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# NUTRITION AND RESILIENCE:

Discussion Brief on Better Integration of Nutrition into  
Resilience-Strengthening Programs



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## Acronym List

<b>CMAM</b>	community management of acute malnutrition
<b>GAM</b>	global acute malnutrition
<b>MUAC</b>	mid-upper arm circumference
<b>PREG</b>	Partnership for Resilience and Economic Growth
<b>REAL</b>	Resilience Evaluation, Analysis and Learning Award
<b>REGIS-AR</b>	Resilience and Economic Growth in the Sahel-Accelerated Growth
<b>REGIS-ER</b>	Resilience and Economic Growth in the Sahel-Enhanced Resilience
<b>RFSA</b>	Resilience Food Security Activity
<b>RISE</b>	Resilience in the Sahel Enhanced
<b>SBC</b>	social and behavior change
<b>USAID</b>	United States Agency for International Development
<b>WASH</b>	water, sanitation, and hygiene
<b>WaST</b>	Wasting-Stunting Technical Interest Group

## Introduction

This discussion brief intends to promote a greater understanding of the **relationships between nutrition and resilience** and inform debate among policymakers, technical advisors, and practitioners responsible for designing, implementing, or evaluating program approaches to strengthening both.

Emerging evidence confirms the role of positive nutrition outcomes in strengthening resilience capacities. This evidence also highlights the importance of considering potential shocks and stresses as contextual factors for nutrition programming. By summarizing relevant concepts, identifying practical examples of integrated resilience and nutrition programming in the face of shocks and stresses, and outlining priorities for further research, this brief aims to support continual learning on how best to maintain and improve the well-being—including nutrition—of vulnerable populations.

Among other insights, this discussion brief advocates for the wider adoption of the following practices:



- Comparing the resilience capacity of population groups;
- Incorporating nutrition analysis and programming as key components of resilience-strengthening initiatives;
- Considering the context-specific impacts of shocks and their management on nutrition carefully;
- Strengthening and prioritizing shock-responsive, nutrition-sensitive interventions (climate-smart agriculture, livelihood diversification, targeted safety nets, access to financial services, etc.); and
- Preparing to scale up nutrition-specific interventions during shocks.

## Conceptual Overview and Definitions

### Nutrition

Optimal nutrition is fundamental to achieving the United States Agency for International Development's (USAID) wider mission to end extreme poverty and promote resilient, democratic societies while advancing our national security and prosperity.<sup>1</sup> At the most immediate level, malnutrition is caused by inadequate dietary intake and poor nutrient utilization (disease). Immediate causes of malnutrition are linked with underlying factors such as household food insecurity, sub-optimal care and feeding practices, poor environment, and inadequate health care, as well as to the systemic social, economic, and political factors that predispose certain groups to undernutrition.<sup>2,3</sup> Nutrition-specific interventions address the immediate causes of malnutrition, while nutrition-sensitive interventions address the underlying and systemic causes. Nutrition interventions often target women and children under five, emphasizing the

<sup>1</sup> USAID. (2014). Multi-sectoral Nutrition Strategy (2014–2025).

<sup>2</sup> Malnutrition refers to “an abnormal physiological condition caused by deficiencies, excesses, or imbalances in the energy, nutrients, or both necessary for an active, healthy life.” Dufour, C., Kauffmann, D., & Marsland, N. (2014). Strengthening the Links between Resilience and Nutrition: A Proposed Approach. 2020 Conference Brief.

<sup>3</sup> UNICEF Conceptual Framework on Maternal and Child Nutrition (2020).

1,000-day window of opportunity from pregnancy to a child's second birthday, which is critical for optimum physical and cognitive development.<sup>4</sup> Similarly, undernourished women of reproductive age, particularly adolescents, are at a higher risk of poor birth outcomes, including low birthweight babies, perpetual intergenerational cycles of undernutrition, and physiological vulnerability.<sup>5</sup>

The USAID Multi-Sectoral Nutrition Strategy aligns with global goals for stunting and wasting, including the Sustainable Development Goals and the World Health Assembly nutrition targets, aimed at catalyzing global change and action.

- **Wasting**, or acute malnutrition, is defined as **low weight-for-height**. Severe wasting is associated with a nine-fold increased risk of mortality, while moderate wasting is associated with a three-fold increased risk of mortality. Wasting is also associated with an increased risk of infections and impaired physical and cognitive development.<sup>6</sup>
- **Stunting** is defined as **low height-for-age**, which is a height more than two standard deviations below the World Health Organization Child Growth Standards median. Stunting in early life is negatively associated with long-term future health and development.<sup>7</sup>

### Nutrition-specific interventions

can include prenatal care, behavioral interventions targeting women's diet and child feeding practices, and supplementary and therapeutic feeding programs.

### Nutrition-sensitive interventions

can include those supporting livelihood diversification, improved access to safe drinking water, and empowerment of adolescent girls and women.

Despite substantial variation across contexts, analyses of child growth in sub-Saharan Africa show that both wasting and stunting are persistent problems in areas targeted by resilience-strengthening initiatives.<sup>8</sup> There has been increasing consideration of the relationship between these two types of malnutrition. The Wasting-Stunting (WaST) Technical Interest Group<sup>9</sup> has several important findings:

- Research has shown that individual children are at risk of both conditions, might be born with both, pass from one state to the other over time, and accumulate risks to their health and life through their combined effects.
- Reanalysis of data on survival shows that the mortality risk for children concurrently wasted and stunted is equal to the mortality risk of the most severe form of being wasted.
- Evidence also indicates that seasonal stresses might underlie the connections between weight faltering and linear growth faltering.

Also important to consider is that improving dietary intake by vulnerable groups may affect other well-being outcomes not reflected by anthropometry. For example, improved dietary intake has led to

<sup>4</sup> US Government Global Food Security Strategy 2022–2026.

<sup>5</sup> Martorell, R. and Zangrone, A. Intergenerational Influences on Child Growth and Undernutrition. *Paediatric Perinatal Epidemiology*; July 2012.

<sup>6</sup> Young, H., Marshak, A. (2017). *Persistent Global Acute Malnutrition*.

