

ENHANCING THE LINKS BETWEEN RESILIENCE AND NUTRITION

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This chapter attempts to bring together the thinking on nutrition and resilience, to clarify the role of food and agriculture in each of these agendas, and to define potential synergies between nutrition and resilience concepts and programs.

Indeed, nutrition and resilience are strongly interlinked: nutrition is both an input to and an outcome of strengthened resilience. Reducing malnutrition is crucial to strengthening resilience because well-nourished individuals are healthier, can work harder, and have greater physical reserves; households that are nutrition secure are thus better able to withstand external shocks. Conversely, households that are most affected by shocks and threats face the greatest risk of malnutrition; (Dufour and Egal 2012; Justino 2012) thus, strengthening resilience is essential to efforts to reduce malnutrition.

This chapter focuses on food and agriculture, but some of the concepts and recommendations may be of interest to other sectors. It is based on a longer discussion paper (FAO 2014a), which was written with the following objectives:

1. To describe the common ground between approaches designed to improve nutrition and those aimed at strengthening resilience, and to highlight how the growing attention to resilience represents an opportunity to engage in more effective nutrition programming;
2. To discuss what a nutrition lens can bring to resilience programming in order to maximize the nutritional outcomes of resilience programs in the context of the food and agriculture sector;
3. To highlight issues that require greater clarification and evidence, and where more research and debate is needed.

This chapter is not a review of scientific evidence. Building the evidence of the benefits of linking nutrition and resilience will require, on the one hand, strengthening published evidence of the nutritional impact of food security and social protection programs (Ruel and Alderman 2013) and, on the other hand, fine-tuning methods for measuring resilience and their adoption by field programs. Rather, this chapter proposes a rationale and opportunities for bringing together the nutrition and resilience agendas based on practitioners' field experience, while recognizing the need for operational research to refine these recommendations.

Understanding the Concepts of Nutrition and Resilience in the Food and Agriculture Sector

The Multiple Causes of Malnutrition and the Role of Agriculture

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. The term encompasses undernutrition, overnutrition, and micronutrient deficiencies. The focus of this chapter is on undernutrition and micronutrient deficiencies.

It is crucial to recognize that the determinants of malnutrition are multi-sectoral. In this regard, the conceptual framework of malnutrition developed by UNICEF identifies three levels of interrelated causes of undernutrition: immediate causes (disease and inadequate food intake), underlying causes (household food insecurity, poor caring practices, and poor access to health and sanitation services), and basic causes (causes related to the political, social, economic, and ecological context) (UNICEF 1990).

Fighting malnutrition in a comprehensive way requires adopting approaches that combine short- and long-term actions, as well as fostering linkages between curative and preventive aspects of humanitarian and development interventions. This suggests that the existing dichotomy between “emergency” and “development” presents severe limitations from a nutrition perspective.

Many efforts have been made recently to break the silos between the food-security, nutrition, and livelihoods sectors and to promote a global and comprehensive approach that includes both nutrition-specific interventions (interventions that address the immediate causes of malnutrition) and nutrition-sensitive interventions (those that address underlying and basic causes of malnutrition and avoid negative impacts on nutrition) (Bhutta et al. 2008).

Agriculture has a key role to play in both nutrition-specific and nutrition-sensitive interventions. It can improve people's diets by increasing the availability, affordability, and consumption of diverse, safe, and nutritious foods and diets aligned with dietary recommendations and environmental sustainability.

Resilience and the Food and Agriculture Sector

Building on existing definitions and its experience of supporting agriculture-based livelihoods, the Food and Agriculture Organization of the United Nations (FAO) has proposed a definition of resilience that specifies the relevance of this concept to the food and agriculture sector: "Resilience is the ability to prevent disasters and crises as well as to anticipate, absorb, accommodate, or recover from them in a timely, efficient, and sustainable manner. This includes protecting, restoring, and improving food and agricultural systems under threats that impact food and nutrition security, agriculture, and food safety/public health" (FAO 2013).

