

# SNAPSHOTS

These 10 mini program descriptions highlight the diversity of contexts in which WASH and nutrition can be integrated, and the wide array of donors, ministries, NGOs, and communities that have recognized the benefits of doing so.



## *Burkina Faso*

### **A Short Step from Improved Sanitation to Healthier Gardens and Better Nutrition in the School Canteen**

In Burkina Faso, Action Against Hunger (ACF) made one of its WASH sector priorities improved sanitation and access to clean drinking water in the schools. These efforts also stimulated a more holistic approach to nutrition education as well as production and consumption of more diverse foods by students. The first phase of a program from 2010-2012 in Tapoa Province reached 2,618 students. Funding was provided by Ensemble Foundation, Agence de l'Eau Rhin-Meuse, Brita, and Citroën.

Major activities included: 1) Improved access to clean drinking water: the program created 13 new boreholes and helped form water point management committees in each site (operated jointly by teachers, students, and parents) to protect them. Fences were built around the wells to keep livestock away. Facilities for drinking water were installed in each of the 13 schools and water quality was monitored regularly. 2) Improved sanitation: separate blocks of Ecosan toilets (which provide for separation of urine and recovery systems for fecal matter) were built for boys and girls in each school, along with facilities for washing hands. 3) Training for teachers in hygiene education (following development of a teacher's guide) and formation of school health clubs.

Members of the health clubs learned proper management of the Ecosan toilets and also visited local community gardens to see how recovery of organic matter from the toilets could be used as fertilizer. In several schools students began recovering organic matter for their own school gardens. Project training led to improved management of the gardens and production of a more varied and healthy diet for the school canteens.

Major challenges faced by the project included the mobility of teachers during a given year and difficulty finding qualified companies to produce Ecosan toilets in the area. In phase two, beginning in 2013, the program launched a "framework for joint action" at the beginning of the school year to get broad buy-in to "clean school" activities and is considering building a separate block of Ecosan toilets for the youngest students in each school because they had difficulty with the larger models.

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## *Zimbabwe*

### **Local Ownership of Clean Water Sources and Community Gardens**

While nutrition programs often promote home gardening, these plots are dependent on access to water—and this may require help from the WASH sector. In Zimbabwe, the City Council of Bulawayo (the country's second largest city) and Churches in Bulawayo (a partner of the NGO Tearfund) worked with community representatives to supply the land, the training, initial seed packets, and the water needed to create sustainable gardens for the most vulnerable citizens in 20 different neighborhoods. Beneficiaries of the garden program, which began in 2008, included 983 families selected from among the poorest households as well as those headed by children, widows, and people living with HIV/AIDS (PLHIV). A total of around 20,000 people gained access to safe drinking water as a result of the program.



Water is a perennial problem in the Matabeleland region. Shortages have undermined hygiene and contributed to an outbreak of cholera in 2008 and 2009. Moreover, political instability over the last decade, inflation, unemployment, a crisis in food supplies, and disastrous droughts have contributed to high rates of diarrhea and chronic malnutrition. In an effort to increase community resilience, the City Council of Bulawayo provided land in different neighborhoods for urban gardens of about 2,500 square meters each. Land was purposely selected close to water boreholes that had fallen into disrepair. Churches in Bulawayo helped restore the boreholes (which were then made accessible to the entire community), installed new pumps, set up water point committees, and trained three “pump minders” selected by the community for each well. The City Council and residents’ associations helped select beneficiaries to receive garden plots. Churches in Bulawayo provided initial training on vegetable gardening and the city arranged for agricultural extension workers to provide support to the gardeners.

An evaluation in 2010 found that participants were enthusiastic about gardening, about the noticeable improvements in their diets, and about the opportunity to sell excess produce. In some locations gardens were also being planted by enthusiastic citizens outside of the fences built to guard initial plots. Challenges included vandalism (members often shared the expense of a guard to sleep in the garden), lack of tools to repair the pumps, and the location of some gardens uphill from the wells.

