



ACDI/VOCA Transforming Food Systems

ACDI/VOCA's Conceptualization of and Approach to Transforming Food Systems

Importance of a Food Systems Approach:

The development community has recently recognized that we are not on track to meet the Sustainable Development Goals (SDGs) by 2030. Aiming to revitalize efforts towards these goals, development experts have prioritized food systems transformation as key to getting back on track to attaining the SDGs.¹ The draft 2022-2026 Global Food Security Strategy, which lays out USAID's Feed the Future objectives and priority areas of funding, identified the "elevation of a food systems approach" as one of their four new priority areas of emphasis and action.² ACDI/VOCA supports this new lens and is actively engaging in food systems transformation in our implementation of projects around the world.

Defining the Food System:

Broadly, the food system provides the jobs we rely on for income, the food we eat, and the positive or negative effects on the environment and climate around us. Drawing from the Food and Agriculture Organization's (FAO) definition, the food system stretches from the production of food to the final end-consumer who consumes what the system produces. It includes the range of actors and systems involved in the food supply chain, which moves food from production, processing, distribution, and/or retail to the final consumer. The food system is influenced by external drivers, such as political, environmental, or economic drivers, that can positively or negatively affect the strength of any part of the food supply chain. ACDI/VOCA works to strengthen the food system and – optimizing how food is produced, moved, processed, marketed, and consumed – as well as by addressing external drivers of the food system.



Graphic - High-level depiction of the food system: The food system is comprised of the food supply chain (center, grey) and external drivers (top, blue), which influence its performance. An optimal food system supports the achievement of important development outcomes (bottom, purple)

¹ <https://www.un.org/en/food-systems-summit/about>

² <https://agrilinks.org/sites/default/files/media/file/DRAFT%20July%202021%20-%20U.S.%20Government%20Global%20Food%20Security%20Strategy.pdf>

Transforming the Food System:

ACDI/VOCA applies its inclusive market systems (IMS) approach to transform food systems to better provide livelihood opportunities, promote dietary diversity, empower individuals, while withstanding shocks and stressors in the face of climate-change and local, regional, and global threats. We apply key principles of our IMS approach to achieve the following outcomes within the food system:

- *Consumption of safe, nutritious foods that provide sufficient energy and nutrients to all* - via the increased availability, accessibility, affordability, and desirability of food for all.
- *Drawdown of carbon and the preservation of biodiversity* - via the protection of critical ecosystems, the sustainable management of productive systems, and the restoration of degraded land.
- *Inclusive economic prosperity* - via the growth of inclusive livelihood opportunities within the food system, particularly for women, youth, and other marginalized groups.
- *Household and market-level resilience* - via a system that can withstand vulnerabilities, shock, and stressors to continue supporting livelihoods and the provision of food for all.

Our IMS approach begins with **analysis**, looking beyond the symptoms to uncover the root causes of poor market performance. We co-create solutions to **develop a strategy** for changes that a system needs. We align our resources and **collaborate** with local partners to facilitate that change. Along the way, we identify partnerships and monitor, evaluate, **learn, and adapt** as we discover new information that

ACDI/VOCA's Participation in Food System Transformation Work:

Although the term food system is new, ACDI/VOCA has been working in food systems for almost 60 years through projects that have supported agricultural productivity of edible foods, output market development, increased consumer demand for food, or shifts in the enabling environment that affect the performance of the food supply chain. Nonetheless, the time has come for ACDI/VOCA, like other implementing partners, to focus intentionally on food systems transformation and achieve the aforementioned outcomes.

