmed via the water, sanitation, and hygiene (WASH) sector. Given this, it is important to note that while improving diets is a critical building block for improving nutrition, improving nutrition requires a comprehensive, multisectoral approach including linkages and synergies with GFSS Objectives 1 and 2.

Diet quality is a critical link between food security and nutrition.

According to the 2022 State of Food Security and Nutrition in the World, almost 3.1 billion people could not afford a healthy diet in 2020—an increase of 112 million people since 2019.

The cost of a healthy diet will likely continue to rise without significant investment and intervention to promote affordable, healthy diets.

Terminology and Context

A common understanding of the following terminology and context is important when designing and implementing activities that seek to improve diets and food safety:

Agriculture and Food Systems: The intact or whole unit made up of interrelated components of people, behaviors, relationships, and resources that interact in the production, processing, packaging, transporting, trade, marketing, consumption, and use of food, feed, fiber, and other outputs through aquaculture, farming, wild fisheries, forestry, and pastoralism. The food and agriculture system operates within and is influenced by social, political, economic, and environmental contexts.

Dietary Diversity: The number of different types of foods or food groups consumed over a given period of time.

Food Loss and Waste (FLW): Food loss is the decrease of food quantity or quality at the production, processing, or storage stages, while food waste occurs at the retail and consumer levels. Although both loss and waste occur globally, food loss dominates in developing countries and food waste prevails in industrialized countries.

Food Safety: The absence—or safe, acceptable levels—of hazards in food that may harm the health of consumers.

Food Safety Systems: A set of procedures or practices designed to ensure that food is protected and wholesome to eat. It covers key intervention points where contamination can occur within the food system, spanning from production to consumption.

Large-Scale Food Fortification: Large-scale food fortification tackles micronutrient deficiencies by adding essential vitamins and minerals to regularly consumed staple foods and condiments during the industrial processing stage.

Malnutrition: Poor nutritional status caused by nutritional deficiency or excess. Malnutrition is a condition resulting when a person’s diet does not provide adequate nutrients for growth and maintenance, or if a person is unable to fully utilize the food eaten due to illness; this consists of both undernutrition and overweight or obesity.

Nutrition-Sensitive Interventions: Interventions that address the underlying determinants of malnutrition (e.g., WASH, food safety, nutrition-sensitive agriculture, etc.).

Nutrition-Specific Interventions: Interventions that address the immediate causes of malnutrition. (e.g., breastfeeding promotion, micronutrient supplementation, management of acute malnutrition, etc.)

Designing Activities

Affordable, healthy diets are fundamental contributors to resilient, economically productive, and well-nourished communities. This means that households, especially women and young children, have year-round access to affordable, safe, and nutritious foods. A variety of principles and factors should be taken into account when designing activities, including, but not limited to:

1. Begin with a Context and Systems Assessment

Multiple factors within [food systems](#) affect diets and, ultimately, nutrition. Understanding these factors is critical to guide program design and implementation, and to address the root causes of poor diets and unsafe food at a systemic level. Factors to consider when assessing the local context include: data, host country government and other local stakeholder priorities, policies, strategies, and programming, as well as U.S. Government priorities, strategies, and programming in diets, food safety, and nutrition.

2. Determine the Scope of the Activity

The multifactorial causes of poor diets and nutrition highlight the need for a multisectoral systems approach. While a single activity may address multiple drivers of poor diets and food safety, it is critical to take a broader portfolio approach, coordinating across offices and funding streams, to address these issues across the food system. When determining appropriate scope, consider the following:

- **Activities to improve diets within the food system promote improved availability, accessibility, and affordability of safe, nutritious foods, but will not improve nutrition alone.** To improve and sustain nutrition outcomes, Missions must consider how to strategically coordinate Feed the Future programming with efforts programmed through the health system (IR 8) and WASH sector (IR 9). In addition, Missions should consider how risk management and shock-responsive programming strategies will prevent or mitigate the impact of shocks and stresses on diets and nutrition.
- **Activities to improve diets within the food system can be programmed as stand-alone, nutrition-sensitive agriculture activities or as a component of broader Feed the Future activities.** For example, agriculture or market systems development activities can be designed to achieve both economic and dietary outcomes. Activity design in other sectors, like private sector engagement or WASH, can also address improved diets within food systems.
- **Food safety is an essential activity objective because unsafe diets impede improved nutrition, health, and economic growth.** Food safety interventions should follow a preventive, risk-based approach to maximize program impact and build resilience to potential food safety-related shocks. A risk-based approach involves aligning resources and mitigation strategies based on the likelihood that a hazard exists within a food product and the risk of exposure to determine if there is a considerable public health threat. Adopting a risk-based approach involves ongoing risk analyses of the food system to determine what hazards are present and pose the greatest threat to public health, nutrition, and economic outcomes. Additionally, improved food safety supports actions to reduce FLW.
- **Addressing FLW is critical to support affordability and accessibility to safe, nutritious diets.** FLW occurs at all points along the food system: food is lost on farms, at facilities, and during storage and distribution, and wasted within retail and households. High FLW rates happen in highly perishable and nutrient-dense agriculture products, thus reducing the availability of nutritious foods.
 - For example, FLW can be addressed in activities via training and building capacity of producers or processors, supporting improved food processing facilities, supporting producers with improved storage options, or scaling up digital technologies to prevent FLW.
- **Activities to improve diets within the food system should consider complementary approaches to address vitamin and mineral inadequacies via [large-scale food fortification](#).** These deficiencies often occur seasonally or during times of crisis when food supply is low or not diverse, as during the current COVID-19 pandemic. It is an intervention that complements and builds on existing interventions that are maximizing food systems to improve diets—specifically, private sector engagement, food processing, food safety, policy, and trade.
- **Consider the regulatory environment and how it can be leveraged to promote safe, nutritious diets.** Activities can address local, national, or regional regulations and mandates to promote nutritious foods. Activities can also strengthen the capacity of the regional regulatory environment through collaboration with organizations like the Economic Community for West African States (ECOWAS), East African Community (EAC), and the South African Development Community (SADC).

3. Consider Where and How Food Safety Can Play a Role in Activity Design

Food safety interventions can be designed as stand-alone activities, as a component of nutrition-sensitive agriculture activities, or as a component of other related sectors, including WASH, livestock, or private sector engagement activities. Food safety interventions should address one or more of the following leverage points to promote safe diets within food systems:

- Inform and empower consumers to demand safe, nutritious foods and hold governments and industry accountable to improve the chemical and biological safety of raw foodstuffs from production to consumption.
- Build small- and medium-sized enterprise (SME) capacity to manage food safety risks by utilizing food processing and packaging technologies, like pasteurization or irradiation, to mitigate food safety hazards. Activities can also teach SMEs how to profit from improved food safety practices. It is fundamental that SMEs have the capacity to implement measures that comply with international, national, and local food safety laws and regulations.
- Support local governments to establish and enforce clear, unified guidelines and regulations that are evidence- and risk-based. Local governments should also invest in infrastructure and digital technology to enable traceability and reporting tools to reduce foodborne diseases.
- Partner for impact at scale with governments, the private sector, universities, civil society, and other donors to facilitate behavior change of food handlers and consumers, as well as the adoption of appropriate policies, practices, and technologies to promote a unified food safety approach.
- Food safety interventions should be applied to fresh food markets to help ensure that nutritious animal-source foods (ASF) and fresh fruits and vegetable products are available to vulnerable populations year-round. When promoting dietary diversity—including increased consumption of fruits, vegetables, and ASF—it is important to simultaneously address the increased food safety risks associated with consuming those foods. For example, ASF, including meats, fish, shellfish, dairy products, and eggs, provide an excellent source of high-quality protein and micronutrients, including iron, zinc, vitamin A, vitamin B12, and calcium. However, they are easily contaminated by biological hazards.

