

Seeing the Forest *and* the Trees: Systems Thinking for Better Nutrition in Ghana

Introduction

Today, the world faces a double burden of malnutrition, with almost three billion people suffering from either undernutrition or overweight and obesity (FAO 2013). No country is untouched. Hunger and inadequate nutrition contribute to high rates of maternal, infant, and child anemia, morbidity, and mortality. They also result in impaired cognitive function and reduced future productivity, as well as the development of obesity and nutrition-related chronic conditions like diabetes.

The causes of this crisis are numerous. In 2014, the United States Agency for International Development (USAID) released its Multi-Sectoral Nutrition Strategy (2014–2025) recognizing the “multi-factorial causation” of malnutrition (USAID 2014a), and a local systems framework, Local Systems: A Framework for Supporting Sustained Development (USAID 2014b), which suggested that multi-sectoral approaches would benefit from using systems thinking to strengthen design, implementation, and measurement. Although there is growing enthusiasm for systems thinking, very little guidance exists on how a country can incorporate the approach into their program design and implementation (see box titled Priority 1,000-Day Household Behaviors).

In response, in 2015, USAID’s multi-sectoral nutrition project, Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING), developed a simple framework for



Photo credit: SPRING

Members of a mother-to-mother support group listen to a SPRING/ Ghana radio program on infant and young child feeding.

What Is a Systems Approach?

A systems approach calls on program planners and policymakers to look at the forest AND the trees – to consider and prioritize each factor individually and together that should be addressed. A systems approach does not mean everyone does everything at once, but it does push programmers and policymakers to be intentional about which factors are and are not prioritized; to recognize the interrelationships between them; to anticipate possible negative consequences; and to take advantage of synergies with existing systems, programs, and structures. SPRING’s systems framework illustrates these relationships and includes several cross-cutting factors that influence, interact, and impact nutrition (SPRING 2015).

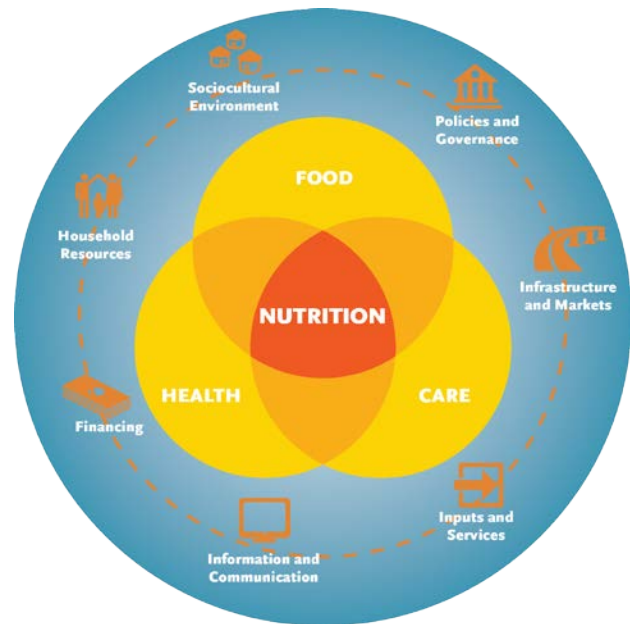
applying systems thinking (figure 1). This framework took inspiration from USAID’s paper on local systems (2014b), the United Nations Children’s Fund (UNICEF) framework of the causes of undernutrition (UNICEF 1990, 2013), and the World Health Organization’s building blocks for health systems (WHO 2010).

SPRING hypothesized that nutrition-specific and nutrition-sensitive programs¹, given the multi-sectoral nature of solutions to malnutrition, could benefit from a systems approach. We went further, hypothesizing that, in the absence of this type of an approach, programs may not adequately anticipate unintended consequences or strengthen existing systems to ensure sustainability and facilitate scale-up.

We developed this brief, which explores SPRING’s work in Ghana, as well as a companion brief on our work the [Kyrgyz Republic](#),² for those responsible for designing and implementing multi-sectoral nutrition programs like SPRING as well as for the global nutrition community of funders and advocates like the Scaling Up Nutrition (SUN) Movement. Our goal was to determine how well the SPRING systems framework maps to “real world” nutrition programs. It is important to note that we did not deliberately apply systems thinking during program design or implementation in Ghana because we had not yet developed the framework or related tools. This analysis is, therefore, a retrospective “test fit” to inform future programs.