Food Systems Resources:

[Comprehensive list of Food Systems resources from the United Nations](#)

[Food Systems - Definition, Concept and Application for the UN Food Systems Summit](#)

[Ensuring Access to Safe and Nutritious Food for All](#)

[Shift to Healthy and Sustainable Consumption Patterns](#)

[Boost Nature Positive Production in the Food System](#)

[Advance Equitable Livelihoods in the Food System](#)

[Building Food System Resilience to Vulnerabilities, Shocks and Stresses](#)



ACDI/VOCA Transforms Food Systems for Nutrition

Action track #1: Ensure Access to safe and nutritious food for all

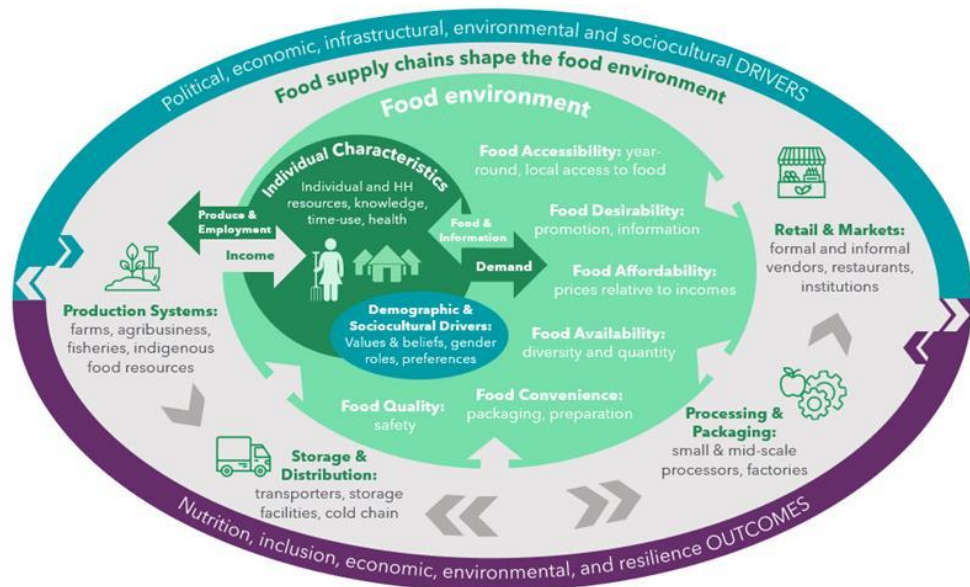
Background

In 2020, roughly 10% of the world experienced hunger, up from 8.4% in 2019, and 22% of children under five were chronically malnourished.³ These data illustrate a difficult path forward in achieving Zero Hunger—the second sustainable development goal (SDG)—which aims to eliminate food insecurity and malnutrition in all its forms by 2030. Transformation of food systems to ensure access to safe and nutritious food for all has been recognized as a priority action area to address food insecurity and malnutrition.⁴ However, consuming sufficient quantity, quality, and diversity of foods remains a challenge in many countries, due to low availability, accessibility, affordability, and/or desirability of safe, nutritious in local food systems.

ACDI/VOCA's Approach to Ensuring Access To Safe And Nutritious Food For All

ACDI/VOCA aims to transform food systems to support the consumption of safe, diverse, nutritious foods for all. Specifically, we aim to positively impact the food environment – or the interface between the consumers and the food system – and impact what consumers can and want to procure for consumption. The priorities and function of actors that make up the food supply chain determine the extent to which

consumers can access and afford diets that are safe, nutritious, convenient, and desirable, by positively or negatively impacting the food environment. Thus, to improve nutrition, ACDI/VOCA takes a holistic food systems approach and identifies and addresses leverage points along the food supply chain that will positively impact the food environment and support households to consume a healthy diet. In



Graphic - Transforming Food Systems for Nutrition: The food supply chain (grey) influences (negatively or positively) the food environment (green), affecting what consumers procure for consumption. Within the food environment, consumer demand is influenced by individual, demographic, and sociocultural characteristics/drivers (center, green and blue), which sends market signals back into the food supply chain about what consumers are demanding.