<sup>7</sup> Victora, C.G., Adair, L., Fall, C., Hallal, P.C., Martorell, R., et al. (2008). *Maternal and child undernutrition: consequences for adult health and human capital*.

<sup>8</sup> Osgood-Zimmerman, A., et al. (2018). *Child Growth Failure in Africa between 2000-2015*.

<sup>9</sup> [Wasting and Stunting: Overcoming the divide | ENN \(ennonline.net\)](#)

improvements in cognitive development<sup>10</sup> and reduced morbidity/mortality.<sup>11</sup> This underscores the importance of analyzing both dietary intake and nutritional status measures as determinants of well-being.

## Resilience

The increasing focus on resilience strengthening among policymakers and practitioners reflects a growing effort to protect development gains from the diverse and widespread impacts of shocks and stresses (e.g., drought, floods, epidemics, population pressure, conflict, climate change, market disruptions, human and animal disease outbreaks, fiscal policy failures) on individual, household, and community well-being.<sup>13</sup>

### USAID defines resilience as:

“the ability of people, households, communities, countries, and systems to mitigate, adapt to and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth.”<sup>12</sup>

Resilience-strengthening strategies and activities are designed to strengthen the capacities of target populations to **absorb, adapt to, and transform** in the face of these risks. At a foundational level, they focus on helping vulnerable populations anticipate and manage shocks and stresses while avoiding adverse long-term consequences. Conceptual adaptation of resilience theories for development practice helped identify three key dimensions of resilience:<sup>14,15</sup>

- **Absorptive capacity:** The ability to minimize exposure and sensitivity to shocks and stresses through preventative measures and appropriate coping strategies to avoid permanent, negative impacts.
- **Adaptive capacity:** The ability to make informed choices and changes in livelihood and other strategies in response to longer-term social, economic, and environmental change.
- **Transformative capacity:** The governance mechanisms, policies and regulations, cultural and gender norms, community networks, and formal and informal social protection mechanisms that constitute the enabling environment for systemic change.

## Relationship between Stresses, Shocks, Nutritional Status, and Resilience Capacities

### Shocks, Stresses, and Nutritional Status

In many contexts, recurrent and severe shocks and ongoing stresses only exacerbate underlying drivers of poverty, deprivation, and deteriorating well-being among affected populations.

<sup>10</sup> Frongillo, E.A. et al. (2017). Large-Scale Behavior-Change Initiative for Infant and Young Child Feeding: Advanced Language and Motor Development in a Cluster-Randomized Program Evaluation in Bangladesh.

<sup>11</sup> Persson, L.A. et al. (2012). Effects of Prenatal Micronutrient and Early Food Supplementation on Maternal Hemoglobin, Birth Weight, and Infant Mortality among Children in Bangladesh.

<sup>12</sup> USAID. (2012). *Building Resistance to Recurrent Crisis: USAID Policy and Program Guidance*.

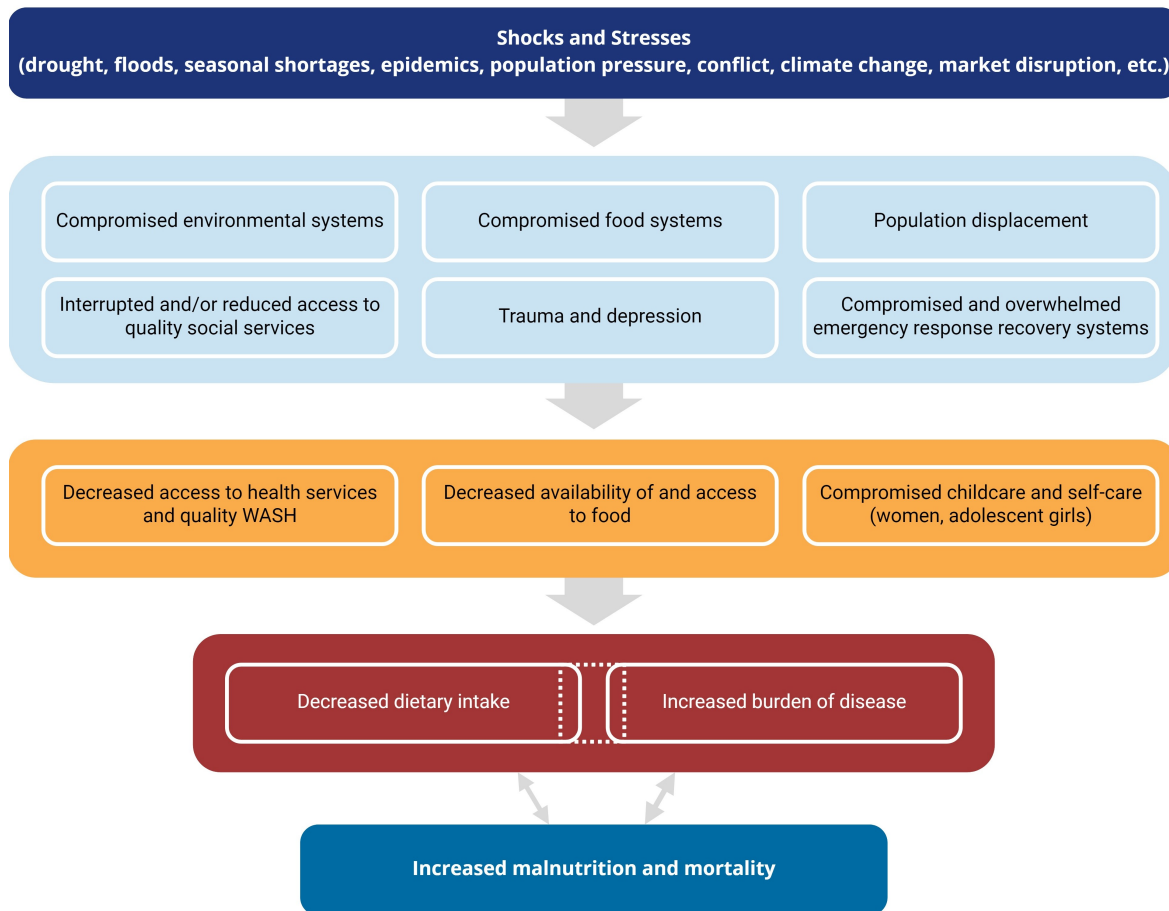
<sup>13</sup> Barrett, C.B., & Constanas, M. (2012). *Resilience to avoid and escape chronic poverty: Theoretical foundations and measurement principles*.

