Intuitively, agricultural and rural development projects may seem to bear straightforward impacts on human nutrition. Yet nutrition outcomes are not traditionally within the purview of those who plan and implement rural development programs. For professionals working in this field, any improvements in nutrition that emerge as a result of their activities are likely to be considered naturally-occurring downstream effects of higher incomes and more integrated rural economies. However, much of what determines the nutritional status of a household or community has to do with the awareness of nutrition-related issues on the part of local people, and their understanding that the types of foods they consume play an important role in their health. For development agencies like the World Bank and their partners working at local levels, this raises the question of how to incorporate human development areas like nutrition and education into more conventional economic development-related concerns with agricultural production and rural transport, irrigation, communications, and energy infrastructure.

For the South Asia Food and Nutrition Security Initiative (SAFANSI), a logical starting point was to find large-scale rural development programs - large enough to draw comparisons between communities within the project area, as well as with some outside the project area altogether. Differences that emerge between communities in which the project incorporated nutrition and other communities in which it did not, can subsequently be assessed both qualitatively and quantitatively. In Sri Lanka, the Community Livelihoods in Conflict-Affected Areas Project, more often referred to simply as the Reawakening Project, was identified as one such project. The study project undertaken in conjunction with the Reawakening Project was titled Integrating Nutrition Promotion and Rural Development or “INPARD,” and it aimed to introduce and later assess the performance of activities to promote improved nutrition outcomes within the larger rural development Project.

While education and awareness activities undertaken by INPARD would duly emphasize consumers participating in the Reawakening Project, substantial efforts would also focus on development practitioners and local policy makers. These are professionals and public officials working in defined professional disciplines and sectors and separated by a division of labor in which they are highly accustomed to communicating freely with their peers, using their own vernaculars. Yet enabling them to communicate with others who work outside their field is required because human nutrition is an area that all their work affects, and their effective collaboration will be necessary in delivering results.
Among consumers on the other hand, improved outcomes rely on changing the types of food they demand, and in a context of economic growth and urbanization, promoting fruits and vegetables and making people aware of the very real drawbacks of highly-processed, commercially-advertised foods. Parents and children warrant particular priority, given that informed consumers affect nutrition across generations. The influence parents and older relatives have on dietary behaviors within the household is not surprising. The significant part that school children play, among other things in bringing home the vocabulary needed to understand nutrition issues, and lessons learned at demonstration gardens their schools maintain, was an important finding that INPARD would go on to report.

The INPARD study was undertaken in November 2013 and baseline data collection was completed the following August, after which activities began with a training program for village-level officers such as school principals, midwives, public health inspectors, and economic and agricultural agents. They interacted with community resource persons representing the village development organizations that community members themselves had been organized into. Final assessments were completed in October 2016 and the draft report went through several consultations in Sri Lanka and overseas.

The INPARD Study Areas within the Larger Reawakening Project

The study areas were located in the districts of Ampara and Moneragala, where INPARD would cover households in 112 villages that were participating in the Reawakening Project. A control group of otherwise similar villages that were not participating in the Reawakening Project was also selected for the purpose of eventually comparing with-project and without-project scenarios after INPARD was completed. An additional control group of villages was selected in Kurungela district, far away enough from Project activities to discount any possibility of demonstration effects being gleaned from awareness of Reawakening Project activities.

The training focused in large measure on how the work of organization members impacted nutrition and how collaboration between them could take place across sectors. This was followed by workshops in which newly assembled multi-sector teams drew up action plans to determine priorities and carry out interventions within the communities.

Quantitative data collected included household-, village-, and school-level information about matters like the availability of different foods and how frequently they were consumed. Biometric data measured matters like adult waist size and was complemented by participants’ self-reports of their level of physical activity, consumption of fruits, vegetables, and proteins, and whether and how often they had been drinking sodas or alcohol or smoking.

Qualitative data, often collected through focus group discussions and informant interviews, captured participants’ knowledge, beliefs, and attitudes about nutrition-related issues, and was instrumental in developing an understanding of the cultural factors that influenced behaviors.

Study Areas

The process of consultation and participatory learning on the part of village-level officers working under the auspices of the various concerned
ministries and community members led to the formulation of a series of interventions which were classified as belonging to one of five areas. Agricultural interventions focused for the most part on household level gardens and how they could be used to produce highly nutritious foods. They featured public community events like gardening competitions, and very importantly included basic instruction on how to produce the compost fertilizers and bio-pesticides necessary for cultivating organic foods. Nutrition interventions promoted awareness of issues pertaining to food quality, with particular focus on infant and early childhood nutrition. These featured training on how to prepare highly nutritious foods, and on participants’ ability to recognize signs of nutrient deficiency when they saw them. Health interventions were largely parallel to nutrition ones but addressed issues in addition to food quality such as hygiene and included sports and exercise programs. The production and marketing of “health foods” paralleled agricultural interventions to some degree, but placed greater emphasis on food as commodities and the development of new markets specializing in their sale. Very significantly, these interventions also went to some lengths in treating health food production and sales as a source of self-employment. Finally, social development interventions included sports and social activities for children, youth, and adults, and prevention of negative behaviors like drinking alcohol and smoking.