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## Food Safety and the Importance of Context in Facility-Based SAM Training

During the major drought in the Sahel Region earlier in this decade, WHO/AFRO/IST/WA mobilized financial assistance to the area from the United Nations Central Emergency Response Fund (CERF). Among the priority activities in Cote d’Ivoire, Senegal, and Mauritania was refresher training for health workers in severe acute malnutrition (SAM) with medical complications. In the first critical days following assessment for SAM, children are treated in stabilization centers; mothers are then given preparation to manage the nutritional care of their children at home. During the Sahel crisis, training was conducted for management of SAM at the hospital level using WHO training material. Given the high prevalence of diarrhea, Module 7— which focuses on counseling the mother in how to provide care (including proper food hygiene, from preparation to storage) was emphasized. Adoption of only even one of the “five keys” for safer food can make a significant difference in preventing food contamination.

As part of the training, WHO discussed the feasibility of standard advice with participants as well with as representatives of the national nutrition focal points. The importance of context, particularly for drought-prone areas, was apparent to everyone. Where water is not an issue and facilities for cooking and storage are available, all of the “five keys” can at least theoretically be followed by mothers/caregivers. However, where water is scarce, keys number 4 and 5 (keep food at safe temperatures, use safe water and safe raw materials) need to be adapted to the local context for both urban and rural areas and for different economic and cultural settings. In general training needs to be adapted to the local context and should include a focus on how to reduce barriers to adopting the recommended keys for food hygiene.

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## Sources of Fecal Contamination in the Infant Feeding “Universe”

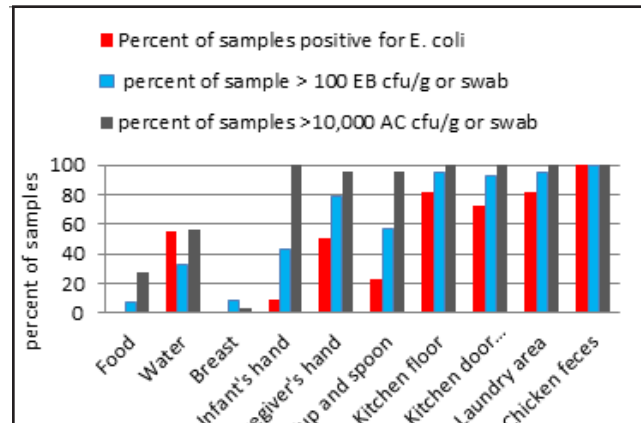
Although it is well-known that “fecal-oral” transmission of bacteria causes diarrhea among infants and children, transmission can occur via many pathways. Knowing which sanitation and hygiene behaviors should be targeted as the highest priorities is a challenge from community to community. Cornell University and Zvitambo Institute for Maternal & Child Health Research conducted an in-depth observation study in Shurugwi District of rural Zimbabwe in order to record hygiene behaviors of 23 caregiver-infant pairs (over a six-hour period in each household) and determine the predominant fecal-oral pathways of bacteria transmission among infants. The study included microbiological analyses of many potential vectors for fecal indicator bacteria. Funding was provided by DFID as part of formative research for the Sanitation, Hygiene, Infant Nutrition Efficacy (SHINE) Project by Zvitambo.

Observations revealed multiple sources for contact and contamination in these infants’ environments. In 50 percent or more of households, E. coli contamination was found on the mother’s dominant hand, in drinking water, on the kitchen floor, and in soil within the kitchen yard. Infants’ fingers and food were visibly dirty 75 percent of the observed time and 32 percent of the time they were observed going into the mouth. Several infants ingested handfuls of dirt and several ingested chicken feces. Caregivers rarely washed their hands with soap following possible fecal contact.

The figure at right shows the percent of samples from different potential transmission vectors in these homes that tested positive for E. coli and percent of samples with greater than the recommended minimum cutoff for other bacteria. Columns on the right show the highest level of contamination and indicate how easily a child can be endangered simply by reaching out a hand within his or her surroundings (especially through ingestion of soil and chicken feces). The investigators recommended in particular that greater emphasis be put on separating chicken feces (and chickens) from a baby’s everyday environment.