4. It Is Critical to Include Objectives and Indicators Specific to Increasing Access to Affordable, Safe, and Nutritious Diets across GFSS Activities

Agriculture market systems development activities are not inherently nutrition-sensitive. For these activities to contribute to improved diets, activity designers must be intentional in developing the objectives, strategies, and interventions, as well as indicators to measure dietary outcomes, such as Minimum Dietary Diversity for Women (MDD-W).

5. Social and Behavior Change Interventions Should Be Considered for Activities Addressing Improved Diets

Systematically and appropriately addressing priority behaviors that affect diets across food systems is critical. Thorough formative research should be conducted to understand local perspectives, including cultural norms and preferences, as well as the individual, social, and environmental factors that influence the adoption and maintenance of these priority behaviors, with interventions designed to break down barriers and enhance motivators. A range of actors and stakeholders, including producers, retailers, and consumers, contribute to the supply and demand of safe, nutritious foods and impact all aspects of the food system. The behavior of these actors matters for diets. As activities work to strengthen food systems to deliver affordable, safe, and nutritious diets, it is more important than ever to understand the central role that food systems actors can play in sustaining improved diets and how social and behavior change approaches can influence their behaviors.

6. Gender Equality and Women’s Empowerment Are Important for Improving Diet Outcomes

Engaging both women and men in practices to promote improved diets and more equitable roles in caregiving, workloads, and decision-making over household and community resources improves nutrition. This includes considering gender dynamics during shocks or stresses—as women and girls are often at greater risk of adjusting food consumption patterns following a shock or stress—and building on the skills, capacities, and leadership of women in SMEs and in government policymaking.

7. Addressing Diets Can Be Complex and Require an Expert for Design, as Interventions Are Context-Specific

When in doubt, contact your USAID/Washington advisors or other U.S. Government agency advisors for technical support and assistance.

Programming in Practice

Introduction

The [Feed the Future Bangladesh Livestock and Nutrition \(LAN\) Activity](#) (2021–2026), a follow-on to the Bangladesh Livestock Production for Improved Nutrition (LPIN) Activity (2015–2021), aims to sustainably increase the production, marketing, and consumption of dairy and meat products to enhance household income and diets. LAN applied lessons learned from the first phase to adopt an increasingly holistic approach to programming—encompassing a broader range of food systems actors and leveraging relationships among food systems components. It provides an example of how an agriculture and market systems activity can apply a food systems lens to its interventions to strengthen diets, the primary nutrition-related outcome of food systems approaches to improve nutrition.

Drivers

The first phase considered drivers through its implementation—such as those related to climate, environment, and environmental sustainability, which impact livestock productivity. LAN’s design phase drew on lessons learned to consider additional drivers and identify ways to enable micro, small, and medium enterprises (MSMEs); women; and youth to participate in and benefit from the livestock sector. For example, the activity expanded its results framework (Figure 1) to incorporate two additional [drivers](#) through three crosscutting IRs: (1) increase access to finance, technology, and infrastructure (increase adoption of information and communication technologies), and (2) address institutions and social norms (increase gender and youth empowerment).

