CRS
CATHOLIC RELIEF SERVICES

Feeding the Future: Leveraging Agriculture for Better Diets and Nutrition

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A CRS participant's granddaughter attends to the family's field in the Tanahun district of Nepal.

Cover photo by Benny Manser for CRS

Contents

Executive Summary

Introduction and Context

A series of interconnected crises have significantly impacted global hunger and malnutrition, such as the COVID-19 pandemic, economic disruptions, conflicts such as the war in Ukraine, and climate change. These factors have reversed decades of progress in reducing hunger and malnutrition. Malnutrition, encompassing both undernutrition and obesity, is now the leading cause of poor health worldwide. In 2022, as many as 783 million people suffered from hunger, 2.4 billion faced moderate or severe food insecurity, and over 3 billion could not afford a healthy diet. Globally, poor diet is a cause of as much as 20 percent of deaths.[1] In poorer countries, poor nutrition has significant negative impacts on economic growth, resulting in losses of approximately 11% of Gross National Product annually.

The Role of Agriculture in Nutrition

Agriculture is fundamental to food and nutrition security, producing essential staples and diverse foods necessary for a balanced diet. It influences nutrition outcomes not just through food production but also via its impact on livelihoods, incomes, and food access. Smallholder farmers, who form a significant part of the world's rural poor, depend on agriculture for subsistence and income. Enhancing agricultural productivity, diversifying income sources, improving market access, and empowering women can lead to better household food security and more nutritious diets.

However, the relationship between agriculture and nutrition is complex. Increased agricultural production does not automatically lead to improved nutrition, especially if the produced foods are not nutritionally adequate or if access to nutritious foods is limited by poverty or inadequate infrastructure. Therefore, nutrition-sensitive agriculture is necessary, focusing on food quality, diversity, and equity rather than merely increasing food availability. Good nutrition and diet are significantly a matter of equity, as income, gender, and social status are among the key determinants of an individual's ability to access a healthy diet. Women and girls face acute and differentiated challenges in nutrition, for example.

International Response and Funding

The global financial requirement to meet nutrition targets is estimated at $10.8 billion annually from 2022 to 2030, with other estimates as high as $160 billion per year to end hunger by 2030. Despite the large potential economic returns from improved nutrition, international assistance for nutrition has stagnated at around $1 billion annually across major donors, with the United States contributing approximately $160 million through U.S. Agency for International Development's (USAID) global health program and $1.7 billion in emergency food assistance. Bridging the gap between needs and assistance is crucial, and leveraging synergies with other sectors is one way to address this.

Nutrition-Sensitive Approach

A "nutrition-sensitive" approach integrates nutrition objectives into programs in sectors like agriculture, water and sanitation, social protection, health, and education. This systemic approach aims to prevent nutrition insecurity at the household or community level rather than addressing it individually. USAID's Feed the Future initiative exemplifies this approach, aiming to accelerate agricultural growth, reduce poverty, and improve nutrition outcomes through integrated actions.

Methodology

This study is meant to assess the current state of knowledge about nutrition-sensitive agriculture from a range of sources, including through a literature review, open-ended interviews with experts, a country case study and consultations with an Advisory Committee. It focused on understanding the dynamics and success factors for nutrition-sensitive agriculture and identifying practical ideas for improvement. The focus is primarily USAID's Feed the Future initiative, due to its heavy investment into agricultural development, but has implications for other U.S. government programs as well.

1 The Lancet. "Globally, one in five deaths are associated with poor diet." ScienceDaily. ScienceDaily, 3 April 2019. <www.sciencedaily.com/releases/2019/04/190403193702.htm>.

Findings and Recommendations

1 Nutrition Prioritization in Feed the Future:

- **Findings:** While nutrition is one among three primary objectives of the U.S. Global Food Security Strategy and the Feed the Future initiative, in more cases than not, agriculture growth and livelihoods dominate the activities, funding and outcomes.
- **Recommendations:**
  - Rebalance programs to emphasize nutrition and diet-related goals, ensuring leadership commitment and dedicated resources.
  - Create credible theories of change that include nutrition and dietary outcomes more integrally to the other objectives of livelihoods and resilience, so there is a clear understanding of the dependencies between them.

2 Stunting as an Indicator:

- **Finding:** Using child stunting as a success indicator for nutrition-sensitive agriculture programs is inappropriate due to its complexity and long-term nature.
- **Recommendations:**
  - Focus on diet-related changes and improvements, such as diet diversity and adequacy, rather than stunting.
  - Develop and implement short-term, measurable indicators of dietary quality, particularly for vulnerable populations including adolescent girls, pregnant and lactating women, children 6-59 months of age and lowest two wealth quintiles.

3 Pathways for Nutrition and Diet Outcomes:

- **Finding:** Current pathways for achieving positive nutrition or diet-related outcomes have not been updated in a decade and may not reflect the latest evidence and trends.
- **Recommendations:**
  - Update and elaborate pathways to incorporate new evidence, including the impacts of climate change on food systems and nutrition security.
  - Refine conceptual frameworks and intervention strategies based on updated knowledge and research findings.

4 Women's Empowerment:

- **Finding:** Women's empowerment is an important vector for improved nutrition and diet.
- **Recommendation:** Nutrition-sensitive agriculture programs should include gender analysis and women's empowerment as core components.

5 Evidence for Nutrition-sensitive Agriculture:

- **Finding:** There are many gaps in knowledge around nutrition-sensitive agriculture and connecting interventions to nutrition or diet-related outcomes. The gaps are acute in looking at value-chain or market-systems approaches, cost-effectiveness and multi-sectoral approaches.
- **Recommendation:** invest in research and impact analysis with special attention to provide guidance to practitioners and implementers.

6 Climate Change's Impact on Nutrition:

- **Finding:** Many low-resource and smallholder farmers already practice diversified agriculture, which has the potential for more diversified and nutritious diets, but climate change and poverty are powerful challenges to these livelihoods and nutrition. Women's empowerment is an important vector for improved nutrition and diet.
- **Recommendation:** Initiatives to address climate change, such as the President's Emergency Plan for Adaptation and Resilience (PREPARE) and the Vision for Adapted Crops and Soils (VACS), should have strong nutrition and diet-related components to ensure they are nutrition-sensitive and help address the underlying causes of malnutrition.

7 Coordination and Integration:

- **Finding:** Operational aspects of nutrition-sensitive agriculture make a big difference in effectiveness. There is often a lack of prioritization of nutrition and diet-related outcomes, and sometimes poor coordination and integration among stakeholders and implementers.
- **Recommendations:**
  - Improve coordination among agriculture, health, social protection, and education sectors to create synergistic effects on nutrition.
  - Increase and protect resources including funding and staff to nutrition in U.S. Feed the Future programs.
  - Provide more authority and engagement for nutrition leadership and bodies such as the Nutrition Leadership Council.

Voloraza Claire, through CRS' Maharo project in Lanirano, Madagascar, ventured into selling fish to provide better nourishment for her children.
[Photo by Tofy Rabenandrasana for CRS]

Introduction and Context

A series of interconnected crises have significantly impacted global hunger and malnutrition, such as the COVID-19 pandemic, economic disruptions, conflicts such as the war in Ukraine, and climate change. After many decades of improvement, gains have reversed, and the world is home to growing numbers of hungry and malnourished people. Malnutrition in all its forms, including obesity and undernutrition, is the leading cause of poor health globally.[1]

Between 691 and 783 million people suffered from hunger in 2022, representing nearly 9 percent of the global population. Nearly a third of the population faced moderate or severe food insecurity (2.4 billion) in 2022 and over 3 billion people could not afford a healthy diet.[2] Nearly half of deaths in children under five are linked to undernutrition,[3] and unhealthy diets are the leading risk factor for noncommunicable diseases. Cumulatively, poor nutrition has significant impacts on economic growth, resulting in a loss of approximately 11 percent of Gross National Product annually in Asia and Africa.[4] The harms are comparatively more severe in low- and middle-income countries.

Faced with the polycrisis that is undermining food and nutrition security, the international community, including the U.S. government, has taken dramatic action. International food and nutrition assistance has surged in recent years; however, most of this increase is meant to address acute emergency needs versus long-term food and nutrition security programming.

Because malnutrition is so prevalent and has a wide range of immediate and underlying determinants, a variety of actions to reduce and end malnutrition are needed. While experts believe that ending malnutrition will require a large increase in nutrition-specific interventions, most of the effort to end malnutrition will come from adjacent sectors and activities (Figure 1). To end stunting, for example, experts judged that deploying the best nutrition-specific interventions could reduce stunting by 20 percent in the poorest countries. But this implies that much of the solution will derive from other means — including nutrition-sensitive interventions and other development programming.[5] A study of progress on stunting shows that contributions from within the health sector are matched by contributions from other sectors, like better sanitation and agriculture.[6]

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1 Swinburn BA, et al. The global syndemic of obesity, undernutrition, and climate change: The Lancet Commission report. Lancet 2019; 393(10173): 791–846 (doi: 10.1016/S0140-6736(18)32822-8).

2 FAO, IFAD, UNICEF, WFP and WHO. 2023. The State of Food Security and Nutrition in the World 2023. Urbanization, agrifood systems transformation and healthy diets across the rural–urban continuum. Rome, FAO. https://doi.org/10.4060/cc3017en

3 WHO, Fact Sheets: Malnutrition.

4 International Food Policy Research Institute. 2014. Global Nutrition Report 2014: Actions and Accountability to Accelerate the World's Progress on Nutrition. Washington, DC. see also: Repositioning Nutrition as Central to Development: A Strategy for Large-Scale Action, The World Bank, 2006.

5 Zulfiqar A Bhutta, Jai K Das, Arjumand Rizvi, Michelle F Gaffey, Neff Walker, Susan Horton, Patrick Webb, Anna Lartey, Robert E Black, Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost?, The Lancet, Volume 382, Issue 9890, 2013, Pages 452-477, ISSN 0140-6736, https://doi.org/10.1016/S0140-6736(13)60996-4, 016/S0140-6736(13)60996-4.

