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The WASHplus project supports healthy households and communities by creating and delivering interventions that lead to improvements in access, practices, and health outcomes related to water supply, sanitation, and hygiene (WASH) and household air pollution (HAP). This five-year project (2010-2015), funded through USAID's Bureau for Global Health (AID-OAA-A-10-00040) and led by FHI 360 in partnership with CARE and Winrock International, uses at-scale programming as well as integrated approaches to reduce diarrheal diseases and acute respiratory infections, the two top killers of children under five years of age globally. WASHplus can integrate WASH and HAP activities into existing education, HIV/AIDS, maternal and child health and nutrition programs and build strong in-country partnerships to increase impact. In addition, WASHplus is charged with promoting innovation in the WASH and HAP sectors.

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Acronyms

AEPC	Alternative Energy Promotion Center
CCEB	Catalyzing Clean Energy Bangladesh
CCT	Controlled Cooking Tests
CDF	Community Development Forums
CHW	Community Health Workers
CLTS	Community-Led Total Sanitation
CSA	Community Situation Analysis
ECD	Early Child Development
E3	Economic Growth, Education and the Environment
FANTA	Food and Nutrition Technical Assistance
FSM	Fecal Sludge Management
GACC	Global Alliance for Clean Cookstoves
HAP	Household Air Pollution
HQ	Headquarters
HWS	Hand Washing Station
ICS	Improved Cookstove
IRB	Institutional Review Board
JMP	Joint Monitoring Programme
KPT	Kitchen Performance Test
KM	Knowledge Management
M&E	Monitoring & Evaluation
MESVTEE	Ministry of Education, Science, Vocational Training and Early Education
MHM	Menstrual Hygiene Management
MOH	Ministry of Health
NACS	Nutrition Assessment, Counseling and Support
NTD	Neglected Tropical Diseases
O&M	Operations and Maintenance
ODF	Open Defecation Free
PNGO	Partner Nongovernmental Organization
PPPHW	Public-Private Partnership for Handwashing
RI	Rotary International
SDS	Strengthening Decentralization for Sustainability
SHN	School Health and Nutrition
SO	Strategic Objective
SPLASH	Schools Promoting Learning Achievement through Sanitation and Hygiene
TOT	Training of Trainers
UP	Union Parishad

Introduction

The state of WASHplus in Year Four is captured in numbers, pictures, and stories. Measurable project accomplishments include: the 1.6 million Kenyans reached with inclusive sanitation messages, the 199,400 Zambians with access to improved drinking water, the 62,566 people in Bangladesh with access to improved sanitation, and the 6,241 households in Mali with newly constructed latrines and 1,650 households with newly rehabilitated latrines. The pictures and the people they capture—a woman cooking with less smoke in her home, support rails guiding a disabled man to his latrine that also restore his dignity, girls making their own reusable pads and managing menstrual hygiene without shame—show that WASHplus’s impact down to the household level is visible and transformative. Stories from the field featured on washplus.org indicate that small doable actions are working incrementally to improve lives in every country program. The concept is simple, has been embraced by implementing partners and local governments alike, and applied to everything from food hygiene to menstrual hygiene to sanitation improvements.

To advance USAID’s global technical leadership role in water, sanitation, and hygiene (WASH) and household air pollution (HAP) WASHplus research is breaking new ground in areas such as the science behind habit formation, analysis of the costs of *not* washing hands, how improved WASH influences school outcomes, and consumer and behavioral perspectives that improve the uptake of clean cooking technologies. The project is also adding to learning in the WASH sector through its innovation agenda and looks forward to sharing lessons learned from research on sand envelopment and household treatment technologies in Bangladesh and sanitation marketing in Ethiopia, as it has done with research completed on fecal sludge management pilot in Madagascar.

WASHplus has been at the forefront of integrating menstrual hygiene management into schools and households. This topic is finally receiving increased attention globally, and WASHplus has experiences and tools to share from its implementation in Zambia, Uganda, Kenya, and Bangladesh. The breadth of WASHplus’s work in sanitation is notable given the size of the project. Activities from Bangladesh to Zambia and many in between are successfully adapting community- and school-led total sanitation, inclusive sanitation, low-cost latrine options, and sanitation marketing to a variety of contexts and challenging environments—rural, urban, flood prone, impoverished.

Country Updates

Bangladesh HAP

The focus of HAP activities this year (Phase 2) in Bangladesh included the development of a behavior change and marketing strategy and controlled cooking tests (CCTs). WASHplus worked closely with the Global Alliance for Clean Cookstoves (GACC) and iDE to develop the behavior change and marketing strategy, which identifies early adopter consumer segments for improved cookstoves and develops a marketing strategy around a “4Ps model” (product, price, place, and promotion) for each. As part of the strategy development, iDE organized a Dhaka-based stakeholder meeting to vet key findings and concepts related to the behavior change and 4Ps marketing strategy. More than a dozen stakeholders attended the May meeting and gave input into the process. WASHplus Deputy Director Julia Rosenbaum, as part of a technical visit, worked with the iDE team to finalize key aspects of the strategy. She traveled to Khulna to participate in a two-day design session with target customer groups and value

chain actors (wood sellers, stove distributors, finance agents) to validate the “value propositions” and test concepts for each of the 4Ps.