By using the framework to guide this qualitative mapping exercise, we were able to identify areas that were successful as well as those that could be strengthened with a systems-thinking approach. In the sections that follow, we explore the extent to which each factor in the systems framework was considered and/or addressed as well as the attention given to feedback loops and unintended consequences. We end with a summary of our lessons learned regarding the systems framework.

Figure 1. Framework for Systems Thinking and Action for Nutrition



¹ Hereafter we refer to these as “nutrition-related” activities. We consider the systems approach to include both nutrition-specific and nutrition-sensitive activities.

² We were interested in conducting this mapping exercise of programs that set out to apply systems thinking. However, it was difficult to find such programs, much less any that would provide inside access. In the end, we learned from examining two of our own country experiences.

Background on Ghana

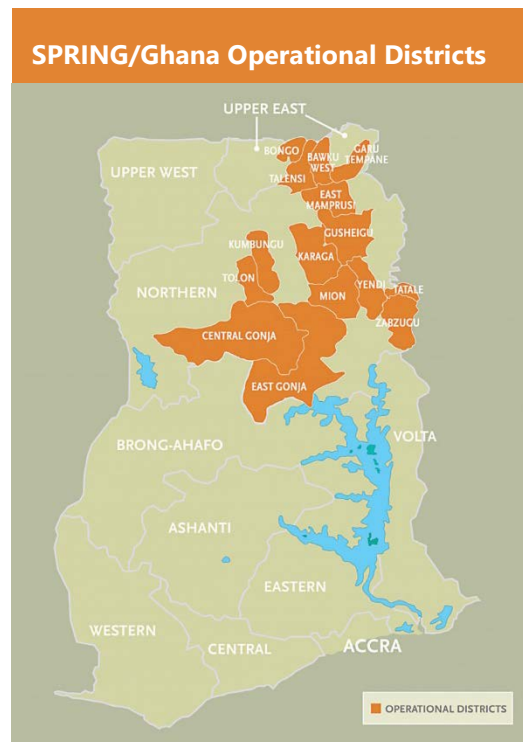
In 2013 USAID/Ghana asked SPRING to work in the Upper East and Northern Regions of the country. Both of these regions are marked by high levels of poverty, low levels of education, and seasonal food insecurity. According to the 2014 Ghana Demographic and Health Survey (GDHS), the Northern Region has the highest rates of both stunting and wasting, with a stunting rate of 33.1 percent and a wasting rate of 20.0 percent. Meanwhile, the Upper East Region has a stunting rate of 14.4 percent and wasting rate of 10.8 percent (GSS, GHS, and ICF International 2014). The incidence of childhood anemia in the Northern Region is, at 82.1 percent, the highest in the country, followed by Upper East Region at 73.8 percent. Poor diets, low dietary diversity, high rates of illness (especially malaria), and poor sanitation contribute to stunting and anemia in Ghana.

SPRING Program Planning and Design

USAID funded SPRING to improve nutritional status, particularly as it relates to stunting and anemia among women and children, through nutrition-related activities³ implemented in 15 districts in the Upper East and Northern Regions. Initially, we were asked to plan for three years of implementation, through September 2016. Our program was ultimately extended through October 2017.

When we started working in Ghana, data from the 2014 GDHS were not yet available and a baseline survey was not within the scope of the project. In addition, while some formative research on the barriers to optimal nutrition, food, and care practices in the country had been conducted, there were gaps in information. Based on those gaps and the objectives that USAID had articulated for us, we developed plans for additional formative research. Unfortunately, this research was never conducted out due to time constraints, lack of financial support, and pressure to begin implementation.

We designed our program using the information we had and based on priorities of the Government of Ghana (GOG) and Feed the Future, good program design practices, what we knew to work from the scientific literature and past projects, and available funding. In particular, the SPRING approach was guided by USAID's multi-sectoral nutrition strategy (USAID 2014a) and the socio-ecological model of behavior change, both of which encourage thinking across sectors and at multiple levels.⁴ Working with actors across sectors and at various levels, we selected 14 nutrition-related behaviors⁵ (see box



³ Note also that we use the terms "activity" and "intervention" interchangeably.

⁴ For more information, see https://www.unicef.org/cbsc/files/Module_1_SEM-C4D.docx and https://c-changeprogram.org/sites/default/files/sbcc_module0_intro.pdf.