6 Bhutta ZA, Akseer N, Keats EC, Vaivada T, Baker S, Horton SE, Katz J, Menon P, Piwoz E, Shekar M, Victora C, Black R. How countries can reduce child stunting at scale: lessons from exemplar countries. Am J Clin Nutr. 2020 Sep 14;112(Suppl 2):894S-904S. doi: 10.1093/ajcn/nqaa153. PMID: 32692800; PMCID: PMC7487427.

Figure 1. What is nutrition-specific vs. nutrition-sensitive?

Nutrition-sensitive interventions are actions, policies or programs that address the underlying determinants of malnutrition by incorporating specific nutrition goals and actions. **Nutrition-sensitive** programs are distinct from and complement nutrition-specific programs, which directly address nutrition and dietary needs, such as providing vitamin supplements to pregnant women and young children, promoting exclusive breastfeeding for the first six months of life, and providing foods to prevent or treat malnutrition in children.

Nutrition-sensitive activities can draw on complementary sectors such as agriculture, health, social protection, early child development, education, and water and sanitation to affect the underlying determinants of nutrition, including poverty; food insecurity; and scarcity of access to adequate care resources. **Nutrition-sensitive** interventions are designed to address the broader context in which malnutrition is produced.

Although there is no single definition of **nutrition-sensitive** agriculture, its goal is to simultaneously improve agricultural outcomes and resilience, farming livelihoods, and nutritional outcomes for people over the long term.

This paper focuses on how agricultural development can contribute to improved nutrition and diet. Agriculture provides the foundation for food and nutrition security by producing the staples and diverse range of foods that form the basis of human diets. Crops such as grains, fruits, vegetables, and legumes are essential sources of energy and macro- and micronutrients that contribute to a balanced, nutritious diet. Animal sourced foods such as livestock, dairy, poultry, and fish can provide high-quality protein and essential vitamins and minerals, further enriching the nutritional diversity of diets. Thus, agricultural productivity and diversity are essential for ensuring that populations have access to an adequate and diverse range of foods needed for optimal health and nutrition.

Agriculture also supports livelihoods and the market systems that influence dietary patterns and nutritional status. Smallholder farmers, a large proportion of the world's rural poor that are often malnourished themselves, frequently rely on agriculture for their subsistence and income. By increasing agricultural productivity, diversifying income sources, enhancing market access, and empowering women, agriculture can improve household food security and purchasing power, enabling families to access a more diverse and nutritious diet. Additionally, agricultural interventions that target vulnerable populations, including women and children, can have a beneficial impact on nutrition outcomes by addressing underlying socio-economic determinants of malnutrition.

However, agriculture, farmers, food, and nutrition are all elements of complex and interconnected food systems. For example, increasing agricultural production may not equate to improved nutrition outcomes, especially if foods are nutrient-poor, populations cannot afford to purchase nutritious foods, or women do not have

control over how to use income.[7,8] Nutrition outcomes are shaped by myriad factors, such as food production, processing, distribution, marketing and consumption, as well as socio-economic, cultural and environmental determinants — key elements of food systems.

Realizing the potential of agriculture to improve nutrition requires intentional efforts to prioritize nutrition-sensitive approaches across food systems, address underlying determinants of malnutrition, and multi-sectoral engagement and coordination. By integrating nutrition objectives into agricultural policies, programs, and practices, we can harness the power of agriculture to promote health, well-being, and food and nutrition security for all.

International Response

Experts estimate that, to achieve nutrition targets by 2030, $10.8 billion in nutrition-specific financing is required between 2022 and 2030.[9] Other estimates range as high as $160 billion per year. These are large figures, but improved nutrition and reduced hunger would produce massive economic returns: in the range of $5.7 trillion per year and growing to $10.5 trillion by 2050.[10]

International assistance for nutrition has stagnated or declined in recent years at around $1 billion per year across all major donors. This comprises about 0.5 percent of all aid and is losing ground to inflation.[11] The United States allocates approximately $160 million annually on international nutrition programming through USAID's Global Health program. This is in addition to other food security assistance and programming, including $1.7 billion in emergency food aid.[12] The gap between international nutrition needs and nutrition-specific assistance is wide and has not been closing in recent years. As such, finding opportunities to leverage or create synergies with other program areas to make them nutrition-sensitive, could help close the gap for global nutrition needs.

One such opportunity is USAID's Feed the Future initiative. Feed the Future is an exemplary commitment to nutrition-sensitive agriculture as a means of addressing global food insecurity and malnutrition. Launched in 2010, Feed the Future aims to accelerate inclusive agricultural growth, reduce poverty and improve nutrition outcomes in focus countries. One of its core principles is the integration of nutrition objectives into agricultural development programs, recognizing that sustainable solutions to malnutrition require coordinated action across multiple sectors.

7 Ruel, Marie. (2013). Nutrition-Sensitive Interventions and Programmes: How Can They Help to Accelerate Progress in Improving Maternal and Child Nutrition. The Lancet. 382. 10.1016/S0140-6736(13)60843-0.

8 Meinzen-Dick, Ruth et al., 'Gender: A key dimension linking agricultural programs to improved nutrition and health', International Food Policy Research Institute (IFPRI), Washington, D.C., 2011

9 Global Nutrition Report: Stronger commitments for greater action. Bristol, UK: Development Initiatives, 2022

10 Global Nutrition Report: Stronger commitments for greater action. Bristol, UK: Development Initiatives, 2022

11 Global Nutrition Report: Stronger commitments for greater action. Bristol, UK: Development Initiatives, 2022

12 FACT SHEET: The Biden Administration's Commitment to Global Health in the FY 2023 President's Budget, 7 April 2022

Esther Yasini, a farmer and member of the watershed management committee, tills her farm in Lingoni community, Malawi. [Photo by Dooshmia Tsee for CRS]

Feed the Future includes targeted investments in agricultural research, technology transfer, capacity building, policy support and a range of projects to empower smallholder farmers — especially women — to increase productivity, enhance resilience to climate change and diversify income sources. By promoting the production and consumption of nutrient-rich crops, supporting nutrition education and behavior change communication, and strengthening food value chains, Feed the Future aims to improve the availability, accessibility, and utilization of nutritious foods, particularly for vulnerable populations.

While this paper largely focuses on how to improve nutrition-sensitive agriculture within Feed the Future, many of the findings and recommendations are relevant and could be applied to other agencies and programs, such as the U.S. Department of Agriculture, the Development Finance Corporation, and other programs within USAID.

Methodology

This study sought to gather the current state of knowledge about nutrition-sensitive agriculture through a variety of approaches. We gathered evidence and insight through:

- a literature review of relevant peer-reviewed journal articles, research reports, policy documents, academic literature.
- a review of grey literature, program solicitations and project documents (e.g., impact evaluations or annual reports, based on availability) open to the public from implementing organizations (Box 1). This study focused on USAID Feed the Future programs, although the findings are meant to be relevant to other U.S. government programs and initiatives.
- open-ended interviews with experts and practitioners from academia (5 interviews), civil society organizations and implementers (14 interviews), and government (9 interviews). Interviewees were granted anonymity to encourage candor.
- regular consultations with an Advisory Committee that consisted of experts and stakeholders from within and outside of CRS to validate the methods, findings and recommendations and provide strategic input.
- a country case study in Ethiopia (Box 2) to examine, qualitatively, how nutrition-sensitive agriculture policies and funding priorities get implemented at the country level for better nutrition outcomes.

The purpose of this analysis is to summarize the current, best understanding of the dynamics and success factors for nutrition-sensitive agriculture and to identify practical ideas to improve the U.S. government's current programs and policy.

Although malnutrition encompasses both undernutrition and overnutrition, the scope of this analysis was limited to undernutrition. It is well-recognized that overnutrition is a rapidly growing concern and its prevalence is increasing in low- and middle-income countries and among disadvantaged populations. Many countries now have populations experiencing undernutrition and overnutrition in the same or adjacent geography.

An important source for this study's data analysis is the Resilience & Food Security Evidence Aggregation for Programmatic Approaches (REAPER) project, funded by USAID and conducted by the International Initiative for Impact Evaluation (3IE). 3IE searched 17 academic databases and 30 grey literature sources and systematic reviews of impact evaluations related to nutrition and food security. The project reviewed more than 2,000 studies and systematic reviews and appraised the methods applied. These were then plotted in a matrix of interventions versus outcomes. The goal was to identify gaps in knowledge as well as catalog what exists.[13] In analyzing the REAPER data, we focused on systemic reviews, which provide a scholarly synthesis of a body of evidence, in order to extract and interpret the information from a larger body of studies. We reviewed 31 "high confidence" systematic reviews and 39 "medium confidence" systematic reviews that aligned with Feed the Future program approaches for learning.

In Kebbi State, Nigeria, Kulu Usman Sarkin Aiki holds seeds for her farm. Through CRS' Feed the Future Livelihoods Project, Kulu increased profits from her business. [Photo by Michael Stulman for CRS]

13 Lane, C, Storhaug, I, Tree, V, Cordova-Arauz, D, Huang, C, Frey, D, Ahmed, F, Song, B, Marie Edwards, K, Porciello, J, Eyers, J, and Snilstveit, B. 2023. Addressing the systemic causes of malnutrition: The nutrition-sensitive agriculture evidence gap map, 3ie evidence gap map report 24. New Delhi: International Initiative for Impact Evaluation (3ie). https://doi.org/10.23846/EGM024. See also online, interactive evidence map here: https://developmentevidence.3ieimpact.org/egm/reaper-nutrition-evidence-gap-map

A group of farmers tend to their demonstration plot of bean plants in Tanzania's Mbeya region. [Photo by Nanette Gendry for CRS]

Findings and Recommendations

1. Finding: Nutrition is often overshadowed by Feed the Future's other agriculture and livelihood objectives throughout the lifecycle of a project.

In alignment with the USAID Multi-Sectoral Nutrition Strategy, launched in 2014, USAID has made progress in prioritizing and coordinating nutrition activities within relevant bureaus and offices and, to a certain extent, in USAID missions.[14] In a review of the strategy, all 11 countries studied included nutrition-sensitive programming.[15]

The mandate for improved nutrition in the context of agriculture development is clear: Improved nutrition stands as an equal among the three pillars of the Feed the Future initiative and the Global Food Security Strategy (GFSS). Adding to the sense of a political mandate, Congress enacted the Global Malnutrition Prevention and Treatment Act with strong bipartisan support as recently as 2022.