³ FAO, IFAD, UNICEF, WFP and WHO. 2021. The State of Food Security and Nutrition in the World 2021. Transforming food systems for food security, improved nutrition and affordable healthy diets for all. Rome, FAO. <https://doi.org/10.4060/cb4474en>

⁴ Cole, M., Hendriks, S., Kambugu, A., Soussana, J., Zilberman, D. 2021. Ensuring Access to Safe and Nutritious Food for all through Transformation of Food Systems. United Nations: Food Systems Summit 2021. https://sc-fss2021.org/wp-content/uploads/2021/04/Action_Track_1_paper_Ensuring_Access.pdf

practice, ACDI/VOCA works through producers to increase supply of nutritious foods in local food systems, processors to add or preserve nutritious value or make foods more desirable or convenient, and distributors and retailers to ensure that nutritious foods are affordable and available even in remote areas. We also engage communities and public and private sector actors to increase demand for and consumption of nutritious diets by changing behaviors, improving knowledge, and enhancing women's agency.

ACDI/VOCA Projects Improving the Access To Safe And Nutritious Food For All

- **Nutrition in Production Systems:** The Feed the Future Bangladesh Livestock Production for Improved Nutrition (LPIN) project worked along the entirety of the food supply chain, but most notably in the production sector of the food system to increase livestock productivity. Increases in milk productivity increased the **availability and accessibility** of milk at the household for home consumption. Due to an average increase in milk production of 200% for over 180,000 households, LPIN saw a 40-point increase in households that regularly consume dairy products between 2015 and 2020. LPIN also implemented social and behavior change (SBC) activities to drive consumer **desirability** for more diverse, nutritious foods. Project results in 2020 estimate that 83% of women consumed an adequately diverse diet, up from 39% in 2015.
- **Nutrition in Food Processing and Distribution:** Under the USAID/Tanzania Cereal Market Systems Development Activity II (NAFAKA), ACDI/VOCA improves the **availability, accessibility, affordability, convenience, and desirability** of fortified maize flour by working in the processing and distribution sector of the food system. NAFAKA has worked with over 38 small and medium-scale millers to scale-up the adoption of fortification technology and market their product in peri-urban and rural, last-mile markets, increasing the quantity of fortified maize flour available for over 500,000 last-mile consumers and 92,000 students at 230 schools. NAFAKA trained private sector actors, like millers and rural food vendors, and local community actors, like community health workers, on nutrition message dissemination to consumers to stimulate local desirability. After message dissemination, NAFAKA found that 100% of consumers were willing to pay the marginal extra cost to have their maize fortified – supporting processors to continue marketing their product in last-mile areas.
- **Nutrition in Food Retail and Markets:** ACDI/VOCA's Resilience and Economic Growth in the Arid Lands – Accelerated Growth (REGAL-AG) project enhanced the growth and competitiveness of the livestock sector in northern pastoralist Kenya. REGAL-AG partnered with local market management committees (MMCs) to increase the efficiency of live animal sales in rural markets by supporting local policy development, investment in infrastructure, and overall management of the market. In 2018, 20 markets were enhanced and 20 MMCs were executing market management action plans. As a result, marketplaces saw a growth in additional food vendors, like traders selling fruits and vegetables, thereby increasing the **availability and accessibility** of nutritious foods for an estimated 250,000 people. Approximately 75-96% of program participants surrounding these areas achieved a diet in minimum household dietary diversity in 2018.

ACDI/VOCA Transforms Food Systems for Sustainability

Action Track #2: Shift to sustainable consumption patterns

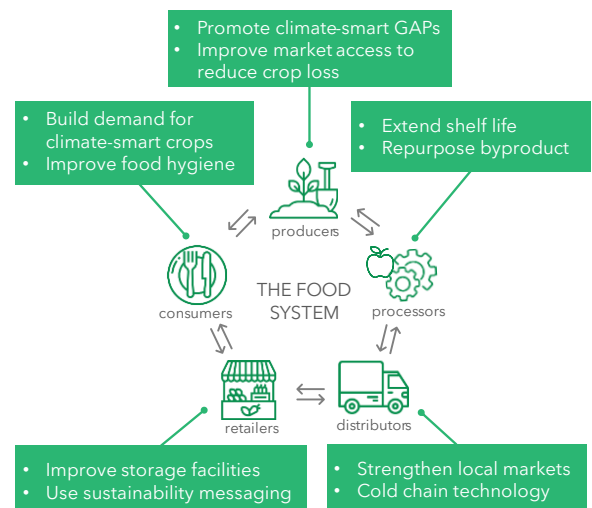
The Current Food System Is Unsustainable