<sup>14</sup> Béné, C., Wood, R. G., Newsham, A., & Davies, M. (2012). Resilience: New utopia or new tyranny? Reflection about the potentials and limits of the concept of resilience in relation to vulnerability reduction programmes (IDS Working Papers). Institute of Development Studies, 2012(405), 1–61.

<sup>15</sup> Vaughan, E. and Frankenberger, T. (2018). Resilience Measurement Practical Guidance Note Series 3: Resilience Capacity Measurement. Produced by Mercy Corps as part of the Resilience Evaluation, Analysis and Learning (REAL) Associate Award.

**Figure 1** illustrates the potentially dire consequences of shocks and stresses on individual and household nutrition, including decreased availability of and household access to food, health services, safe water, and sanitation, as well as compromised childcare and feeding practices, self-care of women and adolescent girls, and health-seeking behaviors. Shocks and stresses often disrupt household access to critical markets for food and nutrition security, especially in fragile states and conflict settings. They can also affect the availability of essential services (e.g., health services and formal safety nets). In such instances, the absence of basic health services such as prenatal and maternity care, vaccinations, and primary care can be particularly devastating for maternal and child nutrition during the crucial 1,000-day window of opportunity between conception and age two.

Figure 1. Shocks, Stresses, and Negative Relationships with Nutritional Status



Source: Adapted from UNICEF Conceptual Framework on Maternal and Child Nutrition (2020).

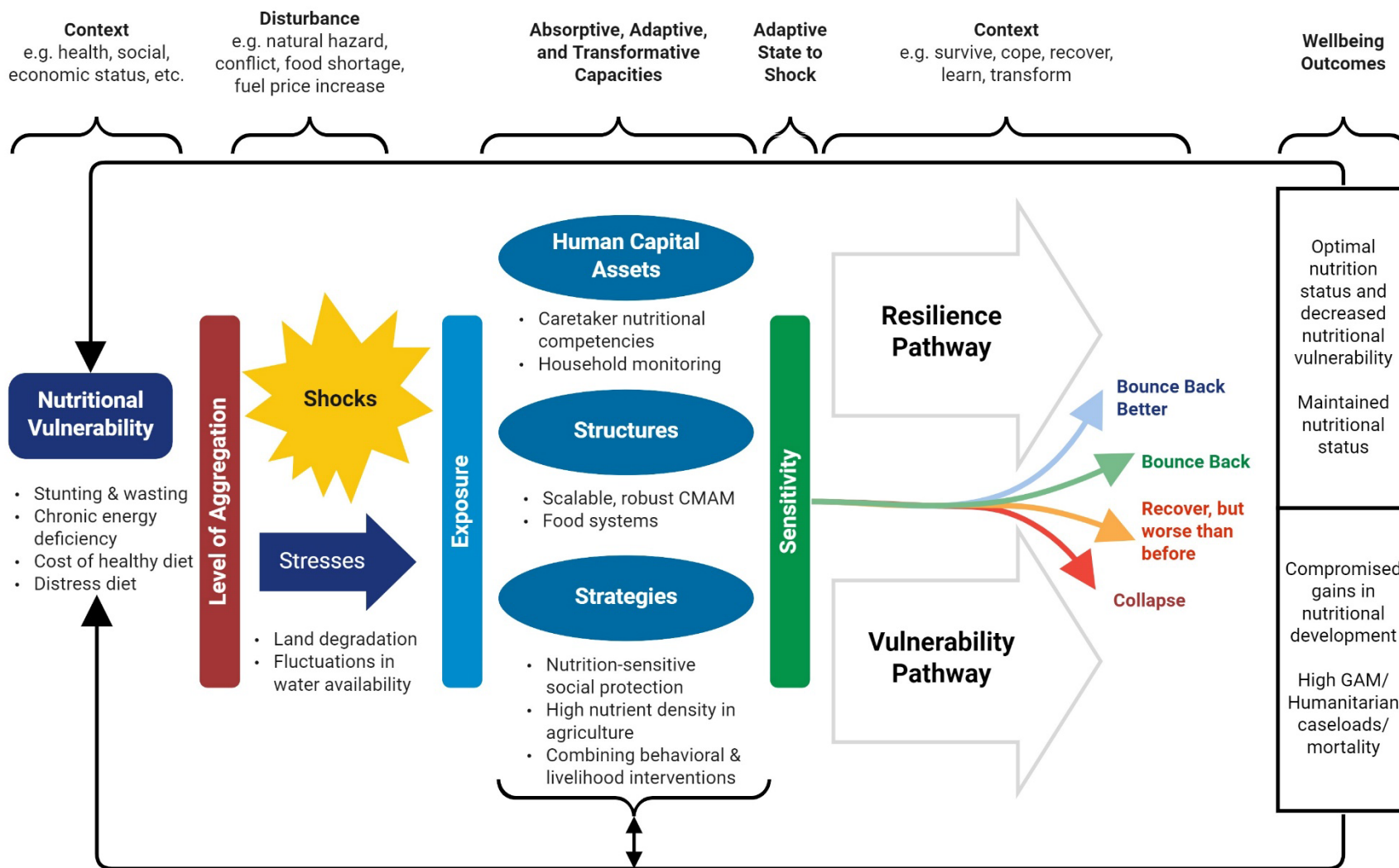
Population displacement (resulting from conflict, climate change, etc.) can also have a major impact on nutritional status because it often disrupts access to all basic human services, including food. The effect of shocks and stresses on maternal psychosocial health is another increasingly important factor, given the influence this has on childcare and self-care practices.<sup>16</sup>

**Figure 2** serves as an overall framework for illustrating the potential influence of shocks and stresses on household and individual well-being outcomes (i.e., nutritional status), depending on resilience capacities.

<sup>16</sup> Surkan, Pamela J., Kennedy, Caitlin E., Hurley, Kristen M., and Black, Maureen M. (2011). *Maternal depression and early childhood growth in developing countries: systematic review and meta-analysis*.