The GFSS (2022 - 2026) includes both nutrition-specific and nutrition-sensitive interventions as key elements to achieve its nutrition objective. For example, the strategy supports nutrition-sensitive agricultural practices, biofortified crops, food preservation and promoting women's empowerment in decision-making as elements. The strategy targets improving the nutrition of women and children during the critical 1,000-day window from pregnancy to a child's second birthday. The GFSS highlights the need to create synergies between nutrition-specific and nutrition-sensitive interventions, focusing on improving food systems. The strategy update also emphasizes multi-stakeholder partnerships to achieve sustainable nutrition outcomes. It introduces a more detailed approach to integrating nutrition into food systems and leveraging local capacities and an increased focus on implementation and research and developing metrics to improve effectiveness.

Despite this clarity on the importance of nutrition in strategy, it can be hard to identify the practical and operational impact of this prioritization in many cases. As a goal, improved nutrition gets lost in the long chain of process and decision-making to implement programs. Practitioners report difficulty in promoting nutrition throughout program design, implementation, monitoring, and evaluation. Nutrition is often mentioned in the early stages of project, particularly at the solicitation stage (Box 1) but is then lost when programs are implemented and evaluated. Nutrition specialists report feeling their contributions are one-offs and that they are not engaged throughout the program cycle (an important factor in adjusting and improving implementation and keeping nutrition goals at the fore in decision-making).

14 Jordan Teague, A multi-sectoral approach to nutrition: Assessing USAID's progress: Briefing Paper, Bread for the World Institute, 2018.

15 USAID, MULTI-SECTORAL NUTRITION STRATEGY FIRST PERIODIC ASSESSMENT, June 28 2019.

Among practitioners we interviewed, there is an acute sense that nutrition is a neglected element in agricultural development programs, despite a clear mandate and priority in policy and legislation. Many practitioners feel "global food security programs focusing on agriculture tend to concentrate on promoting yields and income but ignore nutrition."[16]

Many practitioners feel "global food security programs focusing on agriculture tend to concentrate on promoting yields and income but ignore nutrition."

The decentralized process for Feed the Future project development and implementation means that leadership and accountability at the USAID mission and country levels are very important to delivering nutrition-sensitive agriculture programs. Success often relies on motivated or exceptional staff who understand the multi-sectoral nature of nutrition, champion the integration of nutrition through the project cycle, and can maintain a "nutrition-forward" approach in all its coordination and collaborative efforts with a variety of stakeholders, including national governments. The Ethiopia case study highlights this success, where multi-sectoral efforts are institutionalized towards achieving shared nutrition outcomes (see Figure 3).

Members of a Community Health Workers' cooperative during a training session in Ngoma district, Rwanda for the Orora Wihaze Feed the Future project. [Photo by Mussa Uwitonze for CRS]

16 Bryan Pride and Chelsie Azeveda, "Getting to the Root: Integrating Nutrition and Agriculture for Improved Food Security", Rise Against Hunger, 2023.

Documentation of budget allocation, staffing, or activities related to nutrition-sensitive agriculture across the Feed the Future program and its $1 billion annual budget, the Bureau for Resilience, Environment, and Food Security, or the development assistance budget do not currently exist. The Feed the Future program shows impressive results for nutrition-specific interventions, including reaching more than 32 million children, more than 8 million infants and toddlers, and more than 11 million pregnant women. However, these figures include the entire footprint of the Feed the Future Initiative, including other related USAID activities such as USAID Global Health nutrition investments, representing approximately $160 million allocated in fiscal year 2023 for nutrition interventions; and the Bureau for Humanitarian Assistance' food security and nutrition emergency and non-emergency investments.[17] Within these results, it remains impossible to assess how nutrition-sensitive agriculture did — or did not — contribute to improved nutrition and diet.

Despite the lack of documentation, stakeholders theorize the fraction of budget, staffing, and effort for nutrition-sensitive agriculture is comparatively small. Even where agriculture programs have nutrition objectives or goals, implementation, monitoring, evaluation and accountability is poor. Thus, it is difficult to make an evidence-based argument about how nutrition and diet are prioritized in the agricultural activities of the Feed the Future portfolio.

Recommendation:

Feed the Future and implementation of the Global Food Security Strategy should be rebalanced to elevate nutrition and diet-related goals and outcomes. USAID leadership and other relevant U.S. government agencies should re-emphasize the importance of achieving nutrition and diet-related outcomes from agricultural programs. Leadership should consider specific guidance and goals to achieve this.[18] Overall, programs and goals and effort should be rebalanced to put more emphasis on nutrition and diet-related goals and outcomes in programs. This will require leadership commitment and dedicated resources, including staff, within nutrition-sensitive agriculture programs.

Nutrition remains a stand-alone objective as part of Feed the Future, but each project should fully integrate nutrition and be clear in a theory of change how livelihood and resilience objectives may lead to nutrition outcomes, and how integration of nutrition-sensitive activities leads to nutrition outcomes.

17 USAID Feed the Future, "MEETING THE MOMENT 2023 PROGRESS SNAPSHOT", 30 October 2023.

18 Note: a 1000 Days, a coalition of nutrition advocates, is calling for a 25% allocation of Feed the Future funding to nutrition-sensitive agriculture and other interventions focused on improving nutrition outcomes.

Box 1: CRS Review

To better understand the practical experience of implementing nutrition-sensitive agriculture in Feed the Future projects, Catholic Relief Services (CRS) undertook an internal review of our own projects, given easier access to project-related documents. We reviewed solicitations, endline reports or evaluations, and other relevant project documents to explore how nutrition outcomes were prioritized and implemented in CRS' Feed the Future projects.

We looked at Feed the Future projects for which CRS was the prime implementer or part of a consortium. We found 21 CRS Feed the Future projects for which CRS was the prime or sub-recipient; of these, we were able to find 13 of the original solicitations. Fifteen of the projects have completed, and we identified nine evaluation or endline reports. For our analysis, we focused on projects where we could match a solicitation document plus at least one evaluation or endline report for completed projects or one progress report for ongoing projects.

We found:

- Most project solicitations (61.5%) include nutrition as an objective, indicating a relatively strong emphasis on nutrition-sensitive interventions in project solicitations.
- Almost all project solicitations (92.3%) discuss nutrition-sensitive pathways, but only about 23.1% explicitly mention nutrition-sensitive agriculture.
- Only 44.4% of projects report specific nutrition outcomes, indicating potential gaps in outcome measurement and reporting.
- Most of the project solicitations refer to a need for alignment with Country Development Coorperation Strategy (CDCS)/national plans (75.0%) and coordination with other USAID activities (100%), suggesting USAID strongly emphasizes both to be considered in the program design. The extent to which this is realized from program design through implementation is unknown.
- Only three projects (23.1%) had solicitations that required personnel with nutrition expertise, indicating a potential gap in technical nutrition knowledge within project teams. The most commonly required expertise was agriculture- and livelihoods-related.

**1 global project excluded*

More recent solicitations seem to be comprehensive and directive with requirements.

For example, similar nutrition-sensitive projects in Ethiopia (e.g., Graduation with Resilience to Achieve Sustainable Development (GRAD) to Livelihoods for Resilience Oromia (LRO) to Transforming Agriculture projects) show a clear progression from increasing production, incomes, and women's empowerment with inputs, trainings, and messaging to putting nutritionally-rich foods, dietary diversity, and food fortification at the heart of overcoming undernutrition and micronutrient deficiencies through a food-based approach to sustainably improving access to healthy diets with a food systems lens.

Overall, we found most Feed the Future projects recognize nutrition as a significant component at the program design stage by including nutrition-related outcomes as objectives and requiring nutrition-sensitive activities; but do not always ensure that nutrition-sensitive agriculture practices are integrated throughout project implementation. Nutrition-sensitive pathways are discussed nearly universally across solicitations, although the explicit use of the term "nutrition-sensitive agriculture" is substantially lower. Less than half of the projects reported on nutrition outcomes, pointing toward an urgent need for improved measurement and reporting. Access to solicitations and reports is inconsistent, and it's unclear whether they don't exist or are just not publicly available which makes it hard to determine the implementation quality of projects (and was a methodological challenge for this exercise).

This points to a need for better and more publicly available documentation. Alignment with CDCS/national plans and coordination with other USAID activities is frequently cited, suggesting a high level of strategic intent for integration. However, there is a need to ensure that this strategy alignment and coordination is maintained from design through implementation. A gap in the required nutrition expertise is evident, so mandating that key personnel have nutrition expertise could improve project effectiveness.

In Rwanda, Clementine Mukashyaka sells vegetables in the market. [Photo by Michael Stulman for CRS]

2. **Finding: Stunting is not a practical nor appropriate indicator to measure the success of nutrition-sensitive agriculture programs.** Instead, dietary consumption and access to safe, diverse, and nutritious foods is likely a preferable outcome goal for nutrition-sensitive agriculture.

Reducing or eliminating childhood stunting has been a major focus for international public health and development policy and practice for many years, highlighted in the 2008 Lancet series on maternal and child undernutrition,[19] the 2010 Scaling Up Nutrition (SUN) Movement launch,[20] and in the 2015 Sustainable Goals (SDG2.2).[21] Stunting is the impaired growth and development that children experience from poor nutrition, repeated infection and inadequate psychosocial stimulation. Stunting is usually defined in height-for-age and is associated with adverse consequences on the child, including poor cognition and educational performance, lower adult wages, lost productivity and increased risk of chronic diseases in adult life.

Stunting and other anthropometric outcomes have been widely used as nutrition indicators for nutrition-sensitive agriculture. Reducing stunting has played an integral role in motivating U.S. global nutrition efforts. For example, the GFSS mentions stunting 22 times, including as its highest level goal: "a 20% reduction in poverty and stunting in the areas where we work between 2022-2026."[22] The Global Food Security Act enacted by Congress mentions stunting, but in the context of other (better) indicators as well: "improve the nutritional status of women and children, with a focus on reducing child stunting, including through the promotion of highly nutritious foods, diet diversification, and nutritional behaviors that improve maternal and child health."