Food is a vital component of human health, yet in the current food system comes at an enormous cost to both human and environmental health, and to the livelihoods of the world's poorest. The food sector accounts for **30% of the world's total energy consumption**, and **22% of greenhouse gas emissions**⁵. Nearly 1/3 of food produced globally never makes it into a mouth – an amount that **could feed 2 billion people**.⁶ Beyond draining already-threatened natural resources, food waste has serious economic impacts along the food supply chain, representing over **\$1 trillion in value lost**⁷ for producers, processors, and retailers. Losses are highest among the most profitable and nutritious foods such as animal products and fresh fruits and vegetables, which are highly perishable.

Opportunities To Increase Sustainability Across the Food System

ACDI/VOCA recognizes that transforming food systems to be more sustainable is an immediate priority to protect human and planetary health. This transformation does not need to come at the expense of economic prosperity; sustainable food systems transformation is an opportunity to support stable, diversified livelihoods, ensure resilience in agriculture and markets, and improve food security. ACDI/VOCA utilizes opportunities to enhance sustainable production and consumption across the food system by:

- Demonstrating the economic benefits of resource-efficient production and processing practices
- Building demand for healthy, sustainable diets including local nutritious climate-resilient crops
- Building capacity of retailers to assess and meet consumer demand for eco-friendly products
- Promoting practices and technologies that reduce spoilage and loss among all actors



Food System Sustainability at work in ACDI/VOCA Projects

Reducing food waste through post-harvest handling: In Burkina Faso, the [USAID-funded ViMPlus Activity](#) has trained women's groups on solar drying techniques to preserve green leafy vegetables for consumption throughout the lean season. Drying the vitamin-A rich leaves prevents waste in the rainy season, when they grow in excess, and allows households to save income in the lean season when vegetables are most expensive.

Promote consumption of sustainable crops and improve shelf-life: The [Walmart Foundation-funded APFMRP II](#) project in India, implemented by Tanager, has worked with farmer-producer organizations to develop nutritious and desirable millet products. The grain is less resource-intensive than many other staple crops grown in the region, and high in fiber and minerals. The FPO has also installed improved nitrogen-flush packaging technology, drastically increasing the shelf life of the millet products.

⁵ FAO, "'Energy-Smart' Food for People and Climate," *Issue Paper*, 2011, <http://www.fao.org/3/a-i2454e.pdf>.

⁶ FAO, *Food Loss and Food Waste: Causes and Solutions* (Rome, 2011), <https://doi.org/10.4337/9781788975391>.

⁷ FAO.

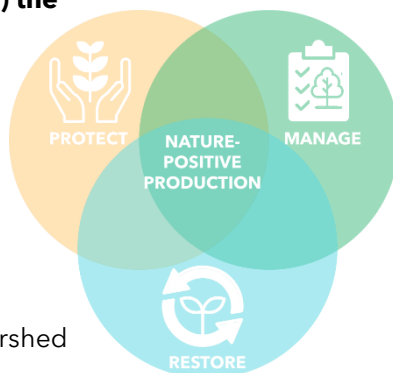
Building Back Better: Nature-Based Food Systems

Action Track #3: Boost nature-positive production

A Vicious Circle: With more than a third of the world's land surface and 75% of freshwater resources now devoted to crop or livestock production,⁸ the global food system is the single biggest threat to nature. Plant and animal agriculture has caused massive biodiversity loss, overfishing in much of the oceans, three quarters of the world's deforestation, and approximately one quarter of all greenhouse gas emissions. In turn, ecosystem degradation compromises our ability to nourish current and future generations, increases resource conflict, and spurs the spread of zoonotic diseases like Ebola, SARS and COVID-19. With the global population expected to exceed 10 billion by 2050, systems need to not only "produce more with less," but also play a key role in fostering healthy ecosystems.