Figure 2. Nutrition and Resilience Conceptual Framework



## Nutritional Status and Resilience Capacities

Resilience measurement and analysis suggest that optimal nutrition is both a contributing factor to resilience capacities and an important indicator of attained resilience.<sup>17,18</sup> In other words, **nutrition is both an input to and an outcome of resilience.**

Strengthened capacities to withstand and recover from shocks and stresses, along with reduced vulnerability and exposure to shocks, not only improve individual and household nutritional status and psychosocial well-being in the short-term (reducing morbidity and mortality), they also contribute to enhanced physical development, human capital, and economic productivity over the longer term.<sup>19,20</sup>

There is vast literature on the multiple pathways to improve nutrition through multi-sectoral strategies.<sup>21</sup> **Looking at nutrition with a resilience lens, however, means not only strengthening multi-sectoral programming through a nutrition lens but also strategically considering nutrition in the context of shocks and stresses.**

Traditionally, there has often been a delineation between humanitarian response programming and development assistance programming. Experience shows, however, that geographic areas and vulnerable populations are moving in and out of periods of emergency need within a broader development context. Further, we see that crises resulting from climate change, conflict, natural disasters, and pandemic disease typically exacerbate underlying cycles of social, economic, and gender inequality, food insecurity and malnutrition, ineffective governance, etc.

This dynamic risk context in shock-prone countries has prompted USAID and other donors to adopt an approach termed the Humanitarian-Development-Peace Coherence. The approach aims to improve the coherence and effectiveness of long-term resilience strategies by promoting complementarity and collaboration across humanitarian, development, and peace actors toward a common agenda. It is also an acknowledgment that continuing to operate in silos without coordinating different types of assistance will be neither efficient nor effective for addressing complex challenges.<sup>22,23</sup>



<sup>17</sup> High levels of global acute malnutrition (GAM) are a key trigger indicator for humanitarian assistance.

<sup>18</sup> UNHCR. (2018). *Emergency Handbook: Acute malnutrition threshold*.

<sup>19</sup> Good nutritional status is a key determinant of resilience linked to survival, reduced morbidity, and improved cognitive and physical development.

<sup>20</sup> De Onis, M., & Blössner, M. (2005).

<sup>21</sup> USAID. (2014). *Multi-sectoral Nutrition Strategy (2014–2025)*.

<sup>22</sup> USAID. (2022). [Programming Considerations for Humanitarian-Development Peace Coherence: A Note for USAID's Implementing Partners](#). Resilience Leadership Council & Technical Working Group. January 2022.

<sup>23</sup> UNICEF European Union (2022). [www.unicef.org/eu/humanitarian-development-nexus](http://www.unicef.org/eu/humanitarian-development-nexus). *The Humanitarian-Development nexus | UNICEF European Union*

When looking from a nutrition and resilience lens, we see that where poor nutrition is an underlying stressor, shocks can cause rapid deterioration, leading to dramatic increases in humanitarian caseloads of acute malnutrition. This is indeed the situation in the drylands of Africa, where stunting and persistent levels of acute malnutrition set up a dangerous situation for adult and child malnutrition and mortality. In the short term, we need transformative changes in social protection, food systems, and health systems to prevent the deterioration of well-being. As a first step, host governments and humanitarian assistance partners should **prepare to scale up nutrition-specific interventions during shocks**. For example, food commodities may be pre-positioned geographically for early response, and health systems need to be prepared to ramp up care for acute malnutrition. These transformations will better enable the most vulnerable women and children in households to absorb shocks to their nutritional status. The earlier the response, the better households will absorb shocks and maintain nutrition status. Family mid-upper arm circumference (MUAC) screening done within the household by parents and caregivers for early referral of children in the early stages of global acute malnutrition (GAM) is proving to be an effective activity.<sup>24</sup>

Donors, governments, and program staff should also seek opportunities to **strengthen and prioritize shock-responsive, nutrition-sensitive interventions**. For instance, livelihood diversification strategies should consider the nutritional impacts of on-farm, off-farm, and non-farm opportunities. Governance interventions, particularly in the health sector, should develop preparedness and contingency planning around shock scenarios. Health services may need to adapt periodically to highly infectious pandemic diseases, while communities modify typical social practices (e.g., community meetings and funerals).

Moreover, we must carefully consider the complex relationships between shocks and how social responses to shocks can affect nutrition. Epidemic shocks such as Ebola, COVID-19, and others need to consider the food security and nutrition impacts of mitigation measures. There is ample evidence that

the response to COVID-19 had major impacts on food and health systems. Yet initial responses to COVID-19 focused only on prevention and control of viral spread. We need to broaden the narrow consideration of shocks and the way to manage them to understand the nutritional impacts of cascading and amplifying shocks.



<sup>24</sup> The State of Acute Malnutrition (2022). [www.acutemalnutrition.org/en/Family-MUAC](http://www.acutemalnutrition.org/en/Family-MUAC). *The Family MUAC Approach - State of Acute Malnutrition*.

<sup>25</sup> USAID Advancing Nutrition (2020). Exploring the Influence of Social Norms on Complementary Feeding: A Scoping Review of Observational, Intervention, and Effectiveness Studies. Peer and gray literature described various norms, customs, and perceptions related to appropriate foods for young children, parenting practices, gender, and family roles but rarely explored how they motivated behavior. <https://www.advancingnutrition.org/resources/exploring-influence-social-norms-complementary-feeding-scoping-review-observational>