WASHplus reprogrammed remaining Phase 1 Mission funding to support CCT testing of Phase 1 stoves modified by manufacturers to address the feedback/design issues raised by participants during the household trials. The CCTs were undertaken in February by Aprovecho Research Center and measured time to cook, fuel use, and indoor emissions for eight improved and traditional stoves. The research is intended to help Catalyzing Clean Energy Bangladesh (CCEB) and other stakeholders identify and incorporate into their programming improved cookstoves that are as appealing and high performing as possible.

Winrock consultant Karabi Dutta traveled to Dhaka to present on both the strategy and the CCT results at the CCEB’s Improved Cookstove Market Facilitation Platform in September. WASHplus also displayed a poster on the marketing strategy at the event. Final revisions of the strategy report are currently underway. WASHplus continued to actively coordinate with CCEB project staff and other key stakeholders, including GACC, SNV, GIZ, Grameen, IDCOL, The World Bank, and others, throughout the year.

Other publications this year included a four-page brief entitled “What Do Cooks Want? What Will They Pay? A Study of Improved Cookstoves in Bangladesh,” based on the full-length formative research report. A peer-reviewed journal article on Bangladesh study results has been accepted for publication in *Journal of Health Communication*, the innovative methodology and findings of which were presented to the editorial panel and journal article group in March 2014.

Bangladesh WASH

At the beginning of Year Four WASHplus was well placed to advance the WASH agenda in Bangladesh. WASHplus partners completed community situation analyses (CSAs) in a total of 1,157 villages and established 1,206 community development forums (CDFs), with 30 percent female membership, to assist in developing WASH action plans. CDFs were put into place to organize various community-level activities and work with partner NGOs (PNGOs) and Union Parishads (UPs) to conduct mobilization activities. To date, a total of 3,618 volunteers have received leadership and advocacy training to enhance their ability to identify gaps in WASH services in their community, establish and operate community-based WASH management funds, and advocate with local government on behalf of community members. US Ambassador to Bangladesh Dan Mozena and USAID Bangladesh Mission Director Janina Jarulzelski visited WASHplus project activities in Osmangonj in February, including a community recently declared open defecation free (ODF), and met with community development forum members.

WASHplus staff worked closely with PNGOs to develop operational guidelines and to ensure standardized implementation of WASHplus field activities (construction, mobilization, and training). In addition, a comprehensive, multi-level WASH Behavior Change Strategy was designed to reflect best practice in response to the local situation. To strengthen PNGOs’ staff competencies in key approaches of the strategy, WASHplus organized a three-day training in each intervention subdistrict. A total of 99 participants attended.

WASHplus has created a solid groundwork for sustainable, improved access to water and sanitation services. Both bureaucratic processes and inclement weather led to fewer outputs and beneficiaries than expected, but targets are expected to be met by the end of this calendar year. The Environmental Mitigation and Management Plan was extensively reviewed and revised, which caused delays in initiation of activities. Moreover, heavy rains and flooding subsequently provided challenges and delays in hardware installation and community mobilization activities, such as behavior change promotion. In addition, practices of other development partners, such as providing cash and gift incentives for participation in community behavior change sessions, introduced a disquieting competition for the time and participation of communities.

As a result of triggering activities and related hygiene sessions, and as part of the community-led total sanitation (CLTS) approach, PNGOs have encouraged communities to repair or install new latrines at the household level. A challenge to improved sanitation in the project area is improving or replacing leaking latrines. During Year Four, 62,566 household latrines were constructed, renovated or otherwise upgraded to an improved style of latrine; many moved from using an unhygienic pit latrine to a pit latrine with a water seal and improved superstructure. In an effort to address the issue of leaky latrines as a source of ground and surface water contamination, WASHplus selected ICDDR,B to investigate the scientific validity and technical feasibility of sand/earthen envelopment to reduce pathogen loading from pit latrines in the context of the Coastal Belt. *(See SO4 for more details.)*

Based on CSA data, 1,715 latrines were also constructed for extremely poor households that cannot afford to build their own. WASHplus also constructed 52 demonstration latrines in public places to educate the community about low-cost sanitation technologies and motivate them to select and install improved, hygienic latrines.

Many of the activities conducted at the community level are being mirrored at the school level. PNGOs are working closely with teachers and the school management committees established last year to build capacity and support action on the topic of menstrual hygiene management (MHM) and how MHM acts as an intervention against absenteeism and school dropout among girls. PNGOs completed hygiene improvement trainings for 428 teachers this year on how to facilitate communication among students, their families, and the larger community. In addition to behavior change communication via teachers, PNGOs continue to hold hand washing demonstrations at primary and secondary schools. To further encourage the practice, a number of schools received hand washing devices and supplies.