Boosting Nature-Positive Production: Nature-positive food systems involve meeting the demand for nutritious food while managing natural resources in a regenerative way. Biodiversity is a cornerstone of nature-positive food systems because of its capacity to filter water, attract pollinators, control pests, regulate climate, build soil, and store carbon. Nature-positive food systems refer to three interlinked conditions: **1) the protection of natural ecosystems** by avoiding their conversion to other uses, and by returning some land and water back to nature; **2) the sustainable management of productive systems** to deliver net-positive biodiversity benefits; and **3) the restoration of degraded land** by rehabilitating once productive land.

Integrated landscape management (ILM) is broadly defined as a framework for harmonizing policy and practice for multiple land uses (e.g., protected areas, for food, fodder, fuel, fiber) within a given geography. The conservation of natural resources is best done at the landscape scale because the ecosystem services provided by a river or forest, for example, are shared by a multitude of actors across farm boundaries. Landscape-level interventions include climate-smart agriculture (CSA), agroforestry, sustainable grazing management, watershed management, and soil and water conservation.



Nature-positive production in ACDI/VOCA Projects

Protecting forests and biodiversity: In Liberia, the USAID-funded Forest Incomes for Environmental Sustainability (FIFES) Activity helped communities secure the rights, governance structures, viable businesses, and partnerships needed to sustainably manage and benefit from forest resources. This included conserving the biodiversity of 11 community forests, increasing the productivity of forest-product value chains, and developing enterprises to provide income for farmers.

Promoting agroforestry: The USAID-funded Jamaican Rural Economy and Ecosystems Adapting to Climate Change (Ja REEACH) I and II Project increased climate change resilience and promoted sustainable natural resource management. Ja REEACH improved drought forecasting and introduced agroforestry innovations, including rotational sequential intercropping, windbreaks, spot planning to increase tree cover, and sustainable apiculture.

Championing CSA: In Ghana, the USAID-funded Agricultural Development and Value Chain Enhancement (ADVANCE) II Project maximized productivity and the adoption of environmentally sustainable practices in maize, rice, and soybean value chains. CSA techniques adopted by smallholders included the use of hybrid seed, fertilizer, manual tilling techniques to minimize soil disturbance, and the promotion of cover crop systems.

⁸ IPBES, 2019. *Global assessment report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*, Brondízio, E. S., Settele, J., Díaz, S., Ngo, H. T. (eds). IPBES secretariat, Bonn, Germany.

ACDI/VOCA Empowers Women and Youth in Food Systems

Action Track 4: Livelihoods and Equality

Food Systems suffer from Gender and Social Inequalities

Women are key contributors to food systems, playing an important role in food production, processing, marketing, and distribution in food value chains. However, gender inequalities in access to agricultural land, inputs, finance, and group memberships limit their capacity to fully contribute to and benefit from food system growth. **Women contribute at least 40% of labor for crop production in developing regions, but only 10-20% of women own agricultural land.** Similar constraints exist for youth and social groups that face systemic discrimination. **In developing countries 57% of youth (15 to 19-year-old) are employed in agriculture. Yet, they have less assets and limited access to formal and informal finance.** Social and gender norms also influence food distribution practices within households leading to differential access to food.

Promoting Inclusive Livelihood Opportunities in Food Systems

Addressing these inequalities is key to both ensuring the health and agency of women and youth, as well as the capacity of the food system to provide nutritious food, environmental health, and sustainable livelihoods. Food systems interventions must be informed by a thorough understanding of context-specific gender and social norms that create barriers and inequalities to inputs, services, and end markets. Interventions must go beyond addressing these inequalities to transforming the underlying structures that create them through increasing agency and empowerment.