### Programmatic examples: Strengthening Resilience Capacities and Improving Nutritional Outcomes

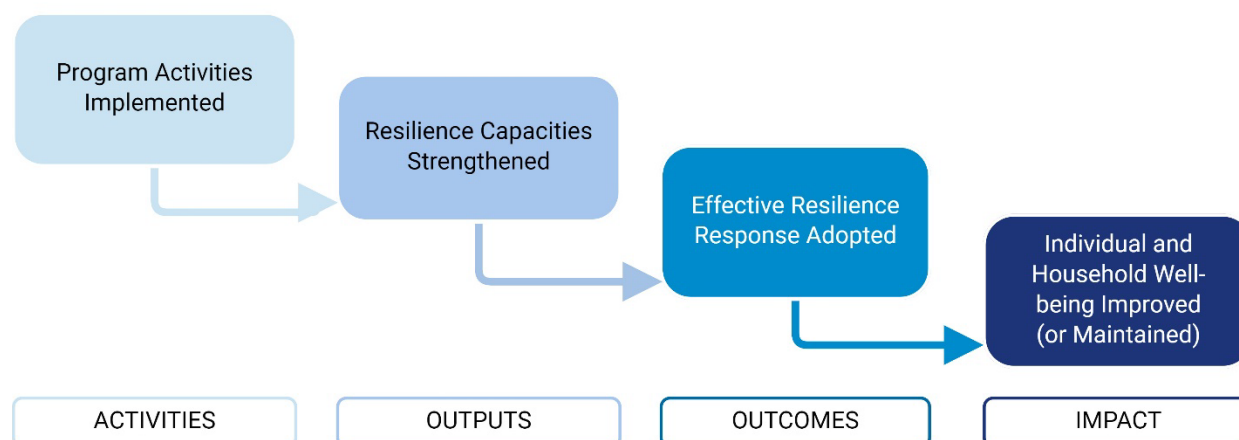
- **Absorptive capacity:** Nutrition-specific and nutrition-sensitive safety net services provided through formal government systems and/or via humanitarian assistance are critical for supporting undernourished households exposed to shocks and stresses. When such activities are targeted to reach the nutritionally vulnerable and effectively linked with maternal-child healthcare and behavioral change initiatives, they can help maintain the nutritional status of the most vulnerable during and after the onset of food security shocks.
- **Adaptive capacity:** Activities promoting the cultivation of nutrient-dense, drought-tolerant crops, access to and utilization of financial services, and sustainable management of natural resources can each improve the capacity of households to adapt to shocks by supporting diverse means of household nutrient consumption, income generation, and risk reduction. To have the greatest impact on nutrition, they must be adapted to context (taking into account trade-offs between household consumption and income) and linked with behavioral interventions aimed at improving household feeding and caregiving practices. Activities that strengthen the economic and social roles of women in managing productive resources also contribute to improved nutrition.
- **Transformative capacity:** Gender equity and access of marginalized groups to health and social protection interventions are particularly important for mitigating risk and maintaining resilience and nutritional status in shock-prone environments. Programs can incorporate normative change into designs and social and behavior change (SBC) strategies as key drivers of improved nutrition, e.g., to address complementary feeding.<sup>25</sup> Strengthened capacity of formal and informal institutions to scale-up safety net and community-oriented nutrition programs to prevent and manage severe acute malnutrition also helps strengthen system-level change to increase resilience to shocks and, in turn, avert emergencies and prevent or limit backsliding on nutritional outcomes.

Although absorptive and adaptive capacities are equally important, transformative capacity is particularly key to achieving sustained resilience. For example, a scoping review of the influence of social norms on complementary feeding identified multiple negative influences on mothers' and other caretakers' ability to implement change without broader transformative support from the extended family and social community. Socio-cultural factors and gender norms, including pressure on women to be "good mothers" (as defined by community norms) and the influence of mothers-in-law and male heads of household, may lead to unequal decision-making power, and care and feeding practices that may not prioritize the needs of the youngest children, particularly during lean periods.<sup>26</sup>

During shocks or stresses, poor households with limited resilience capacities often employ coping strategies that have a particularly negative effect on the nutritional status of vulnerable members. For example, households may reduce the portion size of meals, reduce the number of meals eaten each day, and/or reduce consumption of protein-rich and micronutrient-rich foods, each of which is especially detrimental for mothers and children. Additionally, some research has shown gains in quantitative measures of food security and resilience capacities *simultaneous* with decreases in nutritional status, attributed to poor access to safe drinking water and health services.<sup>27</sup>

<sup>26</sup> Ibid.

<sup>27</sup> Smith, L, Frankenberger, Fox, K., T, Nelson, S., and Griffin, T. (2019). Ethiopia Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) Project Impact Evaluation: Endline Survey Report. Washington, DC: Resilience Evaluation, Analysis and Learning (REAL) Associate Award.

Figure 3. Resilience Applied to a Basic Theory of Change Framework<sup>28</sup>

## Resilience-Strengthening Initiatives with Nutrition in Mind

This discussion brief recommends including an assessment of the nutritional status of women and children to better understand the dynamics of change occurring in programs that are focused on strengthening household resilience. Two practical examples of these types of nutrition-oriented resilience programming are provided below.<sup>29</sup>

### Resilience in the Sahel Enhanced (RISE)

The *Resilience in the Sahel Enhanced (RISE) Program (2014–2019)* sought strategic integration across three distinct types of activities in targeted areas of Burkina Faso and Niger. These included *Resilience and Economic Growth in the Sahel-Enhanced Resilience (REGIS-ER)* and *Resilience and Economic Growth in the Sahel-Accelerated Growth (REGIS-AR)*, both of which were funded through USAID Feed the Future. Five individual Resilience Food Security Activities (RFSAs)—three in Niger, two in Burkina Faso—funded by the USAID Office of Food for Peace were also important components of the RISE Program. These activities focused primarily on maternal and child health and nutrition, livelihood security, and disaster risk management. The primary purpose of the RISE Endline Survey Report was to determine whether and how the RISE project’s package of interventions enhanced households’ resilience and resilience capacities.<sup>29</sup> However, largely due to the fact that the primary well-being outcomes of interest were poverty and women’s empowerment, the impact of RISE interventions on child nutritional status was not measured as part of the RISE impact evaluation.

Drawing on learning from the first iteration of the program, **RISE II** reflects a sharper focus on addressing the underlying drivers of multidimensional vulnerability in the Sahel: water scarcity, high birth rates/early marriage, low literacy rates, extended lean seasons, migration, lack of secure land access, and a large youth population.

<sup>28</sup> Béné C., Frankenberger T., Nelson S. 2015. Design, Monitoring and Evaluation of Resilience Interventions: Conceptual and Empirical Considerations. IDS Working Paper no.459, p. 23.

<sup>29</sup> Smith, L, Brown, D, Hedley, D, and T Frankenberger. (2022). *Resilience in the Sahel-Enhanced (RISE) Program Impact Evaluation: Endline Survey Report, Volume 1*. Washington, DC: Resilience Evaluation, Analysis and Learning (REAL) Associate Award (forthcoming).