Resilience, as defined by Béné and colleagues (2012), has three dimensions, namely absorptive capacity, adaptive capacity, and transformative capacity. Absorptive capacity refers to coping skills by which households and communities buffer themselves or moderate the impact of shocks to persist with their existing way of life. Adaptation, a term now often used in the context of climate change, refers to incremental adjustment to the impacts of a stress (for instance, adjusting planting schedules or shifting to drought-resistant crops), while transformation refers to the ability to create a fundamentally new system (or way of life) when conditions require it. The concept of resilience is leading humanitarian and development organizations to review the way they design their programs, in particular by developing integrated strategies composed of various interventions designed to strengthen households' absorptive, adaptive, and transformative capacities (FAO 2012).

Nutrition and Resilience: The Common Ground

At the programming level, the concepts of nutrition and resilience clearly share key principles. Effective resilience and nutrition programming both require the following:

- **A systemic approach (multisectoral, multilevel, and multistakeholder).** Both the nutrition and the resilience of an individual or community result from a combination of interlinked factors that can be influenced across various sectors, at different levels, and by a wide range of stakeholders. Consequently, there is no one sector or one response option that

can effectively and sustainably build resilience and tackle malnutrition. Resilience and nutrition demand thinking across silos.

- **A twin-track approach, linking emergency and development.** Fighting malnutrition in a comprehensive way and strengthening resilience require addressing acute needs in emergency situations and crises alongside investing in long-term responses to tackle the root causes of vulnerability and malnutrition.
- **A context-specific approach.** A successful nutrition or resilience-building intervention in one country or livelihoods zone may not be replicable in another context. An in-depth understanding of populations' and individuals' existing coping mechanisms, food systems, and nutrition needs, as well as environmental and social synergies, is a key starting point to contextualize the intervention.
- **Strong local, country, and regional ownership and political leadership.** Political leadership is a prerequisite for successful complex programs requiring multisectoral, multilevel, and multistakeholder approaches. A strong political leadership enables creation of a favorable policy environment and facilitates integration of resilience-building and nutrition programs across ministries (agriculture, health, trade, and so on).

The resilience agenda therefore represents an opportunity to improve the way nutrition programs are designed, funded, and implemented through addressing the root causes of malnutrition and food insecurity as well as the symptoms. The reverse is also true: the use of nutrition tools and approaches can support resilience programming.

Maximizing the Nutritional Impact of Resilience Programming

Applying a Nutrition Lens to the Concept of Resilience in the Food and Agriculture Sector: A People-Centered Approach

In the food and agriculture sector, the concept of the “micro level” often goes no further than the household as a unit of analysis, overlooking the individual level. Although analyzing and addressing resilience at the household level is necessary, it is important to bear in mind that the nutritional needs of individuals within a household differ.

Focusing on individuals. Adopting a nutrition lens to view resilience is an invitation to put the individual back at the center of the system and

to analyze the food system in terms of its ability to provide the right food at the right time to the right individuals. This view entails paying specific attention to individuals who are most vulnerable to malnutrition and requires that resilience programming place greater importance on the type of food available and the way food is prepared, utilized, and shared between individuals within the household.

Viewing absorptive, adaptive, and transformative capacities with a nutrition lens. From a nutritional perspective, an individual or household could be said to have a high absorptive capacity if, in the face of a shock, negative nutritional coping strategies are not very common. High adaptive capacity could mean being able to access foods that meet nutritional requirements from sources that are more reliable in the face of climate change. High transformative capacity might refer to being able to fundamentally alter the sources and types or varieties of food in the face of a crisis while maintaining or improving nutritional status.

Applying a Nutrition Lens to Resilience Programming in the Food and Agriculture Sector

This section builds on the four pillars of FAO's Resilience Strategy (FAO 2014b) to provide operational recommendations for enhancing the nutritional impacts of approaches designed to increase resilience to food and agricultural shocks.