⁵ Throughout this document we use the terms "behavior" and "practice" interchangeably to refer to nutrition-specific and -sensitive actions that directly or indirectly affect nutrition.

titled Priority 1,000-Day Household Behaviors) to ensure that our program holistically addressed the nutrition-related needs of mothers and young children through community/social mobilization, behavior change communication, and systems strengthening. We called this our “[1,000-Day Household](#)” approach.

Mapping SPRING Actions to the Systems Framework



Policies and Governance

When we began working in Ghana, there was a solid policy framework at the national level for health, nutrition, and non-communicable diseases, including a multi-sectoral *National Nutrition Policy for Ghana*, which was updated during the SPRING project. Overall, our work in Ghana focused on the district and community levels rather than the national level, which may have led to some missed opportunities to influence national strategies and policies. But SPRING did influence policy through our work with Ghana Health Services’ (GHS) Micronutrient Task Team on an anemia landscape analysis (SPRING and Ghana Health Service 2016). We also supported the development of a national anemia prevention and treatment manual for health workers and community volunteers.

“Before SPRING we worked with communities, but not as many and it wasn’t as systematic or coordinated with others and most of our visits were to communities close to our office.”

— District Environmental Health Officer

At the district and community levels, SPRING worked extensively to strengthen governance for nutrition by:

- Participating in government planning processes, as well as quarterly and annual review meetings. SPRING’s support helped to improve the regularity of meetings and encouraged multi-sectoral engagement, while also building the capacity of GOG staff. This helped ensure the coordinated implementation of multi-sectoral activities and services delivered by health workers, district environmental health, community development, school staff, and agricultural extension workers in communities.

The Systems Framework: Policies and Governance

Policies affect food, care, health, and the environment—although their level of impact varies according to adherence and enforcement. SPRING’s Pathways to Better Nutrition (PBN) case studies in Nepal and Uganda demonstrate that clear, long-term, multistakeholder policies are critical for increasing commitments to improved nutrition (Pomeroy-Stevens et al. 2016a, 2016b). “Good governance,” according to the former United Nations (UN) Secretary General Kofi Annan, “is perhaps the single most important factor in eradicating poverty and promoting development” (UN 1998). The importance of collaboration and coordination, one of the elements of nutrition governance, has been widely emphasized because it affects the implementation of multi-sectoral nutrition plans at all levels and across departmental and sectoral boundaries (Levinson, Balarajan, and Marini 2013). Our PBN case studies also reveal that the prioritization of nutrition, another element of good governance, determines the amount of funding, time, and effort it will receive (Pomeroy-Stevens et al. 2016a, 2016b).

- Training GHS and MOFA regional and district managers in nutrition to ensure their understanding and prioritization of nutrition.
- Supporting district managers from multiple sectors in the use of SPRING’s District Assessment Tool for Anemia (DATA) to prioritize anemia prevention and treatment interventions and identify cross-sectoral activities for collaborative action (SPRING 2016).
- Conducting advocacy activities with community leaders to strengthen their understanding of and commitment to nutrition and to develop action plans for nutrition.

Despite our focus on the district and community levels, our work has or will likely influence national policies, governance structures, and programs. Indeed, discussions are underway to determine how the SPRING approach in Ghana could be sustained and scaled up.

“I appreciated the collaboration with SPRING. We weren’t just trained; they also involved us in the planning sessions and in reviewing the training. It reinforced and enriched what I should be doing in my job. During the training we practiced what we were taught—this was new!”

—District Agriculture Extension Officer

Priority 1,000-Day Household Behaviors for Better Nutrition

Infant and Young Child Feeding

- Initiate breastfeeding early and continue exclusive breastfeeding for the first 6 months.
- Begin appropriate complementary feeding (animal- source food, diverse diet, recommended frequency, and quantity, and responsive feeding) at 6 months.
- Continue breastfeeding for at least 2 years.

Anemia Prevention in Pregnant Women

- Attend the first ANC visit in the first trimester.
- Consume diverse foods including animal-source foods and nutrient-rich vegetables.
- Take iron folic acid tablets as recommended.
- Sleep under an insecticide-treated bed net every night.
- Get the recommended dose of intermittent preventive therapy.

Improved WASH Practices

- Wash hands with soap prior to food preparation, feeding children, and after defecation or handling infant/child feces.
- Safely dispose of adult and child feces through a latrine.
- Keep children under two away from key contaminants (soil, animal and human feces).
- Disinfect drinking water (ideally through boiling) for children six months to two years of age.