### **Resilience in the Sahel Enhanced (RISE) (Continued)**

Objective 3 of RISE II is to "improve health, family planning, and nutrition outcomes" by demonstrating and piloting high-impact practices in partnership with communities, local government, and technical services. Through sequenced and layered interventions, health facilities will be supported to provide an integrated package of maternal-child health/family planning/nutrition services. Health facility-based interventions will be complemented by community-level nutrition screening and referral, community-based management of acute malnutrition, and integrated community case management of child illness to reinforce the community continuum-of-care. Objective 2 of RISE II promotes nutrition-sensitive interventions through diversification of agriculture production and market systems development. In line with these nutrition-focused objectives, the impact of RISE II on household nutritional status will be assessed through the impact evaluation, drawing on baseline anthropometric data collection and analysis.

For RISE II, greater engagement in governance with state institutions is a central strategy for ensuring the sustainability of results, along with a stronger focus on behavior change components aimed at addressing the immediate drivers of malnutrition. The geographic target zone for RISE II has also been reduced to enable the concentration of resources and maximize the long-term impact of efforts to enable participants to manage future shocks and stresses and pursue sustainable pathways out of poverty.

### **Partnership for Resilience and Economic Growth (PREG)**

The **PREG** initiative brings together humanitarian and development partners to build resilience in the vulnerable pastoralist communities in the arid and semi-arid lands of northern Kenya. The counties in the arid and semi-arid lands are home to over 10 million people who have suffered, and continue to suffer, from recurrent drought, human conflict, and a legacy of marginalization.

PREG's partnership model links and coordinates diverse partner activities among multiple national ministries (in particular, the National Drought Management Authority), multiple county government authorities, more than 10 international non-governmental organizations and local non-governmental organizations, international institutes and centers for development, multilateral entities, and unique conservancies and trusts. Efforts focus on improving livelihoods and governance; strengthening livestock value chains; enabling access to water, sanitation, and hygiene services; increasing conservation measures; addressing conflict; and promoting inclusiveness and gender responsiveness. At midterm assessment, these initiatives had contributed to improvements in nutrition, including positive changes in women's and children's dietary diversity and reduced household hunger.<sup>30</sup>

The PREG Endline Evaluation Report found that despite no measurable, sustained improvements in household livelihood diversity, food security, and poverty over the life of the project—largely due to severe, recurrent shock—there was a positive trend for all three child anthropometric indicators (stunting, underweight, and wasting) between the baseline and endline. Although differences were not statistically significant, the prevalence of severe stunting, wasting, and underweight was approximately 50% lower at the endline for each indicator.

Like the RISE II Baseline Study, the PREG II Baseline Study included the collection of anthropometric data and thus will provide improved analysis of the impact of nutrition-specific and nutrition-sensitive activities that will be useful for adaptive management of the program.

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<sup>30</sup> USAID. (2018b). *Partnership for Resilience and Economic Growth*.

## Analyzing the Nutritional Impacts of Resilience-Strengthening Activities

While the practice of resilience measurement and analysis continues to evolve, to date, **there is not yet sufficient evidence linking resilience-strengthening initiatives to mitigating or preventing the negative impacts of shocks on nutritional status**, preventing backsliding, reducing the need for humanitarian aid, and, in optimal cases, improving nutritional outcomes. Learning to date suggests that to ensure sustainable improvements in human capital and well-being (e.g., as indicated by reduced stunting) in shock-prone regions, **resilience-strengthening initiatives must focus deliberately on improving women and children’s nutritional status through nutrition-sensitive and nutrition-specific interventions**. These interventions should specifically account for the varying nutritional impact of shocks and stresses on nutritionally vulnerable populations (e.g., women, adolescent girls, and children).

Decades of nutritional research in food insecure environments demonstrate that while the drivers of undernutrition are multifactorial, the specific interventions that ultimately prove most effective are context-specific. This means that the design of resilience program strategies in areas characterized by high levels of undernutrition must be informed by a nutrition causal analysis. This requires an analysis, usually supported by existing quantitative and qualitative research, of the most important factors influencing nutritional status among specific populations.

Current approaches to nutrition causal analysis can be strengthened by applying a “resilience lens”—adopting a stronger focus on the specific capacities of individuals, households, communities, and institutions, each of which has an influence on nutritional outcomes for vulnerable women, adolescent girls, and children in the wake of shocks and stresses.

### Measuring and Monitoring Resilience and Nutrition Indicators

Stunting and wasting are important indicators of stressors or underlying vulnerabilities. Recent discussions have noted some of the strengths and weaknesses of using stunting as an indicator. Programs that reduce chronic nutritional deficits ultimately alleviate this stressor. To inform the design and adaptive management of such activities, it is important to assess the outcomes and impacts of long-term, multi-sectoral nutrition programming.

However, the assumption that multi-sectoral programming will result in improved or maintained nutritional status of vulnerable women, adolescent girls, and children needs to be measured and tracked. For optimal learning and adaptation, we need to examine the relationship between resilience capacities and nutritional status more closely.



Photo: Fredrik Lermeryd/Save the Children

Resilience-strengthening initiatives aimed at reducing nutritional vulnerability must measure and monitor nutritional status, among other key indicators, and the ability of individuals and households to maintain nutritional status in the face of shocks and stresses. Due to their ability to collect real-time (or near real-time) data on resilience dynamics at the household, community, and systems levels as they are unfolding, recurrent monitoring surveys are especially useful for monitoring the role of absorptive, adaptive, and transformative capacities during and after the onset of shock. However, since they are deliberately designed as high-frequency, “light-touch” activities, recurrent monitoring surveys typically do not collect data on nutritional outcome measures, making it difficult to determine how interventions influence interim outcomes and nutritional status, if at all. Wherever appropriate and feasible, these types of more frequent resilience monitoring activities should include nutritional status measures.

Where this is not possible, light touch indicators of food consumption, dietary quality, and morbidity should be collected, at a minimum. These are valuable for monitoring in that they may show intermediary improvements before improvements in anthropometric measurements of well-being are detectable.<sup>31</sup> Monitoring household coping mechanisms, food stores, purchasing and marketing patterns, and food prices are also important and are predictors of imminent food and nutrition shocks.