ACDI/VOCA's [GenderFirst toolkit](#) offers a valuable approach to assessing gender and youth specific barriers and opportunities in food systems, designing interventions to address these barriers, and avoiding harm. Across our projects, we seek to:

- 1) Improve access to inputs and time-saving technologies to improve productivity of women and youth farmers,
- 2) Increase access to finance and improve numeracy to enable women- and youth-owned businesses to thrive,
- 3) Promote positive social and gender norms around the importance of women's equitable control over income and access to nutritious foods within the household.

Women and marginalized groups often rely heavily on natural resources to sustain their livelihoods, necessitating their active engagement in developing strategies to protect and sustainably manage natural resources.



Gender And Youth Equitable Livelihoods in ACDI/VOCA Projects

Improving access to resources and agency for women: In Burkina Faso, the Bill & Melinda Gates Foundation funded SELEVER project increased access to poultry inputs, services, and finance for female producers and female-owned enterprises. SELEVER also engaged men and implemented social behavior change activities to address social norms limiting women's ownership and roles in poultry production, as well as increase women's decision making and control of household income.

Promoting gender inclusive business models: In Bangladesh, the USAID-funded Feed the Future Rice and Diversified Crops Activity used a gender inclusive business case and gender-focused facilitation approach to urge private sector companies to employ women in crop input and advisory service distribution models. This led to improved access to yield-boosting inputs and increased access to crop output supply modes for women farmers, leading to increased incomes and food security.

Strengthening youth-owned enterprises: In Kyrgyzstan, the USAID-funded Agro Horizon project provided financial support to young entrepreneurs to set up a dried nut processing facility which led to a significant scaling up of their activities, growth in sales and the creation of additional job opportunities for youth beyond production-level of the food supply chains.

ACDI/VOCA Builds Resilient Food Systems

Action Track #5: Build Resilience to Vulnerabilities, Shocks, and Stress

Increased Shocks Undermine Food Systems

The frequency and intensity of shocks—all drivers of food insecurity—are on the rise. **Violent conflict has increased 86 percent** since 2010, more than doubling the number of internally displaced persons between 2010 and 2021.⁹ And **96 percent of low- and middle-income countries have reported exposure to extreme climate events** like droughts and floods between 2015 and 2020, compared to 76 percent from 2000 to 2004.¹⁰ In 2020, the COVID-19 pandemic pushed an estimated 124 million people into extreme poverty, particularly **affecting marginalized groups who continue to experience widening income inequality**.¹¹ The rural poor are frequently caught in a vicious cycle of hunger and malnutrition, environmental degradation, productivity loss, economic vulnerability, and growing conflict.

ACDI/VOCA's Approach to Building Resilience in the Food System

Building resilient food systems that don't simply absorb shocks but also adapt and transform in response to or in anticipation of these shocks¹² is critical to ensuring food security and nutrition, increasing economic benefits, mitigating conflict, and securing resources, particularly for vulnerable groups. ACDI/VOCA's resilience programming seeks to build absorptive, adaptive, and transformative capacities linked to USAID's resilience indicators.



FIGURE 1 USAID'S RESILIENCE INDICATORS

⁹ Food and Agriculture Organization, 2021, *The State of Food Security and Nutrition in the World 2021*, pp. 62.

¹⁰ Ibid, pp. 63.

¹¹ USAID, 2021, Draft US Government Global Food Security Strategy, p. 4.

¹² Bene, C., A. Newsham, M. Davies, et al, 2014, "Resilience, Poverty and Development", *Journal of International Development*, 26 (5): pp 598-623.