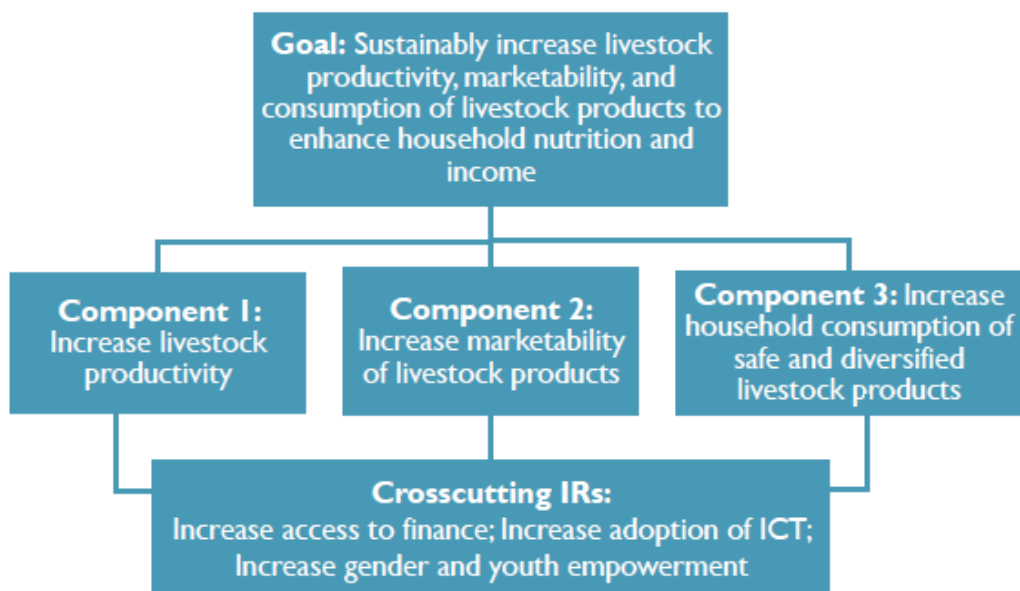


Figure 1: LAN results framework

To achieve these results, the activity considered food systems actors with the potential to influence drivers and worked to strengthen their capacities and assets and support relationships between actors. For example, it made engaging livestock service providers (LSPs) central to its approach to build the capacity of producers and consumers related to finance, production, marketing, and nutrition. It recruited and trained LSPs, especially youth and female LSPs, who engage directly with the public and private sector. Data from the first phase of implementation was critical for informing this approach, noting that youth LSPs are better at networking and are more technologically savvy, and female LSPs appear to be more successful at building relationships in less time than their male counterparts. As a result, the private sector has shown interest in developing the skills of youth and female LSPs. In this way, the activity is increasing food systems actors' abilities to respond to external shocks and stressors and influence drivers that contribute to building a more resilient, local food system.

Food Supply

LAN aims to build on its prior successes to continue supporting livestock farmers to boost production of dairy and meat products. An evaluation showed that the first phase successfully boosted production of livestock products: it supported 179,586 livestock producers in accessing livestock inputs and markets, and increased their meat and milk production by 188 and 240 percent, respectively. However, findings from formative research of meat and milk consumption used to design the second activity phase indicated that increased production did not always result in increased consumption for producer households. For example, households producing milk still showed a preference for milk sales over consumption—households set aside an average of only one ounce of milk per person, per day for home consumption. Thus, USAID/Bangladesh recognized the importance of continuing support for strengthening supply while increasing its focus on efforts to improve consumption, as described below.

Food Environment

LAN is implementing a range of interventions at livestock markets to increase the availability, affordability, quality, desirability, and acceptability of meat and dairy products. These efforts aim to address the gap between production and consumption by boosting the market potential of livestock products while also improving diet outcomes. Its efforts show how programs can apply food systems thinking to identify synergies and weigh trade-offs to achieve multiple, concurrent outcomes.

For example, the activity is continuing to improve its approach to address issues around the safety, availability, and affordability of dairy and meat products, which were exacerbated during the COVID-19 pandemic. The activity plans to work with LSPs to train households engaged in livestock processing on hygiene and safety issues during dairy and meat production, preservation, and marketing (including handling of inputs, slaughtering, and waste). To improve availability and affordability, the activity aims to increase the number of sales points where dairy and meat products are sold year-round; this will improve consumers' access while reducing market and transportation costs for producers and consumers, resulting in lower prices.

The activity also emphasizes engagement with the private sector to market and promote the nutritional benefits of consuming safe and diverse dairy and meat products. This includes: (1) using additional platforms to target consumers, such as collaborating with the Islamic Foundation as a social influencer and using social media to engage youth, and (2) working with livestock producers and the private sector to diversify their range of dairy and meat products to respond to consumers' preferences. These strategies show promise for increasing consumers' purchase and consumption of the dairy and meat products being offered in local markets.