Reduced Aflatoxin Contamination

- Select good planting sites, prepare land according to guidelines, select healthy seeds, conduct germination test, follow good planting practices, practice regular pest, weed, and disease control.
- Avoid mounding groundnuts in the field, dry on a tarp, discard bad groundnuts, and store according to guidelines.



Infrastructure and Markets

In the Upper East and Northern Regions there are few roads, schools, or health facilities. Those that exist are often in poor condition. The availability of safe drinking water in homes and health facilities is also extremely low. Neither infrastructure nor market development was within SPRING's scope of work in Ghana. Rather than intervene directly to improve physical infrastructure, we partnered with others already working to do this in the region, including USAID's ADVANCE project. Unfortunately, geographical overlap with other projects, even ADVANCE, was relatively limited. This indicates a need to plan projects and services based on coverage needs as well as strong coordination between government, donors, and implementing partners.



Inputs and Services

In line with our 1,000-Day Household approach, we emphasized inputs and services across a range of nutrition-related sectors, such as equipment for food production and nutrition equipment and supplies within the health sector. Accordingly, SPRING:

- Procured nutrition commodities (zinc tablets and oral rehydration supplements to treat diarrhea), small equipment (HemoCue machines, microcurvettes, weighing scales, height boards, tapes for measuring mid-upper arm circumference), health management information systems (HMIS) program registers, and child health cards.
- Provided agricultural inputs, such as tarpaulins and storage bags, and labor-savings tools, such as planters and shellers, for Farmer Field School demonstrations. Agriculture extension officers report that many of the trained

The Systems Framework: Infrastructure and Markets

Infrastructure, including roads and physical structures like health facilities, are critical to good nutrition: to educate and provide health and nutrition services and to store, distribute, and sell agricultural, food, sanitation, and hygiene products. The market is also essential in terms of the delivery, sale, purchase, and ultimately consumption of water, sanitation, and hygiene (WASH) and health products. For example, building a road to a market or trading post may allow a community to engage in value chains that impact incomes and access to healthy, diverse foods. And improving a market's sanitation facilities can reduce the spread of food and waterborne pathogens.

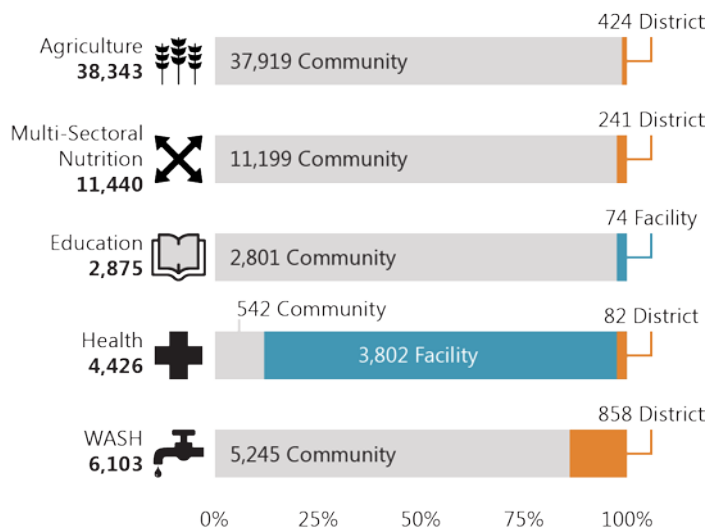
The Systems Framework: Inputs and Services

A systems approach takes into consideration the nutrition-related inputs, products, and supplies necessary for food production, storage, preparation, and distribution of nutrition services, ranging from seeds, fertilizers, silos, and food-processing equipment to preventive and curative medicines, medical devices, and technology. However, these inputs are of little use without the human resources and services to provide, promote, and distribute them, such as teaching, selling, health care, and extension and advisory services. Despite a global consensus on actions that are essential to address malnutrition, the workforce to conduct those actions is often insufficient, under-qualified, and unsupported for the task. A systems approach calls for better integration of nutrition into a wide range of broadly-defined services.

farmers independently purchased tarpaulins and storage bags, indicating that some of SPRING’s work is sustainable.

- Distributed sweet potato seedlings and vitamin-A fortified maize through partnerships with other USAID-funded projects, particularly the Resiliency in Northern Ghana (RING) and Agriculture Technology Transfer projects.