Pillar 1: Enable the Environment

The question here is how the legislative and policy environment can be strengthened in order to maximize the nutritional impact of measures designed to improve resilience. The following opportunities can be seized:

- **Convincing policymakers of the case for nutrition-sensitive resilience measures.** Policymakers concerned with resilience building must be made aware of the social, economic, and human costs of undernutrition. This awareness will increase the likelihood that nutritional considerations are fully taken into account in the development of policy, program, and coordination frameworks for disaster risk management (DRM) and food security.
- **Integrating nutrition in resilience/DRM planning and supporting synergies with food-security and nutrition policies, strategies, and coordination mechanisms.** Explicit nutrition objectives should be included in resilience and DRM policy frameworks as

a means of ensuring that the needs of vulnerable individuals and groups are addressed and that resilience-building and DRM programs do not have negative impacts on nutritional status. Furthermore, there are opportunities to build stronger links between, on the one hand, development-oriented multisectoral policy support and coordination initiatives on food security and nutrition (such as those supported through the Scaling Up Nutrition [SUN] movement) and, on the other hand, more emergency-related coordination bodies (such as the Nutrition and Food Security Clusters) and initiatives related to DRM and resilience at national, regional, and global levels. In Niger, for example, the Nutrition Working Group (led by the Ministry of Health's Nutrition Department and composed of UN agencies and nongovernmental organizations) deals with nutrition in both emergency and development contexts, and advises both the High Commission on the 3N Initiative (les Nigériens Nourissent les Nigériens)—a high-level and multisectoral initiative on food security and nutrition, and the newly formed Technical Working Group on Resilience (Personal communication 2014).

- **Using nutrition as an enabling entry point for gender-sensitive resilience-enhancing measures.** Adopting a nutrition lens (that is, asking who is most at risk of malnutrition and why) can be a neutral and practical entry point for gender-sensitive and equitable resilience programming. By orienting activities toward household food security and nutrition (for example, supporting women to grow vegetables for nutrition purposes, introducing labor-saving technologies to enhance women's availability for child care, and so on), one can address power relations, distribution of domestic chores, and women's access to productive resources without having to emphasize these subjects overtly. For example, several nongovernmental organizations working in conservative areas of Afghanistan targeted food assistance, supplementary feeding programs, and income-generation activities—associated with literacy classes and health and nutrition education—toward women. The main objective of these programs was to improve household food security and child nutrition, but many women involved in them also reported that bringing home food or income and being able to seek better care for their children raised their status and enabled them to take greater part in decisionmaking in their households.

Pillar 2: Watch to Safeguard

Greater integration of nutrition-related information in food and agricultural information systems has several benefits in terms of better monitoring of threats, situation and context analysis, and causal analysis. All of these attributes are beneficial for supporting resilience planning in the food and agriculture sector.

Early warning. Diet-related coping strategies may be early indicators of a pending crisis. People may not wait until food is in short supply before they begin to change their behaviors. Thus changes in consumption behavior not only reflect current status but may also reflect the best judgment of household decisionmakers about the foreseeable future. Including indicators of food consumption, such as dietary diversity and number of meals, in early warning systems can therefore increase their ability to detect forthcoming shocks and pinpoint the households or livelihood groups at greatest risk (Maxwell and Caldwell 2008).

Situation assessment and surveillance. Nutrition indicators should be part of the key indicators to measure resilience when conducting a situation analysis. Nutritional status (especially stunting) is an indicator of the erosion of people's resilience and of greater vulnerability. Monitoring nutritional trends over time also helps researchers understand how various shocks and threats impact households' and individuals' well-being.

Nutrition causal analysis as a key for situation analysis. An understanding of the causes of malnutrition in different livelihood groups provides the background against which to analyze early warning indicators and anticipate impact on specific groups. In particular, malnutrition problem trees¹ provide a useful framework for identifying relevant indicators and sources of information when designing food-security and nutrition early warning and surveillance systems (FAO 2014c).

Pillar 3: Apply Disaster Risk–Reduction Prevention, and Pillar 4: Prepare and Respond

Activities under Pillar 3 are designed to reduce the risk of being exposed to a shock and mitigate its impact should the shock arise, while activities under Pillar 4 are designed to ensure that the response to the shock is adequate, timely, and effective. Pillars 3 and 4 correspond to different stages of the resilience programming cycle, but they are presented together because the

1 A participatory methodology for doing a causal analysis of malnutrition, whereby causes of malnutrition are classified and sequenced as roots or branches in a tree.

recommendations for making prevention, preparedness, and response activities more nutrition sensitive are similar.