Food and Water Utilization

To improve the safe consumption of meat and dairy products, the activity previously made considerable efforts to promote hygiene behaviors at the household level, such as encouraging safe food preparation and practicing handwashing before and after food handling and consumption. While the final evaluation of the first phase showed the activity met its related objectives, there was room for improvement. The activity now plans to expand its efforts to improve food hygiene by leveraging its partnerships and communication channels to disseminate food safety-related information and messaging. As part of its social behavior change (SBC) strategy, LAN also intends to develop television communication materials and use social media messaging to boost campaign outreach to consumers of livestock products. More specifically, it will share healthy food preparation practices, including those that increase product shelf life, reduce waste, and promote basic hygiene standards. Through the SBC strategy, the activity seeks to link production to consumption in the food system to ensure dairy and meat products are being consumed safely and in ways that maximize their nutritional benefits.

Development Outcomes

Through its investments in livestock productivity and marketability, the activity aims to improve affordability by reducing the production cost of safe and diverse dairy and meat products and increasing the availability of these products in the market. Combined with a stronger, consumer-focused approach, it intends to improve consumption of these foods as components of nutritious diets. The activity anticipates that these efforts will support livestock producers to generate more income. To avoid the potential pitfall of increased production not resulting in increased consumption, it plans to support the private sector (large dairy processors and MSMEs) in developing a robust marketing and SBC strategy to sell nutrition and the benefits of consuming a diverse range of livestock products, rather than selling a specific product (or brand name). In this way, it intends to build consumer demand for the range of nutritious dairy and meat products produced. Taken all together, these efforts strive to enhance household nutrition. Applying a food systems approach allowed the activity to recognize existing strengths as well as gaps that needed to be addressed to impact desired outcomes.

Conclusion

The activity is using a food systems approach to consider the drivers, actors, and relationships that impact meat and dairy production and consumption. Lessons learned from the first phase indicated ways the activity could adjust its design and implementation to address barriers and opportunities throughout the food system to reach its diet and nutrition objectives. The activity demonstrates how food systems thinking can be applied through a range of activities, including those focused on market- and production-oriented interventions to achieve food systems outcomes—safe, nutritious diets; income generation; and improved nutrition—and ultimately contribute to a healthy, resilient population.

Additional Resources and Tools

The [RFS Food Systems Conceptual Framework](#) is a functional tool to envision how investments across the food system can improve diets as well as incomes, health, and environmental sustainability.

[How to Use the RFS Food Systems Conceptual Framework to Improve Diets](#) is an interactive tool to guide the review and application of the framework by unpacking its components in more detail. The tool can stimulate thinking and conversations around food systems, encourage understanding of the complete RFS Conceptual Framework, and facilitate a more in-depth analysis of a specific part of the food system.

[Food Processing For Improved Diets](#) is a short guidance document prepared for USAID and its implementing partners to begin to inform design and implementation of food processing activities for improved diets and nutrition.

The [Integral Role of Food Safety in Strengthening Food Systems](#) serves three functions: (1) provides the latest evidence linking food safety to GFSS development objectives, (2) highlights why food safety is a growing development priority and how it plays a key role in achieving development outcomes. and (3) outlines the utility of a risk-based approach and steps USAID can take to incorporate food safety into planning and programming.

The [Large-Scale Food Fortification Programming Guide](#) is as a tool for Bureaus, Missions, and development partners across government, the private sector, and civil society to assess their specific needs and strategic opportunities; to design, implement, monitor, and evaluate; and to adjust large-scale food fortification programming for countries based on their local context. The guide is built around a comprehensive results framework and will support users in fulfilling the Agency's vision for sustainable, large-scale food fortification that will contribute to improving access to adequate, affordable diets across countries.

For further assistance related to these Activity Design Guidance documents, please contact ffguidance@usaid.gov.