Over time, the evidence has shown that it is unusual to find stunting outcomes attributable to nutrition-sensitive agriculture interventions. One review found little evidence of impacts on child stunting, underweight, or wasting; of six studies reviewed that measured child anthropometry, none had impact on stunting.[23] The fact that reduced stunting has not been a consistent outcome from nutrition-sensitive agriculture does not necessarily signify failure, but perhaps misjudgment. The emerging consensus among experts and practitioners is that stunting can be a useful indicator for identifying target populations and indicates a poor nutrition and childhood development environment. Stunting should be considered a long-term indicator that can take four to six years to improve but is complex and difficult to change. Stunting, by itself, may not cause poor, longer-term development outcomes.[24] USAID itself has recognized that "it is not appropriate to use stunting as the primary indicator of success of short-term (e.g., five-year) or single interventions. Failure to reduce the prevalence of stunting should not be interpreted as the failure of a nutrition program or project. Nutrition programs should consider—and

19 https://www.thelancet.com/series/maternal-and-child-undernutrition

20 "Policy Brief Scaling Up Nutrition: A Framework for Action", Food and Nutrition Bulletin, vol. 31, no. 1 © 2010, The United Nations University. See also The history of the SUN Movement

21 UN Sustainable Development Goal 2, Target 2.2

22 Feed the Future, Global Food Security Strategy 2022-2026.

23 Ruel, M. T. (2019). New evidence on nutrition-sensitive agricultural programs. Agriculture for Improved Nutrition: Seizing the Momentum, 93-103. https://doi.org/10.1079/9781786399311.0093

24 Jef L Leroy, Edward A Frongillo,Perspective: What Does Stunting Really Mean? A Critical Review of the Evidence, Advances in Nutrition, Volume 10, Issue 2, 2019,Pages 196-204, ISSN 2161-8313, https://doi.org/10.1093/advances/nmy101. (https://www.sciencedirect.com/science/article/pii/S2161831322003982)

measure—a broader range of the many benefits that programs can achieve." [25] USAID then recommends nutrition indicators such as diet quality and well-being indicators like health status.[26]

The most consistent impacts of nutrition-sensitive agriculture interventions have been on "enhancing household and individual consumption of nutritious foods and diverse diets."

The most consistent impacts of nutrition-sensitive agriculture interventions have been on "enhancing household and individual consumption of nutritious foods and diverse diets."[27] Instead of stunting or other anthropometric outcomes, many stakeholders now believe nutrition-sensitive agriculture interventions should focus on improving household access and consumption of nutritious food and diverse diets: "current evidence suggests that agriculture may in fact be more beneficial for improving household access to nutritious food and diverse diets than for reducing stunting, and for household members other than young children, who have particularly high nutrient needs."[28]

However, quantifying the impacts of agriculture programs on dietary intake and adequacy is challenging. Until recently, innovation in measurement and methods of nutrition outcomes has lagged, and standard instruments to measure diets in low- and middle-income countries have been inadequate.[29] Although there are a variety of dietary metrics in use, none of them have been fully assessed against malnutrition outcomes like maternal and child health or non-communicable diseases. Some of the metrics used most frequently have no validation.[30] Measuring diet diversity and adequacy can be difficult, time-consuming and expensive. However, progress has been made on new indicators including the Global Dietary Recommendations Score (GDR Score) and the Global Diet Quality Score (GDQS). The Minimum Dietary Diversity for Women is often used in nutrition-sensitive agriculture contexts. Very recently, a new Reference Diet Deprivation (ReDD) index has been growing in popularity among researchers. The ReDD index can be used as a stand-alone measure to compare diet quality across households or populations, or track changes in diet quality over time, but also has the potential to help guide strategists in selecting interventions and value chains for nutrition impact.[31] However, there is still a need for harmonization in the application of these metrics.[32] Analysis of the various metrics identifies significant knowledge gaps in whether and how these metrics can be extended to populations and settings beyond their original design, and whether they can be used equivalently for comparisons.[33]

25 USAID Advancing Nutrition. 2020. Stunting: Considerations for Use as an Indicator in Nutrition Projects. Arlington, VA: USAID Advancing Nutrition.

26 USAID Advancing Nutrition. 2020. Stunting: Considerations for Use as an Indicator in Nutrition Projects. Arlington, VA: USAID Advancing Nutrition.

27 Jef L Leroy, Marie Ruel and Deanna Olney (2020). Measuring the Impact of Agriculture Programs on Diets and Nutrition, Strategic Brief, International Food Policy Research Institute

28 Ruel, M. T. (2019). New evidence on nutrition-sensitive agricultural programs.. Agriculture for Improved Nutrition: Seizing the Momentum, 93-103. https://doi.org/10.1079/9781786399311.0093

29 see Sparling et al 2021, Leroy, et al. 2020 and Walls, et al. 2018 and Jef L Leroy, Marie Ruel and Deanna Olney (2020). Measuring the Impact of Agriculture Programs on Diets and Nutrition, Strategic Brief, International Food Policy Research Institute

30 Miller, Victoria & Webb, Patrick & Micha, Renata & Mozaffarian, Dariush. (2020). Defining diet quality: a synthesis of dietary quality metrics and their validity for the double burden of malnutrition. The Lancet Planetary Health. 4. e352-e370. 10.1016/S2542-5196(20)30162-5.

31 Pauw, K., Ecker, O., Thurlow, J.P., & Comstock, A.R. (2023). Measuring changes in diet Deprivation: New indicators and methods. Food Policy.

32 Report of the Technical consultation on measuring healthy diets: Concepts, Methods, and Metrics. 2021. WHO.

33 Verger EO, Savy M, Martin-Prével Y, Coates J, Frongillo E, Neufeld L et al. Healthy diet metrics: a suitability assessment of indicators for global and national monitoring purposes. Geneva: World Health Organization; 2023.

Staff at Mohammed Abuna Dairy Farm in the Oromia region of Ethiopia tend to cattle. [Photo by Melikte Tadesse for CRS]

Recommendation:

Feed the Future and nutrition-sensitive agriculture activities should move away from using reducing child stunting and other anthropometric indicators as success indicators. Stunting remains a useful global and national indicator for development progress.[34] However, experts and practitioners agree that it is not a suitable primary measure of nutrition impact for nutrition-sensitive agriculture. Better indicators are diet-related changes and improvements, diet diversity and adequacy. The current GFSS recognizes that setting reduced stunting as an indicator is problematic in the "strategic pivots" section: "The previous GFSS prioritized stunting as the key nutrition outcome…. we now include additional nutrition indicators besides stunting…" However, stunting is still included as a key indicator in the Monitoring, Evaluation, and Learning section.[35]

Recommendation:

Invest in and validate new and existing tools to measure diet quality and to improve data collection tools. Developing tools that are both effective, easy to use, and cost effective for dietary metrics should be a priority, particularly for vulnerable populations including adolescent girls, pregnant and lactating women, children 6-59 months of age and lowest two wealth quintiles. Likewise, better and more consolidated tools would be valuable for measurement of women's empowerment, time use and energy budgets.[36]

A former project participant in Guatemala demonstrates the results of water smart agriculture practices during a tour of her farm. [Photo by Dinorah Lorenzana for CRS]

34 USAID Advancing Nutrition. 2020. Stunting: Considerations for Use as an Indicator in Nutrition Projects. Arlington, VA: USAID Advancing Nutrition.

35 Feed the Future, Global Food Security Strategy 2022-2026.

36 Jef L Leroy, Marie Ruel and Deanna Olney (2020). Measuring the Impact of Agriculture Programs on Diets and Nutrition, Strategic Brief, International Food Policy Research Institute. And see Olney, D. and Shapleigh, S. 2022. A Review of Measures and Indicators for Assessing the Relationship Between Women's Empowerment and Nutrition. CGIAR GENDER Impact Platform Working Paper #006. Nairobi, Kenya: CGIAR GENDER Impact Platform https://cgspace.cgiar.org/handle/10568/119601. Several new measures and indicators for diet are in development. See Intake 2022. Global Diet Quality Score Toolkit. Washington, DC: Intake – Center for Dietary Assessment/FHI Solutions. Which includes a table comparing different diet quality metrics for administrative complexity, data needs, time and other attributes.

3. Finding: The current concepts for pathways for positive nutrition or diet-related outcomes have not been updated in 10 years.

The evidence suggests that the pathways conceived by Feed the Future — food production, agriculture income, and women's empowerment — are insufficient by themselves to make nutrition or diet-related impacts. Studying *whether* agricultural interventions have positive impacts on nutrition provides important evidence for practitioners to design programs and improve practice. Understanding *how* agriculture interventions can impact nutrition is also important to improve policy and practice. This is the question of pathways.

The nexus between agricultural interventions and nutrition outcomes is complex and pathways may be indirect or attenuated. One study identifies five pathways for nutrition outcomes:

- food production
- nutrition-related knowledge
- agricultural income
- women's empowerment
- strengthening of local institutions[37]

But these pathways require more analysis and elaboration. Increased food production and income do not necessarily lead to improved dietary diversity or nutrition; in fact, the evidence suggests otherwise.[38, 39, 40, 41, 42]

37 Sharma IK, Di Prima S, Essink D, Broerse JEW. Nutrition-Sensitive Agriculture: A Systematic Review of Impact Pathways to Nutrition Outcomes. Adv Nutr. 2021 Feb 1;12(1):251-275. doi: 10.1093/advances/nmaa103. PMID: 32970116; PMCID: PMC7850060.

38 Masset E, Haddad L, Cornelius A, Isaza-Castro J. Effectiveness of agricultural interventions that aim to improve nutritional status of children: systematic review *BMJ* 2012; 344 :d8222 doi:10.1136/bmj.d8222

39 Ntakyo, P.R., van den Berg, M. Effect of market production on rural household food consumption: evidence from Uganda. *Food Sec*. **11**, 1051–1070 (2019). https://doi.org/10.1007/s12571-019-00959-2

40 Alessandra Garbero, Lisa Jäckering, The potential of agricultural programs for improving food security: A multi-country perspective, Global Food Security, Volume 29, 2021, 100529, ISSN 2211-9124, https://doi.org/10.1016/j.gfs.2021.100529.