KEY ENTRY POINTS FOR NUTRITION-SENSITIVE PROGRAMMING

TO BUILD RESILIENCE

Using nutrition indicators and data for identifying vulnerable groups and targeting in

- prevention and DRR—target prevention activities to groups who face chronic problems with food security, health, or both, or are exposed to regular nutrition-related shocks;
- preparedness and contingency planning—anticipate which groups risk being hardest hit by a given shock or threat; and
- postdisaster response—use indicators such as food consumption data to effectively identify which groups need urgent help.

Causal analysis of malnutrition through analyzing the contributing factors affecting nutritional status. This analysis can be done by constructing problem-and-solution trees to better understand the problems/causes and solutions/interventions for malnutrition within different livelihood groups. This methodology is a practical and user-friendly way to build a response framework that includes both curative and preventive interventions from various sectors, and it is thus useful for designing resilience programs aiming to improve food security and nutrition (FAO 2014c).

Making nutrition an explicit objective and monitoring progress toward it through measuring the nutritional impact of resilience-building programs using a set of indicators. For example, indicate a reduction in the prevalence of stunting, wasting, and so on, as an objective. Food and agriculture interventions should, among other objectives, aim to improve diets, and the interventions' nutritional impact can thus be assessed with indicators such as dietary diversity.

EXAMPLES OF NUTRITION-FRIENDLY RESILIENCE PROGRAMMING

Nutrition education to address the three dimensions of resilience (coping, adapting, and transforming) and to empower households through²

- improving feeding practices, which contributes to prevention of undernutrition as well as increased human capital;

² See more information on the role of nutrition education, reviews and evidence, and key issues for implementation in McNulty (2013).

- helping households in their decisionmaking on what foods to produce and purchase, and how to store, process, prepare, and consume them for optimal nutrition; and
- linking food and agriculture programs to other sectoral interventions, namely health, water and sanitation, and education.³

Diversification of food intake and livelihoods as a nutrition-sensitive risk-reduction intervention to

- contribute to the prevention of both chronic and acute malnutrition through direct consumption, and contribute to income generation through growing more nutritious crops, and
- reduce vulnerability to shocks through providing people with more opportunities to diversify their food production, livelihoods, and thereby, economic alternatives (Save the Children 2012).

Linking food and agriculture interventions with social protection measures for improving nutrition and strengthening resilience. For example, providing families with either cash, food, or livelihood alternatives may be the best solution to protect the families' nutritional status when they cannot afford to buy nutritious food or cannot access health care. By protecting assets and livelihoods, social protection programs can be used for prevention, preparedness, and response. In times of crisis, social protection programs should indeed be scaled up and targeted to the most shock-affected areas to reduce acute and long-term negative effects of the crisis and strengthen capacities for nutritional resilience (Save the Children 2009).

Linking food and agriculture to health, water and sanitation, and education for enhanced nutritional impact through joint situation and response analysis and joint or harmonized targeting, as well as aligning delivery mechanisms of programs that address other determinants of malnutrition, to ensure that communities and households are reached with a complementary set of interventions. Several initiatives are underway to improve multisectoral planning, such as the joint resilience strategies between FAO, the World Food Programme, and UNICEF in Somalia, Uganda, and Ethiopia. And the experience of joint nutrition programs supported by the United Nations Development Programme/Spain Millennium Development Goals Achievement Fund showed that though joint programming is challenging and entails significant transaction costs, a majority

³ For an example of how nutrition education was used to improve multisectoral collaboration, see Dufour (2007).

of participating staff recognized that joint programming was essential to address a multisectoral topic such as nutrition (Perez Zaldivar 2013).

Conclusion: Remaining Challenges of Bringing a Nutrition Lens to Resilience Programming

Challenges remain in transforming these opportunities into action. While the discourse on resilience has been gaining ground, capacities to operationalize the concept at the field level remain weak. Similarly, translating the growing commitment to nutrition into action is held back by limited capacities for multisectoral nutrition programming and for mainstreaming nutrition into other sectors, including agriculture.

Effective capacity development, improved programming, and mobilization of financial and human resources will require developing the evidence base regarding which strategies are most effective to simultaneously strengthen resilience and improve food security and nutrition. The operational recommendations presented in this paper are based on past field experience as well as conceptual considerations, but more practical and operational research is required to test their feasibility and effectiveness in a variety of contexts.

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