Where levels of acute malnutrition are high, MUAC is a commonly used indicator if weight, height, and age data cannot be accurately or readily collected. Both weight-for-height and MUAC are commonly used to calculate GAM, one of the principal indicators of the severity of an emergency.

Persistent GAM—levels of acute malnutrition that are routinely higher than the emergency threshold of 15%—is a particularly important indicator for resilience-strengthening efforts in that it is typically linked with high rates of child mortality, increased humanitarian caseloads, and requirements for resource-intensive therapeutic care. Maternal and adolescent nutritional status is not as commonly measured as child nutritional status but may more quickly reflect changes in food and nutrition security.

## Illustrative Best Practices for Integrating Nutrition and Resilience Objectives

The synthesis of research and learning in this discussion brief suggests several illustrative best practices for effectively integrating nutrition improvement and resilience-strengthening strategies:

- Incorporate multi-level nutrition monitoring as a key component of adaptive management.
  - Include nutritional indicators in recurrent monitoring and early warning systems to ensure that the threat of acute malnutrition is monitored and managed effectively.
  - Integrate nutritional status monitoring by families (i.e., home-based or individual monitoring by mothers/caregivers) into country, region, project level policy and program design.
  - Incentivize village management committees by incorporating nutritional indicators as accountability criteria.

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<sup>31</sup> Leroy, J. and Frongillo, E. (2019). *Perspective: What does stunting really mean? A Critical Review of the Evidence.*



- Incorporate a stronger focus on women and adolescent girls.
  - Include a programmatic focus on women’s own health, and protecting the women and girls from the impacts of shocks and stressors, as they are often the first and most severely impacted.
  - Support women’s financial empowerment and decision-making.
  - Improve linkages between women’s savings groups and nutrition programming.
  - Improve market access for women and girls.
  - Strengthen transformative capacity by addressing gender and social norms related to women’s diet, caring, and feeding practices.

### **Promising practices integrating gender considerations in health and non-health SBC interventions<sup>32</sup>**

- Use a gender lens throughout the SBC program cycle to improve outcomes.
  - Synchronize gender strategies to ensure inclusion of men and women, and boys and girls.
  - Address gendered health disparities that affect the use of services. (Note this pertains to many types of services other than health.)
  - Reduce harmful traditional practices.
  - Ensure community involvement and accountability for promoting gender equality.
  - Consider gender dimensions during emergency preparedness and response.
  - Account for the intersecting gendered vulnerabilities that influence development outcomes.
  - Build organizational capacity and systems for gender integration using a continuous learning approach.
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- Employ diverse agricultural and livestock production activities to improve the diets of women and children year-round.
    - Design strategies to address the social and economic barriers women and their families face in accessing and consuming safe, nutritious foods.
    - Promote the production and consumption of foods that fill critical gaps in local diets, particularly for women of reproductive age and children under two.
    - Promote shock-appropriate, marketable livestock assets to support income generation and ensure availability of critical animal source foods and diets.
  - Layer and sequence activities with other programs addressing the immediate causes of malnutrition.
    - Activities for strengthening household health practices and primary health care at the community level.
    - Support Ministry of Health efforts to achieve full immunization coverage of children for common childhood diseases (which reduce appetite and burn calories and other nutrients) and caretakers for pandemic infectious diseases.
    - Water, Sanitation, and Hygiene (WASH) programming, open-defecation elimination, and control for environmental enteropathy.<sup>33</sup>
    - Early childhood stimulation, particularly activities to strengthen responsive feeding.

<sup>32</sup> Breakthrough Research in Social and Behavior Change (2020). *Gender Integration in Social and Behavior Change: What does it take?* Programmatic Research Brief.

<sup>33</sup> [https://www.globalwaters.org/sites/default/files/usaid\\_wash\\_nutrition\\_tech\\_brief\\_3.pdf](https://www.globalwaters.org/sites/default/files/usaid_wash_nutrition_tech_brief_3.pdf)

- Social protection interventions that can improve nutrition outcomes, including targeted cash (e.g., cash combined with vouchers for nutritious foods) or other types of transfers to increase access to nutritious foods through community-based nutrition programs, maternal and child health programs, education, or childcare.
- Ensure the capacity to rapidly scale up critical nutrition components (e.g., community management of acute malnutrition (CMAM)—vertical and horizontal coverage of social safety net programs) in response to shocks.

## Priorities for Further Research and Learning to Improve the Integration of Nutrition and Resilience Programming

### **Incorporate nutrition analysis as a key component of resilience-strengthening initiatives and incorporate resilience analysis as an element of nutrition programming.**

All resilience programming should prioritize integrating nutrition and resilience, especially in areas where persistent GAM is a feature. We can strengthen interventions through several approaches, including shock-responsive sequencing, layering, and integrating nutrition, livelihoods, health, and WASH interventions as part of strategically coherent resilience initiatives. While nutritional outcomes depend on multi-dimensional causes, research suggests that typically, a small number of drivers can be identified that lead to improved outcome pathways. More research is needed to identify these strategic pathways in African dryland and other environments where persistent, acute malnutrition is a feature.

Operational research is also needed to determine optimal portfolio approaches and answer questions related to the optimal sequencing and layering of intervention packages in distinct operating environments. We should exploit existing opportunities for research experiments. Impact evaluations of ongoing resilience investments should be leveraged to identify strategic pathways for nutritional change. The promising practice related to household evaluation of nutritional status is another important area where research is needed. Both formative and impact evaluation research are critical for informing the design, implementation, and evaluation of this type of intervention. Where possible, we should prioritize conducting advanced modeling and robust research to identify the program components most likely to sustain household nutrition in shock-prone environments.

### **Carefully consider the context-specific impacts of shocks and their management on nutrition.**

Though limited, evidence suggests that covariate shocks have a long-term impact on nutritional status. We should identify and analyze further retrospective research in different contexts that offer opportunities to study the impacts of shock on nutritional status.

Similarly, research on coping strategies that include intra-household changes in diet in response to differing shock exposure in differing contexts might shed light on the mechanisms linking shock exposure to malnutrition. This should be complemented by additional qualitative research on coping behaviors that link shock exposure and intensity to nutritional outcomes.