41 Girard, A.W., Self, J.L., McAuliffe, C. and Olude, O. (2012), The Effects of Household Food Production Strategies on the Health and Nutrition Outcomes of Women and Young Children: A Systematic Review. Paediatric and Perinatal Epidemiology, 26: 205-222. https://doi.org/10.1111/j.1365-3016.2012.01282.x

42 Berti PR, Krasevec J, FitzGerald S. A review of the effectiveness of agriculture interventions in improving nutrition outcomes. *Public Health Nutrition*. 2004;7(5):599-609. doi:10.1079/PHN2003595

For projects that seek to enhance income as a pathway to improved nutrition, systemic reviews show few discernible nutrition-related benefits. Relatedly, cash and voucher projects showed some positive nutrition impact, although not enough to be statistically significant.[43] According to a 2020 UNICEF study, "Based on the existing evidence, there is a broad consensus within the nutrition sector that [cash and voucher assistance] alone is in most circumstances not sufficient to impact nutrition outcomes."[44]

Women's empowerment has an indirect pathway toward improved diet or nutrition. Some systematic reviews of the contribution of women's empowerment to improved nutrition-related outcomes show inconclusive evidence.[45] While evidence shows positive correlations between women's empowerment and children's diet diversity, for other indicators the evidence was mixed or inconclusive, including women's nutrition.[46] There is reason to believe that there may be trade-offs or even negative impacts on nutrition from women's empowerment in some cases, for example, by creating new time demands on women that reduce their ability to provide care, or by requiring more energy expenditure.[47]

In the Feed the Future program, current concepts of pathways to nutrition have not been updated in 10 years (Figure 2).[48] In program design guidance for nutrition-sensitive agriculture, USAID indicates three pathways to improve nutrition: food production, agriculture income, and women's empowerment.[49] This provides a useful framework for practitioners to conceive of programs and to develop theories of change to achieve nutrition and dietary improvement. But as a starting point, these pathways do not incorporate the latest evidence, trends and knowledge.

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43 James Manley, Seth Gitter, Vanya Slavchevska, How Effective are Cash Transfers at Improving Nutritional Status?, World Development, Volume 48, Pages 133-155, ISSN 0305-750X,https://doi.org/10.1016/j.worlddev.2013.03.010. (https://www.sciencedirect.com/science/article/pii/S0305750X13000934) and Durao S, Visser ME, Ramokolo V, Oliveira JM, Schmidt B-M, Balakrishna Y, Brand A, Kristjansson E, Schoonees A., Community-level interventions for improving access to food in low- and middle-income countries. Cochrane Database of Systematic Reviews, 2020, Issue 8. Art. No.: CD011504. DOI: 10.1002/14651858.CD011504.pub3.

44 UNICEF (2020). "Evidence and Guidance Note on the Use of Cash and Voucher Assistance for Nutrition Outcomes"

45 Olney, D. and Shapleigh, S. 2022. A Review of Measures and Indicators for Assessing the Relationship Between Women's Empowerment and Nutrition. CGIAR GENDER Impact Platform Working Paper #006. Nairobi, Kenya: CGIAR GENDER Impact Platform https://cgspace.cgiar.org/handle/10568/119601

46 FAO. 2023. The status of women in agrifood systems. Rome. https://doi.org/10.4060/cc5343en

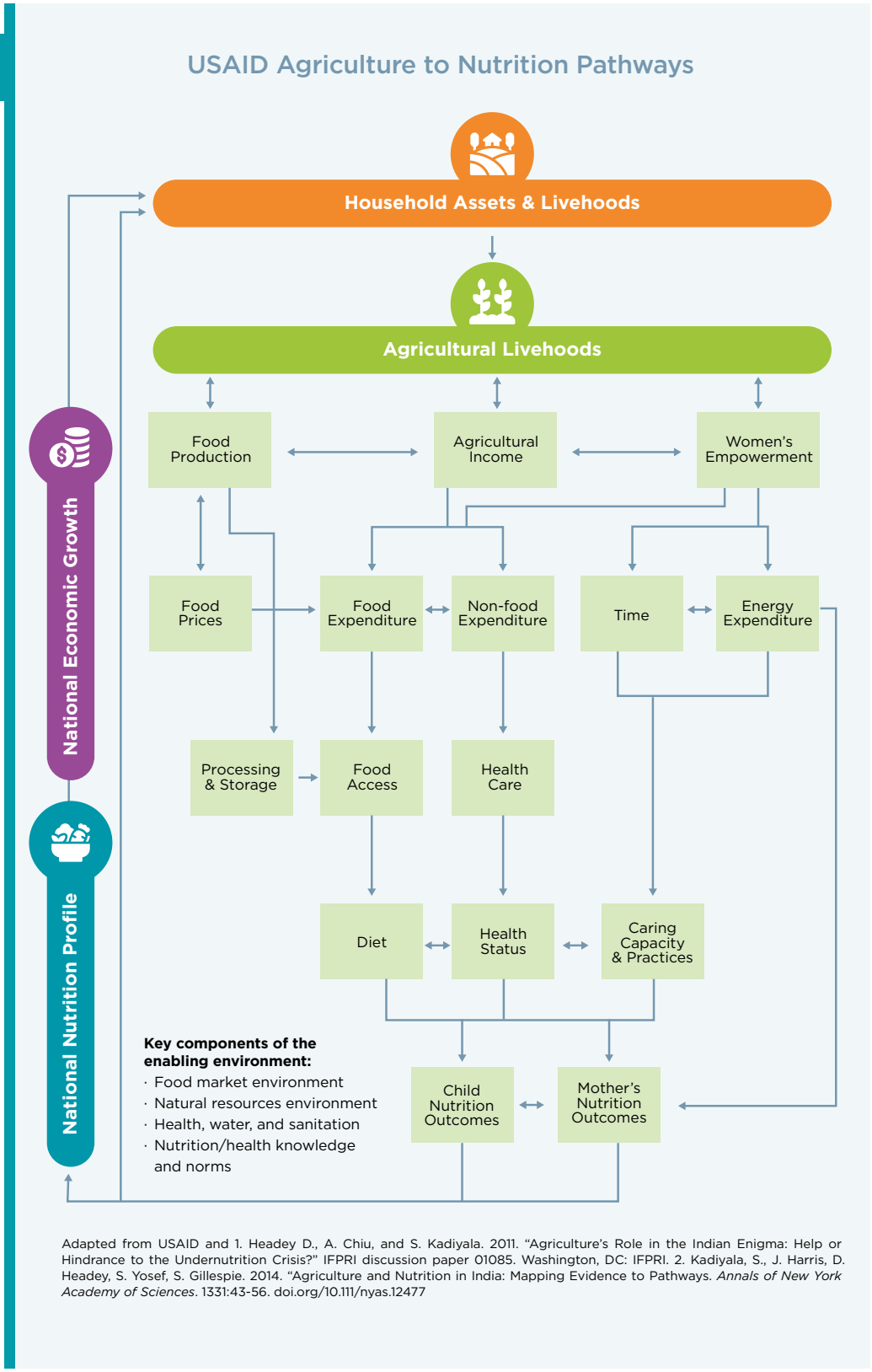
47 Rao, Nitya & Gazdar, Haris & Chanchani, Devanshi & Ibrahim, Marium. (2018). Women's agricultural work and nutrition in South Asia: From pathways to a cross-disciplinary, grounded analytical framework. Food Policy. 82. 10.1016/j.foodpol.2018.10.014. See also: Quisumbing, Agnes R., Kathryn Sproule, Elena M. Martinez, and Hazel Malapit. 2021. "Do Tradeoffs among Dimensions of Women's Empowerment and Nutrition Outcomes Exist? Evidence from Six Countries in Africa and Asia." Food Policy 100 (April). https://doi.org/10.1016/j.foodpol.2020.102001.

48 Herforth, Anna, and Jody Harris. 2014. Understanding and Applying Primary Pathways and Principles. Brief #1. Improving Nutrition through Agriculture Technical Brief Series. Arlington, VA: USAID/ Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) Project.

49 USAID Advancing Nutrition (2022) Designing Effective Nutrition-Sensitive Agriculture Activities Workshop: Facilitator's Guide and Slides

A member of a Community Health Workers' cooperative during a cooking session in Ngoma district, Rwanda. [Photo by Mussa Uwitonze for CRS]

Figure 2. Feed the Future Pathways



Adapted from USAID and 1. Headey D., A. Chiu, and S. Kadiyala. 2011. "Agriculture's Role in the Indian Enigma: Help or Hindrance to the Undernutrition Crisis?" IFPRI discussion paper 01085. Washington, DC: IFPRI. 2. Kadiyala, S., J. Harris, D. Headey, S. Yosef, S. Gillespie. 2014. "Agriculture and Nutrition in India: Mapping Evidence to Pathways. *Annals of New York Academy of Sciences*. 1331:43-56. doi.org/10.111/nyas.12477

In addition, new studies about the likely impacts of climate change on nutrition outcomes provide important context for thinking about agriculture and nutrition interventions.[50] Climate change will challenge the resilience of existing food systems, given that extreme weather can severely disrupt agricultural livelihoods and crops, among other challenges, thereby harming food and nutrition security. Another trend is the emergence of food systems as a framework for considering the integration of agriculture and nutrition.