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Figure: Fecal indicator bacteria



## WASH and Nutrition Education in Urban Schools

Most schools in Sierra Leone lack basic water and sanitation facilities. UNICEF is the lead agency for WASH in schools in Sierra Leone, aiming at full coverage for rural areas. However, with the rapid growth of urban populations, schools – especially in the slum areas of Freetown – increasingly face overcrowding and lack of proper facilities as well as lack of teachers with proper qualifications and tools. Action Against Hunger (ACF) proposed an urban school pilot to UNICEF and DFID as the basis for scaling up. The plan has the support of the Ministry of Education and is designed to integrate WASH and nutrition efforts, to focus on affordable technical solutions for sanitation in low space settings with frequent water shortages, to emphasize gender-related challenges, and to engage children as agents of change in their communities.

The pilot, still in the planning stages, will take place in six primary and junior schools in different sections of Freetown. It will test the feasibility and acceptability of girls’ urinals (to decrease occupancy rate and reduce water consumption) and acceptability of a washing and changing area in girls’ blocks to facilitate menstrual hygiene. Girls’ attendance will be monitored to assess any effects on the current high levels of female absenteeism, and discussions will be held with girls who are absent more than three days in a row to understand what factors may influence their attendance. The sanitation blocks will include rain water harvesting during the rainy season, together with water storage.

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## CMAM and Point-of-Use Water Treatment in Post-Flood Context

In 2010, torrential rains and major floods affected nearly 20 million people in Pakistan—destroying roads and buildings, crops and livestock; displacing families; and contributing to high rates of malnutrition and water-borne diseases. A local NGO, Health Oriented Preventive Education (HOPE) partnered with UNICEF and WFP to set up CMAM programs in the districts of Thatta, Dadu, and Shahdaskot in Sindh Province. Hope screened pregnant and lactating women and children under five years of age for severe acute malnutrition and moderate acute malnutrition (MAM). Between August of 2010 and August of 2011 the program enrolled a total of 93,939 women and 202,230 children under five appropriate treatment.

Scarcity of clean water was a major challenge in these areas. UNICEF initially provided water through tankers and also built latrines in selected villages. In addition, Procter & Gamble provided 17 million PuR water treatment packets to 285,000 families. Distribution of packets was accompanied by demonstrations of household water treatment to families, dissemination of IEC material promoting hygiene and sanitation, hand washing at key times, and provision of soap and containers for water.

Households enrolled in CMAM were followed up on a biweekly basis. Children were weighed and incidence of diarrheal disease was recorded. Monitoring showed that adherence to recommended behaviors was challenging, but children in households that treated their water and practiced regular hand washing had better weight gain and lower rates of diarrhea.

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## Reducing Stunting through a Multisector Approach

Nepal is one of only a few countries with a Multi-Sectoral Nutrition Plan that includes emphasis on WASH. Building on this plan, the USAID-funded SUAHARA program (2011–2016) focuses on malnourished children under 2 and takes a household-based approach to integrating nutrition, WASH, family planning, agriculture, and child health and development. SUAHARA (or Good Nutrition) operates in 25 remote districts and is managed by Save the Children with Helen Keller International, JHPIEGO, JHU/CCP, and several Nepali NGOs (NPCS, NTAG, and NEHAH). The program is working with the Government of Nepal to build the capacity of health workers, as well as staff from the Departments of Agriculture, Local Governance, Education, and Water, to create multi-sectoral collaboration at the district level.

The impact evaluation for SUAHARA will look at results concerning child stunting and anemia (among children under 5 years of age) and on infant and young child feeding practices (among children 0–24 months of age). However, program activities and messages focus on the multiple vulnerable points of development that result in stunting. The nutritional status of pregnant and lactating women and improved maternal, newborn, and child health services are important elements of the program. SUAHARA has expanded the essential nutrition actions (ENA) framework (used by many governments and NGOs as a basis for behavior change programs) to include essential hygiene actions, as well as other components, to create what the program is calling an ENA+ package. To improve access to nutritious food, SUAHARA is also implementing a home-based food production approach that promotes small-scale poultry production and home gardening and is facilitating public-private partnerships to make fortified foods or supplements accessible.