Figure 2. Number of People Trained in Nutrition-related Topics from Each Sector and at Various Levels



While we recognized the importance of meeting immediate needs, systems thinking recognizes that external procurement and distribution can undermine existing supply systems. Therefore, SPRING trained health facility staff in inventory management processes, including ordering, distributing, and storing supplies, for longer-term sustainability of nutrition commodity procurement and logistics.

Strengthening the quality and availability of nutrition services was one of our primary focus areas in Ghana. We provided training, supportive supervision, and technical and financial support to complement other GOG and donor activities. Working closely with regional and district government officials, SPRING:

- Adapted UNICEF’s *Community Infant and Young Child Feeding (C-IYCF) Counselling Package* to the Ghanaian context for training health workers and community volunteers.
- Developed training packages on anemia prevention and treatment and pre- and post-harvest cultivation and storage practices.
- Trained service providers from a variety of sectors (including WASH, agriculture, and health) and levels (including community, facility, and district) on a range of nutrition-related topics (see figure 2).
- Supported districts in forming community-level Farmer Field Schools.

- Reinforced and complemented training with a health facility quality improvement (QI) approach, through which facility staff regularly and systematically analyzed problems, identified solutions, implemented them, and tracked their progress.
- Conducted supportive supervision and coaching visits in collaboration with GOG regional and district-level management teams to improve the quality of services while building capacity.

The provision of inputs and services was one of the strongest aspects of SPRING’s work in Ghana. We took a multi-sectoral approach and considered both the immediate needs (e.g., nutrition supplies and provider training) while implementing longer-term strategies to strengthen existing systems, particularly health.



Information and Communication

The GHS collects limited information on nutrition and nutrition service delivery through its HMIS. Given our regional and district focus, strengthening the national HMIS or adding nutrition indicators to existing forms, was not something we could accomplish, but we did monitor our own activities and supported collection and use of data through planning and prioritization processes; quarterly, semi-annual, and annual review meetings; and printing and distribution of GHS HMIS program registers. We also helped to ensure the accuracy of information collected by building skills of health workers, particularly their ability to track child growth.

“Because of SPRING, community members learned the causes of stunting and understood the importance of defecating in a latrine.”
—environmental health officer

The Systems Framework:

Information and Communication

Information on the availability of food; the cost of agricultural inputs; the nutrition status of vulnerable people; the implementation of actions by enterprise owners, health services providers, farmers, households, and individuals; and the existence of policies and protocols is of little use if it is not communicated effectively through mass media, community mobilization, and/or interpersonal interaction. Information and communication affect actions at all levels of food availability, care practices, health services, and the sociocultural environment. For example, changes in policies, financing, and monitoring systems will accomplish little if they are not properly communicated from the national to the community to the household level. Similarly, a lack of information communicated about the cost of agricultural inputs can affect what food is grown, stored, and/or purchased.



Much of SPRING’s work in Ghana involved communicating and promoting priority nutrition practices at multiple levels. We developed communication materials (videos, a series of radio programs and spots, flip charts, leaflets, etc.) for the nutrition, WASH, and agriculture sectors that complemented our trainings and other existing materials. We developed a series of short videos, 60–90 seconds each, on topics identified by community health workers as important: positioning while breastfeeding; attachment; making enriched, thick porridge; and meal diversity.

SPRING staff, government staff, and community members conducted social and behavior change (SBC) activities in health facilities, schools, markets, demonstration farms, mother support groups, and community meeting places. In addition, community health workers were encouraged to present videos on their mobile phones during counseling sessions and use *WhatsApp* to ask and answer questions and share nutrition-related messages and experiences.

We made a point of ensuring that these multi-sectoral SBC activities were well coordinated and harmonized to focus on the 1,000-day household. Furthermore, SPRING supplied USAID’s RING project with materials needed for sustained implementation of this approach beyond the life of SPRING.

While the approach to social and behavior change at the community level was comprehensive, we did less to communicate policies and protocols or use project learning for advocacy and policy development. Furthermore, additional effort to integrate the collection of nutrition-related indicators into existing information systems would have helped to increase the sustainability and scale of implementation.



SPRING/Ghana developed communications materials like these counseling cards to promote priority nutrition practices.



Financing

When we began work in Ghana, little had been done to assess government or donor funding for nutrition. At the district level, we worked closely with the GHS, supporting planning processes and advocating for increased funding for community mobilization activities such as community-led total sanitation triggering events and supervisory visits. Because our project team was based in Tamale in the north and focused on the Northern and Upper East Regions, it made sense to emphasize financing for these regions.