Food systems transformation got a boost from the 2021 UN Food Systems Summit; and there has been an intensive effort to develop analytical and practical tools for food systems analysis and assessment. For example, a collaboration of institutions led by The Global Alliance for Improved Nutrition (GAIN) has created a Food Systems Dashboard to help policy makers and practitioners analyze and strategize around food and nutrition goals. Dashboards with data and information are available for 230 countries.[51] These emergent trends and tools could make useful contributions to the conceptualization and design of nutrition-sensitive agriculture programs through a food systems lens. Practitioners are already using country-level food systems dashboards to assist in designing nutrition-sensitive agriculture programs. "Although there is broad consensus on the importance and urgency of food systems transformation for sustainable healthy diets, there is much less clarity on how to address the new complexities and trade-offs among outcomes and how to bring about the needed transformation."[52]

Market systems and value-chain approaches sit uncomfortably in the agriculture-to-nutrition pathways concept. As a USAID paper notes: "The causal chain from agricultural market development results to nutritional impact…is rarely articulated during the activity design process…few activities have tested or monitored these pathways during implementation or evaluated them post-activity."[53] In practice, there is often a tension in targeting for market systems approaches, which typically do not include the poorest and most vulnerable populations: "Agricultural market development activities work with a range of private- and public-sector market actors, but typically target smallholder farmers producing, or having the potential to produce, a marketable surplus…Those who self-select are typically less economically vulnerable and more able to assume risk and investments…[and] therefore, often excludes the poorest households."[54] Feed the Future has had trouble integrating nutrition and value chain activities, complicated by the lack of a consensus understanding of what this concept means at an operational level. A 2016 evaluation found there was too little evidence or guidance provided for how to improve the nutrition and diet-related outcomes from value-chain programs.[55] There

50 Swinburn, Boyd A., et al. "The global syndemic of obesity, undernutrition, and climate change: the Lancet Commission report." The lancet 393.10173 (2019): 791-846. Also: Myers, Samuel S., et al. "Climate change and global food systems: potential impacts on food security and undernutrition." Annual review of public health 38 (2017): 259-277. Also: Ramya Ambikapathi and Daniel Mason-D'Croz, How Climate Change Impacts Nutrition Security in Low and Middle-Income Countries, Farm Journal Foundation, May 2024.

51 The Food Systems Dashboard. The Global Alliance for Improved Nutrition (GAIN). 2023. Geneva, Switzerland. https://www.foodsystemsdashboard.org. DOI: https://doi.org/10.36072/db.

52 Ruel, Marie T.; and Brouwer, Inge D. 2024. Diets and nutrition: The potential of a food systems approach. In Global food policy report 2024: Food systems for healthy diets and nutrition. Chapter 2, Pp. 18-24. Washington, DC: International Food Policy Research Institute. https://hdl.handle.net/10568/141886

53 USAID (2017). CONVERGENCE AND TENSION IN NUTRITION-SENSITIVE AGRICULTURAL MARKET DEVELOPMENT ACTIVITIES: MULTI-SECTORAL NUTRITION STRATEGY 2014–2025 Discussion Paper.

54 USAID (2017). CONVERGENCE AND TENSION IN NUTRITION-SENSITIVE AGRICULTURAL MARKET DEVELOPMENT ACTIVITIES: MULTI-SECTORAL NUTRITION STRATEGY 2014–2025 Discussion Paper.

55 Briggs, Lee, and Evaluation Team Leader. "Feed the Future Global Performance Evaluation Report."

have been efforts to improve this knowledge and guidance more recently.[56] The International Fund for Agricultural Development (IFAD) has developed a different nutrition pathways concept for value chains.[57]

The current GFSS endorses the need to expand the pathways analysis and incorporate food systems approaches:

Several complementary interventions show promise, like SBCC, women's empowerment and food fortification.

> [Feed the Future] nutrition-sensitive programming initially focused on household-level income generation and production of staple—but nutrient-poor—crops, like maize, rice, and wheat. While work at the household level remains important, particularly for rural populations, focusing on households alone without addressing food systems is insufficient to make meaningful progress against widespread malnutrition.[58]

Because malnutrition has multiple contributing causes, multi-sectoral approaches are called for to improve nutrition outcomes that can be designed within nutrition-sensitive agriculture programs[59] or in coordination with other programs. In general, packaging adjacent or accessory interventions is critical, particularly social and behavioral change communications (SBCC) interventions, which appear to make a significant difference. Other promising complementary interventions include culturally sensitive women's empowerment activities and provision of micronutrient-fortified products for nutritionally vulnerable household members.[60] However, it is challenging to measure and attribute impacts in multi-sectoral interventions, even if evidence and experience indicate that these are necessary to achieve strong nutrition outcomes.

Recommendation:

Existing Feed the Future concepts of pathways for nutrition-sensitive agriculture should be reviewed and updated to accommodate more systems thinking, climate change, and market-systems and value-chain approaches.

Dexis Consulting Group, December 2016. https://pdf.usaid.gov/pdf_docs/PBAAF131.pdf

56 See market systems work by Ingrid Weiss.

57 de la Peña; I.; Garrett, J. (2018). Nutrition-sensitive value chains: A guide for project design. Volume I. Rome (Italy): IFAD 85 p. ISBN: 978-92-9072-769-9

58 U.S. GOVERNMENT GLOBAL FOOD SECURITY STRATEGY Fiscal Year 2022-2026

59 SBCC are often already included in nutrition-sensitive agriculture programs. See Emily Faerber, Mary Packard Winkler, Tsedenia Tewodros, Amy Webb GIrard, Landscape Analysis of Social and Behavior Change in Nutrition-Sensitive Agriculture Programs, Current Developments in Nutrition, Volume 6, Supplement 1, 2022, Page 564, ISSN 2475-2991, https://doi.org/10.1093/cdn/nzac060.022. (https://www.sciencedirect.com/science/article/pii/S2475299123135384)

60 Ruel, M. T. (2019). New evidence on nutrition-sensitive agricultural programs. Agriculture for Improved Nutrition: Seizing the Momentum, 93-103. https://doi.org/10.1079/9781786399311.0093

4. Finding: Women's empowerment is an important vector for improved nutrition and should be a component for every nutrition-sensitive agriculture program.

In many low- and middle-income countries, women make up more than half of farm and agrifood workers. In general, employment in agriculture and agrifood enterprises is more important to women since other employment is often denied to them through prejudicial rules, social norms, and competing household responsibilities. This means that investments in agricultural livelihoods could provide the most substantial benefit to women food producers and workers.[61]

Women in agriculture face many disadvantages including lower wages and less access to land, credit, agriculture inputs, education services, internet and communications technologies. Women are more vulnerable to economic, social and climatic shocks and suffer higher harms when they occur. These harms, in turn, are transmitted to the children in their care, causing acute health and nutritional deficits.[62]

Feed the Future has spearheaded women's empowerment programs in agriculture

Feed the Future has spearheaded women's empowerment programs in agriculture and has also pioneered measurement and accountability through initiatives like the Women's Empowerment in Agriculture Index (WEAI), launched by USAID, the International Food Policy Research Institute (IFPRI) and others in 2012[63]. There is good evidence that women's empowerment and autonomy are correlated to improved children's nutrition and diet[64]. Using WEAI, several studies have demonstrated the positive links between women's empowerment and children's dietary or nutritional status; women's empowerment positively linked to child dietary diversity in most countries and age groups.[65]

Although women's empowerment activities by themselves may not deliver nutrition or diet-related outcomes, they offer valuable resilience improvements and platforms to channel nutrition and diet programming.

Recommendation:

Nutrition-sensitive agriculture interventions should include gender analysis and a women's empowerment component. Programs should consider adopting gender-transformative approaches in nutrition programming and seek to understand and improve intra-household nutrition and diet dynamics. Project selection should assess the relevance of value chains to women; investments in the vegetable and fruit value chains and food processing can offer employment opportunities for women because they are often typically ascribed to women. Collecting and using gender-disaggregated data across food systems is important to improve program strategy and design. Working with and through women-focused community institutions like self-help groups has been identified as a critical success factor in some projects.[66]

61 FAO. 2023. The status of women in agrifood systems. Rome. https://doi.org/10.4060/cc5343en

62 Ramya Ambikapathi and Daniel Mason-D'Croz, How Climate Change Impacts Nutrition Security in Low and Middle-Income Countries, Farm Journal Foundation, May 2024.

63 https://www.ifpri.org/project/weai/

64 Carlson GJ, Kordas K, Murray-Kolb LE. Associations between women's autonomy and child nutritional status: a review of the literature. Matern Child Nutr. 2015 Oct;11(4):452-82. doi: 10.1111/mcn.12113. Epub 2014 Feb 13. PMID: 24521434; PMCID: PMC6860340.

65 FAO. 2023. The status of women in agrifood systems. Rome. https://doi.org/10.4060/cc5343en

66 USAID Feed the Future, "Locally Led Development: Partnering for Improved Nutrition Lessons from Odisha, India", Advancing Nutrition, August 2021.

Lilian Tzún, a model farmer pictured with her son, Marcos, grows vegetables to supply nearby elementary schools in San Andrés Xecul, Guatemala. [Photo by Thor Morales for CRS]

5. Finding: Further and more rigorous study of nutrition-sensitive agriculture is needed.

Using the REAPER project review, and studying the systemic analyses gathered, we learned more about the gaps in knowledge than clear pathways for success in nutrition-sensitive agriculture. Although there are many impact evaluations, there were very few systematic reviews that directly related agricultural interventions to nutrition or diet-related outcomes. For example, there were no systematic reviews of agricultural production interventions' impacts on diet diversity or diet sufficiency. There were no systematic reviews of interventions of post-harvest food processing on dietary diversity or adequacy[67]. Likewise, there were no systematic reviews that directly relate market systems approaches or value-chain programming to nutrition outcomes.[68]

For policy makers and practitioners, the evidence on what makes nutrition-sensitive agriculture successful is frustratingly thin and rather inconclusive. In particular, there is a lack of evidence on cost effectiveness and little on gender and equity in the context of nutrition-sensitive agriculture[69]. Evidence on the nutrition impact of marketplace interventions is a significant gap. The REAPER project found poor quality or no evaluations of:

- Regulatory approaches to financing;
- Education on market governance;
- Regulations on processing, storage, and packaging;
- Labeling regulations;
- Educational and market-based approaches to large-scale fortification;
- Market-based approaches to small-scale fortification;
- Physical changes to markets / workplace facilities; and
- Education, market-based, and direct provision approaches to support reformulation.