## Safer Water, Safer and Better Food Lead to Healthier Children

Project SWAN (Safe Water and Nutrition) focused on both telling and showing communities in Vietnam that safe water and safer, more nutritious food would improve their children's health. The project was carried out in two phases in 19 communes in Hanoi and Nam Dinh Province, reaching an estimated 120,000 people. Funding was provided by the Japan International Cooperation Agency (JICA) and the Japanese Ministry of Foreign Affairs. Partners included the International Life Sciences Institute, Japan Center for Health Promotion; the National Institute of Nutrition, Vietnam; and the Ministry of Agriculture and Rural Development, Center for Rural Water Supply and Sanitation, Vietnam.

SWAN1 (2005–2008) aimed to develop a workable model for integrating WASH and nutrition activities based on participatory approaches. Technical assistance focused on: i) rehabilitating existing water treatment facilities (WTFs); ii) behavior change activities related to safe drinking water, food hygiene and safety, and child feeding; and iii) creation of community Water Management Unions (WMUs) composed of commune authorities, operators of WTFs, commune health staff, and village health workers.

SWAN2 (2010–2013) aimed to increase the capabilities of local authorities to ensure the program sustainability. Skills transfer focused on 1) how to assess water treatment facilities (WTFs), develop renovation plans based on local needs, and monitor and evaluate outcomes and 2) how to conduct focus groups to clarify problems and needs in the community, develop behavior change messages and materials, and monitor and evaluate their effectiveness. With help from the provincial Support Team, WMUs learned to renovate WTFs with a commune's own budget and to manage water distribution. They took over responsibility for conducting behavior change activities through workshops, home visits, community gatherings, cooking classes, loudspeaker announcements, and drawing and poetry contests.

Preliminary results from an evaluation of SWAN2 in five communes in Nam Dinh Province show improvements in quality and quantity of water in each commune; frequency of hand washing with soap at critical times increased from 52 to 88 percent; the prevalence of childhood diarrhea fell from 4.2 to 2.0 percent; and the prevalence of stunting among children under 5 dropped from 25.8 to 19.6 percent. The program found that participatory approaches helped raise motivation, and building local capacity and using community resources

was essential to sustainability. As community members came to appreciate access to safe water, they became willing to pay a water fee, leading to financial independence of program activities.

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## Integrating WASH into Nutrition Assessment, Counseling, and Support

The Nutrition Assessment, Counseling, and Support (NACS) approach aims to improve the nutritional status of individuals and populations by integrating nutrition into policies, programs, and health service delivery infrastructure. The NACS approach strengthens the capacity of facility- and community-based health care providers to deliver nutrition-specific services while linking clients to nutrition-sensitive interventions provided by the health, agriculture, food security, social protection, education, and rural development sectors. In the last three years, two USAID global programs have been working across sectors to integrate WASH activities and messages into national NACS programming. The two programs, Food and Nutrition Technical Assistance III Project (FANTA) and WASHplus, are both managed by FHI 360.

Through its close partnership with ministries of health and other key stakeholders, FANTA has to date ensured that WASH is part of NACS guidelines, training materials, and counseling materials in Ethiopia, Côte d'Ivoire, Ghana, Haiti, Mozambique, Namibia, Tanzania, Vietnam, and Zambia. WASH topics that are covered include safe storage and treatment/use of water; hand washing at appropriate times; safe preparation, handling, and storage of food; safe handling and disposal of feces; and ensuring a clean/hygienic environment. The primary audience for WASH messages has been PLHIV and their families and caregivers, pregnant women, lactating women, and mothers/caregivers of young children. The primary channels for reaching these audiences are health care providers and community volunteers. FANTA has also worked with WASHPlus to improve WASH content of NACS materials in Ethiopia, Ghana, Haiti, and Mozambique and regularly updates NACS materials from all FANTA focus countries to ensure global guidance and new research findings

are integrated into NACS. The table below provides examples of WASH messages integrated into NACS counseling cards in Haiti.