The Systems Framework: Financing

The development and implementation of policies and the strengthening of governance, infrastructure, markets, inputs, services, information, and communication require adequate and effective financing. Only by taking a broad systems approach can financing be effectively allocated and used to improve nutrition holistically. The USAID Multi-Sectoral Nutrition Strategy states, “political will for nutrition must be reflected through financial support” (USAID 2014a). Similarly, the 2016 Global Nutrition Report asserts, “commitment without funding represents unfulfilled good intentions” (IFPRI 2016). Lack of financing for nutrition is one of the most significant barriers to reducing undernutrition.



Household Resources

Many households in northern Ghana lack resources, particularly during the lean season, to adopt behaviors that we promoted. Recognizing this, SPRING undertook the following activities to help increase household resources and/or prioritize the use of household resources for nutrition:

- Advocated for the USAID-funded ADVANCE project to work in SPRING areas and prioritize 1,000-day households. Their goal is to increase productivity and household income among small-holder maize, rice, and soybean farmers.
- Supported the GOG's Livelihood Empowerment against Poverty (LEAP) program and USAID's LEAP 1000⁶ implementation committees to ensure that the most-vulnerable communities were selected and that our target communities overlapped whenever possible.
- Collaborated with the RING project to promote village savings and loans associations among mother-to-mother support groups.
- Established Farmer Field Schools with the Ministry of Food and Agriculture to reduce post-harvest loss, prevent aflatoxin contamination, and increase orange-fleshed sweet potato production.
- Improved household knowledge of nutrition through counseling and communication and encouraged households (and communities) to invest resources in clean play spaces for children or pro-nutrition products such as labor-savings tools, storage bags for aflatoxin prevention, latrine construction, and handwashing stations.

The Systems Framework:

Household Resources

Household resources include human resources (knowledge, skills, agency, and self-confidence) as well as financial resources and assets, including technology. Access to and equitable intra-household distribution of these resources drive how they are used and how services are accessed. They also affect understanding and adoption of optimal care practices as well as nutritional status. For example, education and income enable women to make well-informed decisions regarding their own health and nutrition as well as that of their children. A systems-thinking approach links various efforts to improve household resources and maximizes the use of resources for education, food, health, WASH, and other nutrition needs.

⁶LEAP 1000 is implemented as part of the GOG's LEAP, a social protection program providing monthly cash transfers to poor households with pregnant women and children under two years old.



Sociocultural Environment

As in many places, household nutrition is often thought of as the responsibility of women in Ghana. However, women are influenced by husbands, fathers, grandmothers, religious leaders, and village chiefs, as well as the larger sociocultural environment (religion, culture, community, and the consequent social norms). A systems approach must consider those forces, power dynamics, and relationships.

In Ghana, to reach these “influencers” SPRING systematically identified and engaged a range of community structures in promoting, adopting, and sustaining priority behaviors. In addition, we organized sensitization and planning meetings with community leaders and piloted a father-to-father support group model that was well-received and had the potential to expand reach.

The Systems Framework: Sociocultural Environment

The sociocultural environment, including gender roles, relationships, cultural values, customs, and norms, influences perceptions of and access to resources and services, as well as nutrition-related behaviors and decisions around what is produced, purchased, prepared, consumed, stored, or disposed. The sociocultural environment mediates interactions with all of the other factors described above. For example, beliefs that children should be given sugar water at birth to whet their appetite or that exclusively breastfed children need water when the weather is hot present barriers to the adoption of evidence-based breastfeeding practices.



Interactions, Consequences, and Processes of Change

In Ghana, we tried to ensure that each priority behavior was enabled or promoted by each factor in the framework in a mutually reinforcing fashion. Guided by the socioecological model and our [1,000-Day Household](#) approach SPRING—

- engaged a wide range of influencers, particularly at community and district levels
- coordinated with actors from multiple sectors to leverage positive feedback loops and avoid negative consequences
- addressed interactions among factors through coordination, communication, review, and use of data across sectors during review meetings
- harmonized our work to improve antenatal care, strengthening supervision, training health care providers, and promoting the use of those services among community members
- worked at multiple levels, addressing multiple factors in the systems framework, to ensure rapid identification and treatment of anemia—developing policies and protocols, procuring HemoCue kits for rapid hemoglobin tests at the community level, and training health professionals in the use of the tests and the referral of cases.