The lack of evidence does not mean these interventions are not worth pursuing, but rather they are under-researched. Better analysis of market-systems approaches could be especially helpful since there is a risk of divergence or even contradictory nutrition outcomes. Systematic reviews could be very useful in looking at market-based approaches; direct provision of goods and services supporting food processing, packaging and storage (including on-farm, post-harvest processing); and women's empowerment and gender equity. In addition, filling research gaps on systems-level interventions would be valuable.[70]

Other studies of nutrition-sensitive agriculture produced more substantive findings but were also often inconclusive on some questions. In a 2019 paper, Marie Ruel, a leading expert on the topic, found that nutrition-sensitive agriculture programs

67 https://developmentevidence.3ieimpact.org/egm-embedded/reaper-nutrition-evidence-gap-map

68 REAPER cite

69 Addressing the systemic causes of malnutrition The nutrition-sensitive agriculture evidence gap map (2023)

70 Lane, C, Storhaug, I, Tree, V, Cordova-Arauz, D, Huang, C, Frey, D, Ahmed, F, Song, B, Marie Edwards, K, Porciello, J, Eyers, J, and Snilstveit, B. 2023. Addressing the systemic causes of malnutrition: The nutrition-sensitive agriculture evidence gap map, 3ie evidence gap map report 24. New Delhi: International Initiative for Impact Evaluation (3ie). https://doi.org/10.23846/EGM024.

can improve nutrition outcomes for mothers and children. However, most studies of nutrition-sensitive agriculture "have had serious methodological limitations that may hamper their ability to demonstrate impacts, especially on anthropometric outcomes." Problems include poor design, small sample sizes and short duration[71]. As noted previously, Ruel finds that nutrition-sensitive agriculture is more effective when it includes social and behavioral change components and interventions designed to empower women, including interpersonal counseling and social mobilization.

Much of what we do know about nutrition-sensitive agriculture was supported by USAID.

Across the literature for nutrition-sensitive agriculture, measurement and attribution are a confounding factor for developing knowledge. There is enormous heterogeneity in project design, use of indicators, hypothesized pathways, and methodology and data collection. This makes comparisons difficult and impedes learning, especially across geographies and contexts. In addition, the necessity for multi-sectoral approaches for nutrition outcomes creates additional challenges for measurement and attribution of nutrition-sensitive agriculture interventions.

It's worth noting that much of what we do know about nutrition-sensitive agriculture, including the REAPER Project described above, was supported by USAID from the Feed the Future program and other nutrition initiatives.

Recommendation:

Although there is a significant body of work linking nutrition to agriculture development, the evidence connecting agriculture interventions to nutrition and diet-related outcomes should be more robust. This could provide more guidance for practitioners and implementers. In particular, evidence on cost effectiveness and multi-sectoral approaches should be prioritized, even though these analyses are complex.[72,73] Implementation quality is also a relevant factor and not always recognized in research and analysis. Investments in a deeper understanding of dietary quality and relevant tools for measuring and improving would be a valuable contribution.

71 Ruel, M. T. (2019). New evidence on nutrition-sensitive agricultural programs. Agriculture for Improved Nutrition: Seizing the Momentum, 93-103. https://doi.org/10.1079/9781786399311.0093

72 There is a good discussion on valuing nutrition interventions and the complexity of benefit-cost analysis in the MCC Nutrition Investment Toolkit, Millennium Challenge Corporation, April 2024. For some examples of "economic analysis" of NSA see: Haghparast-Bidgoli H, Harris-Fry H, Kumar A, Pradhan R, Mishra NK, Padhan S, Ojha AK, Mishra SN, Fivian E, James P, Ferguson S, Krishnan S, O'Hearn M, Palmer T, Koniz-Booher P, Danton H, Minovi S, Mohanty S, Rath S, Rath S, Nair N, Tripathy P, Prost A, Allen E, Skordis J, Kadiyala S. Economic Evaluation of Nutrition-Sensitive Agricultural Interventions to Increase Maternal and Child Dietary Diversity and Nutritional Status in Rural Odisha, India. J Nutr. 2022 Oct 6;152(10):2255-2268. doi: 10.1093/jn/nxac132. PMID: 35687367; PMCID: PMC9535442.

73 Njuguna RG, Berkley JA, Jemutai J. Cost and cost-effectiveness analysis of treatment for child undernutrition in low- and middle-income countries: A systematic review. Wellcome Open Res. 2020 Oct 5;5:62. doi: 10.12688/wellcomeopenres.15781.2. PMID: 33102783; PMCID: PMC7569484. See also: Francesco Ramponi, Wiktoria Tafesse, Susan Griffin, Economic evaluation of interventions to address undernutrition: a systematic review, Health Policy and Planning, Volume 36, Issue 4, May 2021, Pages 533–541, https://doi.org/10.1093/heapol/czaa149 The complexity and heterogeneity of cost and cost-benefit analysis is highlighted in this study.

6. Finding: Many low-resource and smallholder farmers already practice diversified agriculture, which has the potential for more diversified and nutritious diets, but climate change and poverty are powerful challenges to these livelihoods and nutrition.

Recognizing the pressing need for enhanced agricultural resilience in the face of climate change and other environmental challenges, the Biden Administration launched the the Vision for Adapted Crops and Soils (VACS) initiative in 2023. As climate change continues to alter weather patterns, it affects every aspect of plant growth and agricultural productivity. These changes include shifts in temperature, precipitation, and the frequency of extreme weather events, all of which can significantly reduce crop yields, threaten food security, and undermine good nutrition. VACS recognizes that traditional crop varieties may not be able to withstand these new conditions, necessitating the development of crops that are more resilient to climate extremes, pests, and diseases. The VACS initiative emphasizes the cultivation of diverse crops that are rich in essential nutrients and micronutrients. Many of these crops, such as sorghum, millet, teff, and various legumes, have traditionally been under-researched and underutilized. By prioritizing the development and adaptation of these crops, VACS aims to improve dietary diversity and nutritional outcomes, particularly for vulnerable populations such as lactating women and young children.[74]

Climate change is creating a variety of stresses and contributing to rising malnutrition through several pathways, but not all the challenges are equal; there is a "rank ordering" of stresses and nutrition impacts. For example, income loss due to climate change is likely to have a more significant impact on nutrition security than loss of nutritional quality in crops under climate change. The pathways and ordering of nutrition impacts will likely vary across contexts, which means contextual research and routine monitoring systems for nutrition and diets are key to setting policy priorities.[75]

A recent study identified 58 African forgotten food crops from a candidate panel of 138 vegetables (leafy and non-leafy), fruits, cereals, pulses, seeds and nuts, and roots and tubers that could contribute to building climate resilience and sustaining micronutrient provision[76]. Prioritized investments in researching forgotten crops and exploring market, supply chain and household demand factors can help build resilience and food and nutrition security in the context of climate change. Low-resource and smallholder farmers will need special attention to ensure adaptation support to maintain and improve their crop and diet diversity.

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74 Event transcript, "The Vision for Adapted Crops and Soils (VACS): Keynote Address and Armchair Discussion with Dr. Cary Fowler" February 1, 2023 at Center for Strategic & International Studies. Washington DC.

75 Ramya Ambikapathi and Daniel Mason-D'Croz, How Climate Change Impacts Nutrition Security in Low and Middle-Income Countries, Farm Journal Foundation, May 2024. "https://www.farmjournalfoundation.org/_files/ugd/cfcaf3_868592b406504a08a4e8518887635fc7.pdf"

76 Zonneveld, Maarten van, Roeland Kindt, Stepha McMullin, Enoch G. Achigan-Dako, Sognigbé N'Danikou, Wei-hsun Hsieh, Yann-rong Lin, and Ian K. Dawson. 2023. "Forgotten Food Crops in Sub-Saharan Africa for Healthy Diets in a Changing Climate." Proceedings of the National Academy of Sciences 120 (14): e2205794120. https://doi.org/10.1073/pnas.2205794120. As cited in Ramya Ambikapathi and Daniel Mason-D'Croz, How Climate Change Impacts Nutrition Security in Low and Middle-Income Countries, Farm Journal Foundation, May 2024. "https://www.farmjournalfoundation.org/_files/ugd/cfcaf3_868592b406504a08a4e8518887635fc7.pdf"

Recommendation:

Emerging initiatives to address climate change, like PREPARE and VACS, should have strong nutrition and diet-related components to ensure they are nutrition-sensitive and help address the underlying causes of malnutrition.

A key component of the VACS initiative is its emphasis on scientific research and innovation. The program invests in the development of crop varieties that are not only high-yielding and nutritious, but also resilient to drought, pests and diseases. This is an important agenda to extend throughout U.S. agricultural research programs: to identify and enhance adapted crops which can thrive in the diverse agro-ecological zones, particularly contexts where agriculture is a primary source of livelihood for millions.

In 2021, the Biden Administration launched the President's Emergency Plan for Adaptation and Resilience (PREPARE) to help more than half a billion people in low income countries adapt to and manage the impacts of climate change by 2030. The initiative is co-led by USAID and the State Department. PREPARE can help ensure that climate adaptation is nutrition-sensitive across US government activities.

In addition, several other U.S. federal agencies have significant agricultural development portfolios, including the Development Finance Corporation (DFC) and the Millennium Challenge Corporation (MCC). In 2021, the DFC announced a goal of investing up to $1 billion in food and agriculture projects over the next five years, which the agency accomplished ahead of schedule[77]. The MCC has food-security related investments in 22 of its bilateral compacts, and has invested more than $5 billion in this sector[78]. The MCC recently released a new "Nutrition Investment Toolkit with guidance for making agriculture and value-chain investments nutrition-sensitive."[79] Where possible, agriculture development projects supported by the DFC and MCC should be nutrition-sensitive, with clear and specific nutrition and diet-related outcomes specified.

Phouphan, a farmer from Napho village in Laos, grows vegetables with her family on their land and through CRS's LEAPS project, has been able to sell their vegetables at the market and to schools.
[Photo by Benny Manser for CRS]

77 MEDIA RELEASE: DFC to Invest $1 Billion in Food Security and Agriculture Projects, September 23, 2021

78 https://www.mcc.gov/sectors/sector/agriculture/

79 MCC Nutrition Investment Toolkit, Millennium Challenge Corporation, April 2024.

Raúl Chanchavac of Totonicapán, Guatemala, in his greenhouse for vegetable production. [Photo by Ivan Palma for CRS]

7. Finding: Operational aspects of nutrition-sensitive agriculture make a significant difference in whether they deliver nutrition or diet-related outcomes.