**Case studies undertaken in the INPARD program**

Yogurt production and marketing in the Kithulkotte area of Moneragala district, where limited protein intake and low demand for dairy products had been a dietary issue, was identified by numerous stakeholders.

Low protein intake was similarly a concern in the village of Abhayapura in Ampara district, where a local variety of fresh water fish known as Rohu was shunned by consumers as undesirable - until upon further investigation, stakeholders found that it is actually considered a delicacy when smoked instead of served fresh. In the village of Wewinna in Ampara district, low rates of consumption of fruits and vegetables was a serious nutritional issue, and the conventional solution of promoting home gardening had been rendered less feasible by the area’s long dry season. School children played an important role in disseminating knowledge of technical approaches to managing water scarcity such as water harvesting and wastewater management.

**Results**

Changes reported in INPARD villages were notable at both the village and school levels, and did a good deal to vindicate the value added of work purposefully arranged across sectors. Among those reflected in village datasets, some of the most impressive changes were seen among adults who were newly informed of the benefits of improved dietary behaviors. Daily intake of fruits and vegetables increased among both men and women, and in areas where excessive sodium intake was identified as an issue, salt consumption declined. The proportion of adults whose body weight was classified as “normal” increased and those with a healthy waist circumference increased by more than 7 percent among both men and women – important progress in a short period of time in places where people had previously been classified as overweight or obese.

School data likewise registered some important positive outcomes among schools in project areas. The availability of sweets, soft drinks, and fast foods declined from 35 percent to 25 percent of schools in Reawakening Project schools, while the proportion of schools in which they were available increased from 13.8 to 24.1 percent. Regrettably, fewer than half the schools in both project and control areas had fresh fruit and vegetables available for students, and fewer than a quarter had milk available. At the village level however, protein consumption increased in places where low protein intake had been identified as an issue.

The INPARD interventions and analysis of their results exemplified a strategy developed by the South Asia Food and Nutrition Security Initiative in which a series of four “pillars” support an overall objective.
Four Pillars of SAFANSI Strategy

Improved Evidence and Analysis
Knowledge of what works and why to establish focus areas for programming and policies.

Enhanced Awareness and Commitment
Increasing awareness of the problems and potential solutions among critical audiences within the region.

Building Systems and Capacity
Creating the institutions and processes that will help countries better address food security and nutritional challenges in a sustainable way.

Fostering Innovations
Creating space to try new solutions that can work at the grassroots and beyond.

The first pillar, “improved evidence and analysis,” entails collecting data and using it to quantify how the impacts of rural development interventions change when they expressly incorporate nutrition outcomes as project objectives. This contributes to an empirical base available for future projects to refer to when their activities involve both health and non-health sectors. INPARD also demonstrated what “multi-sector teams” consist of and how they work in identifying nutrition-related problems and solutions and in determining priorities. A necessary part of this interdisciplinary work is developing the capacity of local government service providers to work together from within their respective fields, which was where INPARD activities began (the third pillar) – together with raising awareness among members of the communities being served (the second pillar).

The case studies were instrumental in demonstrating to service providers how to collaborate across sectors, and its practicality was subsequently re-enforced and institutionalized through monthly divisional meetings to ensure communication and accountability. Innovation (the fourth pillar), was fostered at a number of levels, which was important because the practical lessons derived from new experiences need to be shared. Encouraging microfinance committees to incorporate nutrition-related objectives as criteria they use when considering applications for loans and other financial support is a notable example. Sharing experiences and best practices at the grassroots level is likewise important, and was facilitated by new channels of communication between counterparts in different areas, for instance school principals and meal providers in neighboring villages. Opening these channels of communication enables local service providers to consult one another when planning a new activity or facing a challenge which their peers in other places may very well already have experience in addressing. Of course, they can also refer to the growing chronicle of experiences documented in the overall body of knowledge being accumulated by the larger project as its empirical base.

More broadly, INPARD established with convincing weight the practicality of work across sectors in pursuit of nutrition-related objectives, and the value of participatory learning and outcome-based strategies in achieving these objectives.

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This results series highlights development results, operational innovations and lessons emerging from the South Asia Food and Nutrition Security Initiative (SAFANSI) of the World Bank South Asia region.

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