The Systems Framework:

Interactions, Consequences, and Processes of Change

A systems approach asks policymakers as well as program planners and manager to recognize the interrelationships between factors, anticipate possible negative consequences, and take advantage of synergies with existing systems, programs, and structures. For example, including men in support groups might reduce women's decision-making power regarding IYCF. Likewise, promoting the processing of nutrient-rich foods by women could ultimately overburden them rather than empower them or provide them with access to resources.

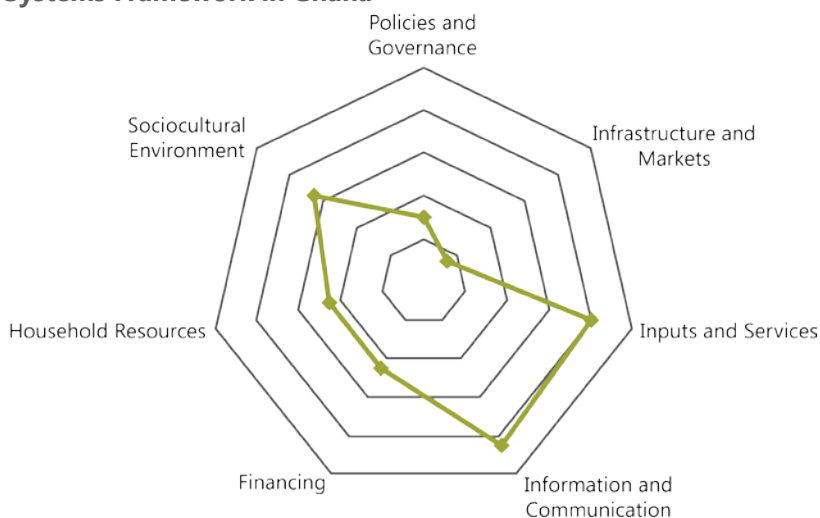
Conclusions on the Role of Systems Thinking

The primary goal of this exercise was to determine how well the systems framework mapped to projects on the ground. In so doing, it was important to recognize that no one project is likely to address all areas of the systems framework and that projects can form multi-sectoral relationships and partnerships with programs and organizations from multiple sectors to fill the gaps.

In Ghana, we found that our work considered and sought to address many of the factors depicted in the framework. For example, we used UNICEF's framework depicting the multi-dimensional causes of malnutrition (1990) to guide our 1,000-Day Household approach, and the socio-ecological model of the multifaceted and interrelated determinants of behaviors to guide our approach to social and behavior change. This suggests an overlap between systems thinking, multi-sectoral approaches, theories of behavior change, and principles of good program design.

Mapping our activities to the systems thinking framework helped highlight which factors SPRING addressed, how we harmonized actions at various levels and with various sectors, and how we coordinated with existing programs and structures at the district and community levels to address areas outside our mandate. SPRING focused on district-level governance, services, and communication, with household resources and the sociocultural environment considered, but not always directly addressed. The exercise also helped us identify areas that were not addressed, such as policy, financing, inputs, and infrastructure (see figures 3 and 4 on the following pages).

Figure 3. SPRING's Level of Engagement with Each Factor of the Systems Framework in Ghana



Recommendations for Systems Thinking in Nutrition Programming

Based on this exercise, we have the following simple recommendations to apply systems thinking for nutrition:

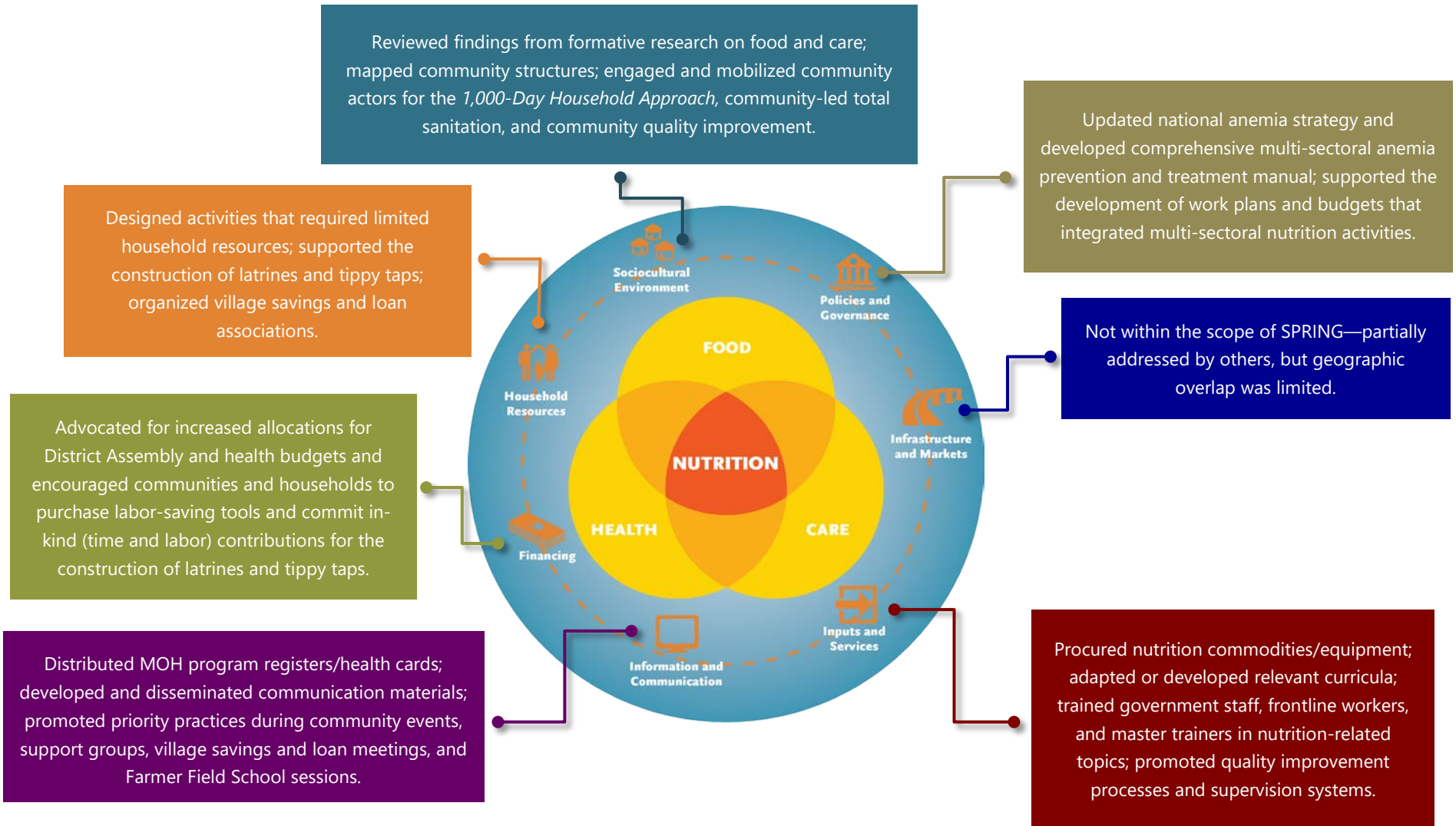
1. **Apply** systems thinking to design, implement, monitor, and evaluate programs. This means considering, if not addressing, each factor and its interactions, processes of change, and consequences as well as periodically mapping programs.
2. **Ensure** that projects are implemented for a sufficient time to apply systems thinking.
3. **Provide** technical leadership and structural support for projects to apply systems thinking during planning and implementation.
4. **Strengthen** coordination and collaboration across sectors, departments, and organizations and with existing structures to fill gaps.

With an increasing number of countries adopting multi-sectoral nutrition policies, we must consider how such policies can have the greatest impact. The application of systems thinking has the potential to strengthen multi-sectoral and multi-stakeholder programming for nutrition.

Additional Resources

Resources for the application of systems thinking for nutrition are limited at this time. USAID's technical note, *The 5Rs Framework in the Program Cycle*, describes a methodology for supporting sustainability and local ownership in projects and activities through ongoing attention to local actors and local systems. [+Acumen](#) offers online courses and a *Systems Practice* workbook to apply systems thinking to address complex, dynamic challenges. In addition, the USAID-funded Child Survival Technical Support Plus (CSTS+) Project prepared a manual that emphasizes systems thinking, *Taking the Long View: A Practical Guide to Sustainability Planning and Measurement in Community-Oriented Health Programming*. This guide is for project managers, planners, and evaluators of health projects in developing countries. Finally, SPRING's *Systems Thinking Assessment Tool* will be available online soon at <https://www.spring-nutrition.org/technical-areas>. <https://www.spring-nutrition.org/technical-areas/systems>.

Figure 4. Summary Findings from a Systems Thinking Assessment of SPRING's Work in Ghana



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