Practitioners, both in USAID and among implementers, report difficulty in promoting nutrition and dietary objectives and activities in the context of agricultural programs.[80] Although there has been progress in incorporating and integrating nutrition through USAID bureaus and multi-sectorally, it has been variable and inconsistent. Prioritizing and coordinating for nutrition outcomes is sometimes neglected in actual practice.[81] This does not necessarily reflect deliberate resistance but rather a lack of knowledge or information about how to design and implement nutrition-sensitive agriculture programs, although the Agency has done extensive education and training programs.[82]

Sometimes, at the USAID mission level, there is no staff person with nutrition expertise or with specific responsibility to ensure that nutrition objectives are generated and prioritized in agriculture programs. An analysis from CARE found "nutrition is not currently playing a central role within the [Feed the Future] programming. In order to maximize impact from [Feed the Future] investments over the next decade and beyond, the importance of co-programming nutrition into agriculture in [Feed the Future] needs to be elevated, contributing to strengthening agricultural outcomes."[83] In CRS' own review (Box 1), it was found that only three of 13 Feed the Future solicitations reviewed required with nutrition expertise; the most commonly required expertise was agriculture- and livelihoods-related. Figure 3 provides an example of good mission level coordination and learning across nutrition sensitive projects, gleaned from a case study conducted in Ethiopia.

80 This perspective was expressed often among the 15 informants interviewed.

81 Jordan Teague, A multi-sectoral approach to nutrition: Assessing USAID's progress: Briefing Paper, Bread for the World Institute, 2018.

82 Jordan Teague, A multi-sectoral approach to nutrition: Assessing USAID's progress: Briefing Paper, Bread for the World Institute, 2018.

83 CARE, "Nutrition In Feed The Future: Policy Brief", January 2022.

Figure 3. Learning and coordination in Ethiopia

Ensuring learning is utilized and carried forward at the institutional level is essential, and can be captured in formal collaboration, learning and adaptation documentation, as well as through longstanding national staff. For example, USAID's investment in nutrition-sensitive agriculture has shifted objectives based on learnings from past projects. Through the learning from Empowering New Generations to Improve Nutrition and Economic Opportunities (ENGINE), USAID's flagship nutrition project (2011-2016), a better WASH component was added to a subsequent 6-year USAID project, Growth through Nutrition (GTN). Based on learnings from GTN, the current Feed the Future projects, Transforming Agriculture and Community Nutrition, specialize in components of the previous GTN. These projects are co-located in 50 target woredas and coordinate with the flagship WASH activity, Transforming WASH. Community Nutrition also includes a mandate for essential coordination and governance between the two projects. Another learning from GTN was to use the grant-under-grant initiative to support and empower woredas (administrative divisions) and local civil society organizations with capacity building.

Based on consultation with the Ministry of Agriculture, Feed the Future's Transforming Agriculture project has included enset, or "false banana," as one of its target commodities. Almost 30 million people in the south of the country depend on enset, which is drought resistant, and now the Feed the Future activity aims to fortify it to increase its nutritional value.

Seva Kevi of Mbeya District Council, Tanzania, feeds her daughter Elvina a nutritious corn porridge made by her for the children in the household. [Photo by Nanette Gendry for CRS]

Recommendation:

USAID should make operational and procedural changes that will help prioritize nutrition and diet improvements in agricultural programs to:

A. strengthen headquarters and mission-level leadership and direction to prioritize nutrition overall;

B. better integrate and coordinate nutrition-sensitive agriculture programs with other sectoral initiatives, like health, WASH, women's empowerment, climate change and governance (creating incentives for this would help);

C. require nutrition goals to be incorporated into the market systems and value chains programs at a formative stage;

D. increase staffing on nutrition and gender (a CARE USA analysis found there were often no designated nutrition coordinators at the mission-level responsible for oversight of nutrition programming; management of nutrition portfolios was often assigned to overwhelmed Feed the Future coordinators); [84]

E. develop guidance on how to approach coordination of agriculture and nutrition programs either through full integration in a delivery platform or through co-locating activities which are managed separately in an overlapping geographic area; [85]

F. maintain multi-sectoral programming, including nutrition-specific interventions, with consistent reconsideration and external evaluation of project components (integrated approaches to nutrition-sensitive agriculture programming are generally considered to be more effective than single-sector interventions; however, critical review of programming components and the effectiveness of each activity is important);[86] and

G. give more authority and engagement in operational and strategic decision-making to USAID's Center for Nutrition, the Nutrition Leadership Council and to the Chief Nutritionist role to ensure strong knowledge-sharing, learning and institutional memory to improve strategies, programs and outcomes.[87] It's important that the Center and the Chief Nutritionist have a remit beyond bureaucratic silos in which they sit, spanning agriculture, health, humanitarian, water and sanitation, education and other sectors.

84 CARE, "Nutrition In Feed The Future: Policy Brief", January 2022.

85 A description of these different strategies is found here: Briggs, Lee, and Evaluation Team Leader. "Feed the Future Global Performance Evaluation Report." Dexis Consulting Group, December 2016. https://pdf.usaid.gov/ pdf_docs/PBAAF131.pdf.

86 Dr. Charlotte Lane, Meta Review: Nutrition-sensitive Agriculture Evidence Brief, 2024. World Vision Australia.

87 Jordan Teague, A multi-sectoral approach to nutrition: Assessing USAID's progress: Briefing Paper, Bread for the World Institute, 2018.

Community Health Workers Habiyakare Francois Xavier (right) supported by Muyimpundu Vestine (left) pour porridge into cups for the children's breakfast before a cooking demonstration in Ngoma district, Rwanda. [Photo by Mussa Uwitonze for CRS]

Box 2: What works well: Ethiopia

Strengthening nutrition sensitive agriculture in Ethiopia: strong coordination at national levels require more investment at implementation level

Introduction and Background: Between 2000 and 2016, Ethiopia made notable progress towards reducing malnutrition in children under the age of five. Despite these gains, mothers' and children's consumption of nutritious foods remained a challenge. Over this time, the Government of Ethiopia (GOE) and its ministries set forth a series of important policies, strategies and plans to address the national challenge of malnutrition.

Despite promising progress in those years, trends have begun to reverse since 2020 given that Ethiopia — like many other countries around the world — has faced economic shocks due to COVID, increased regional conflict (particularly in the Tigray region), and the devastating impacts of climate change-driven drought throughout the country.

Ethiopia's main policy instruments and coordination mechanisms

- **National Nutrition Program** (2008): primarily nutrition-specific interventions in response to high acute malnutrition needs.
- **National Nutrition Program 2** (2013): incorporated more nutrition-sensitive approaches across sectors, including mainstreaming nutrition into agriculture. The NNP2 also calls for enhanced inter-sectoral coordination with signatories from 13 ministries, including the creation of National Nutrition Coordination Body (NNCB) and established Regional Nutrition Coordination Bodies (RNCB).
- **Seqota Declaration** (2015): lays out Ethiopia's high-level commitment to end stunting by 2030. Endorsed and embedded into the National Growth and Transformation Plan, it sits among the country's highest-level commitments.
- **Nutrition Sensitive Agriculture Strategy** (2016): launched by the Ministry of Agriculture, which laid out three main pathways to address malnutrition: 1) food production and productivity, 2) agricultural income, and 3) women's empowerment. It also set out provisions to strengthen multi-sector coordination across the agricultural ministries, which resulted in nutrition focal points or case teams.
- 2013-2016: **doubling of nutrition budget,** largely driven by investments in nutrition-sensitive programs.
- **Food and Nutrition Coordination office** was established at the Ministry of Agriculture (2018).
- **National Food and Nutrition Policy** (2018-2030)
- **National Nutrition-Sensitive Agri-Food Systems Strategy** (2024-2030): builds on learning from the past strategy and includes a broader focus on social and environmental components of nutrition through the four pillars of food systems (NNAFSS, 2024).
- **Food and Nutrition Council** (not yet formed): aims to facilitate and coordinate the implementation of the Food and Nutrition Policy with leadership of the Prime Minister or Deputy Prime Minister.

Findings and recommendations

1 ***The Government of Ethiopia (GOE) has shown strong leadership to advance the cause of nutrition-sensitive agriculture,*** which has been a primary success factor for Ethiopia's elevation of such activities into national policy. While a baseline understanding of nutrition-sensitive approaches has been essential for setting policy frameworks, ongoing capacity training at all levels to deepen understanding of nutrition-sensitive agriculture has also been a key success factor to operationalize the nutrition-sensitive agriculture strategy. Further, GOE's strong understanding and prioritization of nutrition at high levels has made it possible for donors and civil society to increasingly take a "360 approach to nutrition" in which nutrition outcomes are integrated into its many activities.

RECOMMENDATIONS: Multi-year funding must be protected; coordination must continue across humanitarian and development activities, and donors should fund exposure visits, which are low-cost, high-impact activities.

2 ***The multi-sectoral nature of nutrition is well-reflected by the multiple ministries that have signed onto the nutrition strategies and policies mentioned above.*** Government tracking of nutrition budgets and activities across ministries also highlights its prioritization of nutrition among its many policy issues. USAID is well-coordinated with GOE activities at national levels and supports many technical needs.

RECOMMENDATIONS: Donors and Governments should incentivize ongoing multi-sectoral collaboration; and donors, particularly USAID, should lead cross-project coordination for nutrition.

3 ***Grassroots-level capacities, coordination and implementation of multi-sectoral nutrition interventions need further investment, particularly at the woreda-level and below.*** Many of the capacity strengthening activities have not yet made it down to the zonal, kebele (neighborhood) and village levels, despite stronger multi-sectoral collaboration at these levels. Some promising models at the implementation level include utilizing care groups, women's organizations or savings and lending groups (SILC) to push out coordinated nutrition sensitive activities; or a "home economics" model.

RECOMMENDATIONS: Donors, GOE and implementers must cascade capacity strengthening efforts down to the implementation level; and donors should utilize the "grant-under-grant (GUG)" model.

4 ***Implementation is more likely to be successful when it is well-consulted, co-created and utilizes collaborative, learning and adaptive (CLA) approaches.***

RECOMMENDATIONS: Donors and implementers should utilize CLA approaches; and donors and government should invest specifically in strengthening governance and coordination.

5 ***The GOE's shift toward a food systems framework has expanded the scope of food security and nutrition at the national level and will drive greater change for nutrition outcomes.***

RECOMMENDATIONS: USAID should work with Feed the Future stakeholders to explore funding opportunities from the Development Finance Corporation.

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Please contact Emily Wei, Senior Director of Policy, at emily.wei@crs.org or Sara Higgins, sara.higgins@crs.org for authorization.