## Examples of WASH messages integrated into NACS counseling cards in Haiti

Topic area	Example of message
Safe water storage/ treatment	<ul style="list-style-type: none"> <li>• (Traiter l'eau et boire de l'eau traitée chaque jour (si l'eau du robinet n'est pas potable ou si l'eau provient d'un puits, d'un forage ou d'une rivière)</li> <li>• Bouillir durant 15 a 20 minutes, ou</li> <li>• Utiliser de l'eau de javel (3 gouttes / gallon).</li> </ul>
Hand washing	<ul style="list-style-type: none"> <li>• Vous laver les mains toujours à l'eau propre et au savon avant et après la préparation des aliments, après avoir été aux toilettes, avant et après la consommation des aliments, avant de donner le sein ou la nourriture à l'enfant, et après avoir manipulé les selles des nouveaux nés et des enfants.</li> </ul>
Safe food preparation, stor- age and handling	<ul style="list-style-type: none"> <li>• Prévenir la contamination des aliments dans les endroits où on les prépare.</li> <li>• Vous laver les mains avant toute manipulation des aliments.</li> <li>• Boire et utiliser de l'eau potable pour la préparation des aliments.</li> <li>• Utiliser des vaisselles et des ustensiles propres pour conserver, préparer, servir et manger les aliments.</li> <li>• Couvrir et conserver les aliments à l'abri de la poussière, des insectes et des rongeurs.</li> <li>• Conserver séparément les aliments crus et les aliments cuits, surtout quand il s'agit de la viande</li> </ul>
Safe handling and disposal of feces	<ul style="list-style-type: none"> <li>• Utiliser des latrines et les garder toujours propres et fermées.</li> <li>• Désinfecter les latrines ainsi que les surfaces souillées par les excréments avec de l'eau de javel (Chlorox).</li> </ul>
Clean/hygienic environment	<ul style="list-style-type: none"> <li>• Nettoyer votre environnement immédiat au moins une fois par jour (éliminer les eaux stagnantes, les pneus usés...).</li> <li>• Mettre les déchets ménagers dans un sac en plastique puis dans une poubelle avec couvercle.</li> <li>• Jeter les déchets ménagers loin de la maison et loin d'une source d'eau.</li> <li>• Laver et désinfecter régulièrement la poubelle.</li> <li>• Enfermer les animaux dans un enclos loin de la cuisine.</li> <li>• Garder les nappes et les tables de cuisine propres.</li> </ul>

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## **Integrating Nutrition, WASH, Livelihoods, and Early Child Development Utilizing the Care Group Model**

An ongoing program in Malawi (2012–2015) is providing multi-sector support to vulnerable communities by assisting existing government programs for young children and also encouraging greater local involvement through the Care Group approach. The program is unusual in its breadth. Activities are funded by USAID, Nu-Skin, Feed the Children, and Procter & Gamble and activities are carried out by Feed the Children, World Relief, and Total LandCare.

Major components of the program include: 1) Nutrition interventions: supplementary feeding of children 3–5 years of age attending community-based childcare centers (CBCCs); nutrition education through Care Groups; demonstrations of complementary food preparation and feeding; support to government growth promotion activities; provision of seeds, cuttings, and seedlings to households and CBCCs. 2) WASH interventions: provision of PuR packets to households with unsafe water sources; hygiene and sanitation education through Care Groups; provision of hand washing stations to CBCCs; installation and repair of boreholes. 3) Livelihood interventions: technical support for improved agricultural technologies for crop diversification and improved food security; village savings and loans. 4) Early child development interventions: provision of play materials and cooking utensils; mentoring of CBCC caregivers and CBCC management committees in ECD approaches; GIS mapping of ECD centers.

The Care Group approach focuses on improving knowledge and behaviors in households with pregnant and lactating women and children 0–59 months of age. Each Care Group includes 10–15 community volunteers from the same neighborhood who meet twice a month with a program promoter (also a volunteer) for training on high impact interventions. Each Care Group member is responsible for reaching out to 10–15 additional households. An early lesson for the program was the importance of including men as both promoters and volunteers because of their decision making roles (regarding what crops to plant, how much food crops to keep and to sell, and about distribution of both food and income), as well as their potential influence on child nutrition and care practices. At present, 30 percent of the 1,462 volunteers are men.

Regular monitoring through the Care Groups during the first program year indicated improvements in knowledge and behaviors, but also revealed several practices that will take longer for families to change. These include proper disposal of child feces and hand washing at appropriate times.

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