Formative research can also provide an opportunity to look beyond immediate causes of malnutrition and obtain insight into the resilience factors and underlying basic causes of malnutrition, including the shock profiles of communities and coping behaviors related to these. Research can also help identify

positive household and community determinants contributing to the maintenance of nutritional status amid recurrent shocks. With sufficient data, research can correlate these with specific measures of well-being, such as poverty, food insecurity, malnutrition, mortality, and humanitarian caseloads.<sup>34,35</sup>

### Carefully consider the context-specific impacts of shocks and their management on nutrition.

In areas characterized by recurrent and complex shocks, there is also a need to inventory nutrition and resilience programming and conduct performance assessments of these programs benchmarked against nutritional improvements. For any given context, this research should identify which strategies have the highest potential nutritional impact, particularly among women, adolescents, and children.



Photo: Talitha Brauer/Save the Children

Program- and activity-level operational research will also be critical for improving risk-responsive programming strategies. For example, country reviews of social protection and CMAM scale-up are needed to determine how best to support these capacities. We should also test the benefits of layering early childhood development strategies as components of resilience-strengthening initiatives. Given limited donor, government, and private funds for addressing both humanitarian crises and development priorities, further experimentation would also provide insight into the cost-effectiveness of different nutrition-sensitive resilience-strengthening initiatives.

Given the lessons of the ongoing COVID-19 pandemic, important operational research can also inform alternative implementation strategies for nutrition-sensitive and nutrition-specific interventions designed for congregate settings. Research also is urgently needed to identify resilience-strengthening strategies that have had the greatest success in mitigating the nutritional impacts of COVID-19.

Analysis of the broader literature linking resilience and maternal nutrition, nutrition of adolescent girls, and micronutrient deficiencies would also enable a more comprehensive understanding of nutrition and resilience linkages.

### Prepare to scale up nutrition-specific interventions during shocks.

Rapid acceleration of scaling up nutrition-specific intervention during shocks is needed. The Kenya case study, where the country has developed a methodical approach to scaling up CMAM, should be the subject of a deep dive analysis and we should also identify and analyze other cases. These cases can launch a learning stream around the rapid scale-up of nutrition-specific interventions, especially through health sector resilience strengthening. Systems resilience,

<sup>34</sup> Constan, M., Frankenberger, T., Hoddinott, J., Mock, N., Romano, D., Béné, C. Maxwell, D. (2014). *A Common Analytical Model for Resilience Measurement*.

<sup>35</sup> Béné, C., Frankenberger, T., and Nelson, S. (2015). *Design, monitoring and evaluation of resilience interventions; conceptual and empirical considerations*.

particularly health systems resilience, is critical for protecting nutritional status from acute shocks and longer-term stresses. These learnings can serve as an impetus for the enhancement of nutrition-specific intervention scale-up in many settings where nutritional status is suboptimal.

**Strengthen and prioritize shock-responsive, nutrition-sensitive interventions.**

As shock-responsive interventions are increasingly employed, it is essential to identify nutrition-sensitive shock-responsive approaches that protect and enhance nutritional status in different shock and vulnerability contexts. This entails understanding the risk and vulnerability environment, engaging systems actors, and ensuring nutrition is considered in disaster risk-management approaches, and long-term adaptation. In addition to climate-smart production of nutrient-dense crops, we need a multi-sectoral approach, which may include livelihood diversification, targeted nutrition-sensitive safety nets, investments in natural resource management and sustainable productivity, water resource management, WASH, and improved access to financial services. Investments in food systems resilience are also critical.

Where feasible, USAID and implementers should coordinate to conduct more formative research and evaluation research to identify intervention packages that launch nutritionally vulnerable community members toward more nutrition-resilient pathways.

## Annex I: Sample Questions for Nutrition Contextual Analysis with a Resilience Lens

- Use a gender lens throughout the SBC program cycle to improve outcomes.
- What are the key shocks and stresses currently impacting the country and vulnerable populations within it?
- What are the historical trends of shocks and humanitarian caseloads?
- What are the climate, natural resource management, and environmental degradation trends?
- What are the trends in stunting and other forms of malnutrition at the country level but also subnational and local levels? Have certain areas of the country been slower than others to improve nutrition, or has there been backsliding? If yes, what are the socio-economic and shock profiles of these groups, and what are some of the key determinants?
- What is the multi-sectoral nutrition policy implementation and expenditure context, and to what extent are national nutrition policies and programs coordinated and integrated with other programs that influence nutrition-specific and -sensitive outcomes? (e.g., health, agriculture, livelihoods and income, WASH, education, social protection, financial services, disaster risk management, youth and women's empowerment.)
- What is the livelihoods context, and what are the profiles?
- What is the gender and women's empowerment profile?
- Are conflict, displacement, and migration key factors in the specific context?
- Are markets stable, and is there access to nutritious foods for purchase year-round?
- Are basic household needs being met for all members throughout the year?
- Have there been recent changes in food security or changes over recent years due to chronic seasonal or sudden-onset shocks? What changes in the daily household diet occur during these periods (e.g., food purchases, size or frequency of meals consumed, intra-household food distribution for vulnerable women and children)?
- To what extent is nutrition surveillance included in disaster risk management and social protection mechanisms (if they exist)?
- How have shocks and stresses affected women's childcare practices? Have there been changes in breastfeeding practices or complementary feeding practices for children?
- What is the environmental, cultural/gender, and food consumption context for small animal products?
- Is animal milk a key contributor to the nutrient quality of children's diets? Are there periods of limited consumption? When lacking, what is it replaced with?
- Can nutritional recuperation occur through the use of locally available foods (linked with attention to medical needs)? Can community-based management of malnutrition be scaled up?
- If the context includes high GAM (or persistent GAM), what are the key drivers of these high levels of acute malnutrition? How to best address these drivers, especially in shock-prone contexts?
- What health shocks are most prevalent in the target area that affect nutritional status negatively, such as those that result in diarrheal diseases? What forms of environmental enteropathy affect nutritional status, and how can those be mitigated?
- How does access to safe WASH facilities and services influence nutritional outcomes among vulnerable populations?