The key to success is understanding what combination of resilience capacities best addresses the needs of target populations in specific contexts.¹³ Designing resilience programming that responds to these needs should include the following:

- **Use of analysis tools** such as ACDI/VOCA's Rapid Resilience Assessment, [Market Systems Diagnostic](#), or USAID's [Guidance for Assessing Resilience in Market Systems](#) to understand the shocks, stressors, and existing coping mechanisms of program stakeholders and to identify mitigation measures that can be integrated into program design
- **Sequencing, layering, and integration (SLI)** to address multiple targets and outcomes at different levels of the target system (households, communities, firms, etc.) to build resources, relationships, capacities, and aspirations
- **Contingency planning** to ensure program readiness to respond rapidly to shocks if necessary
- **Ongoing monitoring** of stakeholder wellbeing and impact of interventions on participant capacity to respond to shocks and stressors, paying particular attention to which combination of interventions/capacities are more likely to result in improved resilience outcomes

Building Resilience through ACDI/VOCA Projects

Using SLI to build household food security: In Burkina Faso, the [USAID-funded Victory Against Malnutrition Plus \(ViM Plus\) Activity](#) designed the Stabilize-Adapt-Thrive approach to address existing shocks. The figure below shows how the four-purpose design – focused on livelihoods, governance, inclusion, and water, sanitation, and hygiene and maternal and child health and nutrition – will build resilience of households, communities, structures, and systems through thoughtful planning of how interventions build on each other.

Disaster risk management in response to flood-related shocks: In Paraguay, the [USAID-funded Disaster Risk Reduction in Central Department Program](#) seeks to strengthen the ability of the government of Paraguay and vulnerable households in target intervention areas to prepare for, mitigate, and adapt to flood-related shocks. This is achieved through building the capacity of disaster risk management organizations and supporting adapted livelihoods activities for affected households.

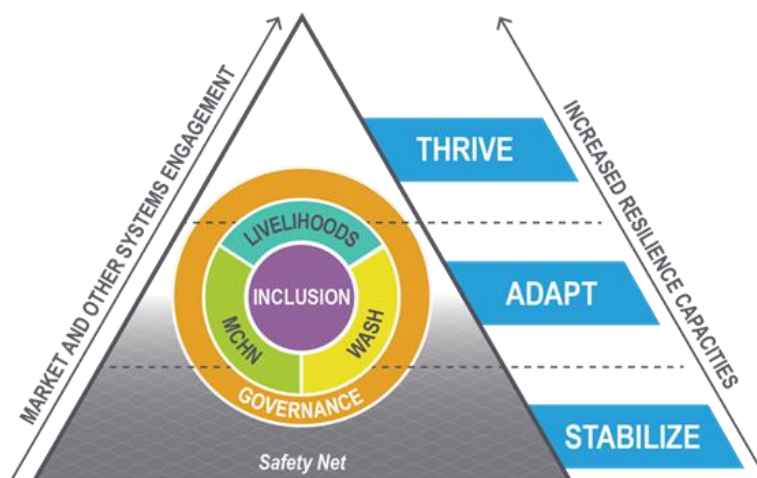


Figure 2 The ViM Plus Activity's SLI Approach

Building restaurant staff capacity to respond to COVID-19: Our [Transforming Market Systems Activity \(TMS\)](#) in Honduras conducted a barrier analysis of the restaurant sector after the onset of COVID-19. This analysis found that restaurant staff training in health measures was the key to increased adoption of health measures necessary to reopen their businesses. TMS partnered with the National Chamber of Tourism, National Vocational Institute and Gastronomic Association of Honduras to develop a training manual for restaurants and provide online training to 5,000 restaurant staff from 1,571 companies.

¹³ For more information on results of context-specific resilience monitoring results, see the USAID-funded Resilience Evaluation Analysis and Learning's (REAL's) "[Somalia Resilience Recurrent Monitoring Survey](#)", "[Resilience in the Sahel Enhanced Program Impact Evaluation](#)", and "[Zimbabwe Resilience Research Report](#)".