WASHplus outreach worker from local NGO AVAM leads a hygiene session in Southwest Bangladesh. In these sessions mothers and caretakers learn the importance of hand washing before food preparation and feeding to support young child growth and reduce diarrhea. At the close of the session, they all learn to make a tippy tap and commit to make (at least) one at home.

To allow for improved government accountability, the PNGOs successfully convinced the UP government to share budgets with communities in Daulatkhan and Char Fasson. The communities are more cognizant of the WASH situation and are empowered to pressure for increased budget allocation for WASH facilities. A total of 2,635 community members participated in a budget sharing event.

WASHplus shared its behavior change approach at the WEDC Conference in Vietnam in September 2014.

A third objective of the WASHplus activity is to integrate WASH into nutrition activities, extracting evidence-based programming guidance as possible. WASHplus co-located activities in two subdistricts overlapping with USAID implementing partners with the objective of increasing access to water and sanitation facilities. To date 198 new water points have been installed, bringing water to an estimated 16,600 people, as have 9,885 new or improved latrines supporting feces free households.

On the ground integration with the SPRING and SHIKHA projects has been complicated by the difficulty of adding additional WASH indicators to existing targets. Both projects currently focus on promoting hand washing before cooking and feeding young children, and WASHplus has engaged in discussions about integrating other behaviors, particularly safe disposal of infant feces. With WASHplus input, SHIKHA added several sanitation questions to their midline evaluation, which will facilitate a strengthened focus in this area. A number of collaborative activities are planned in the coming year. WASHplus also works at the national level with USAID implementing partners and other stakeholders. In June 2014, WASHplus organized a key WASH and nutrition knowledge sharing event focusing on emerging evidence around safe disposal of infant feces co-sponsored by ICDDR,B, SPRING, SHIKHA, WaterAid and The World Bank's Water and Sanitation Program. More than 40 WASH and nutrition program specialists packed the room to learn and discuss the evidence base and programming opportunities.

USAID/Bangladesh informed WASHplus in quarter 3 that it is unable to fully fund the approved three-year, \$6 million program. Significant levels of effort went to developing versions of modified plans and budgets that scaled back on funding and activities, and at the same time allowed for expansion into a new subdistrict appropriate for installation of rainwater harvesting technologies and pond sand filters.

Benin

WASHplus's Urban Hygiene Improvement Program continues to be the only WASH activity in Benin targeting peri-urban zones in the capital city. The baseline survey of 856 randomly selected households from eight peri-urban areas in the larger urban area of Cotonou-Porto Novo-Abomey Calavi was completed at the beginning of Year Four. Among the takeaways—vast room for improvement in the area of hand washing; few homes reported dedicated areas for hand washing near latrines or kitchens. The Ministry of Health (MOH) intends to carry out the same baseline in other Cotonou neighborhoods.

To harmonize the goals, objectives, and strategies of the multiple partners intervening in WASH in Benin, the MOH established a WASH Sector Steering Committee that includes all government agencies related to water and sanitation, development partners, and many local NGOs. WASHplus presented the results of the baseline study during the committee's inaugural meeting. The MOH/DNSP (Public Health Service) took the opportunity to explain that WASHplus is integrated into its overall program and that it is expecting to use the baseline results, methodology, and the pilot neighborhood program experiences to develop its own WASH strategy for Benin's urban and peri-urban zones.

Following publication and dissemination of the baseline, WASHplus implementing partner ABMS/PSI carried out a situational analysis of two Cotonou neighborhoods, Agbato and Enagnon, to understand the WASH lay of the land—the presence of institutions, leadership structures, commercial entities and activities, masons and other artisans, sources of water and sanitation, solid waste disposal, and more. Results of the situational analysis present the typical profile of peri-urban, slum-like areas: no sanitation or hygiene services including solid waste management. Compounding the problems (and underlining why these particular neighborhoods were chosen) is that both areas are built along a lagoon, which is used for defecation and trash disposal. WASHplus is expecting to address the challenges posed by the lagoon as a defecation site by launching the first-ever urban CLTS effort as part of its pilot program with local partners, as it is a pervasive and highly unhygienic problem with no easy solutions.

A four-day planning workshop for community and strategic partners launched the community mobilization and advocacy work in the neighborhoods. Participants hammered out plans for behavior change approaches and communications based on available information on the target neighborhoods and residents. WASHplus through ABMS hired community outreach workers (*relais communautaires*) whose job is to promote hand washing and drinking water treatment in households. They also work with and through women’s cooperatives, religious leaders, owners/managers of water supply sources, and health center staff. The *relais communautaires* have visited every household to establish a baseline of current practices and access to facilities. WASHplus (and predecessor project) materials from other countries have been adapted, and the ABMS program has adopted the small doable actions approach.

Peace Corps/Benin and WASHplus signed a collaboration agreement for the development of WASH toolkits and job aids for training and supporting volunteers in WASH activities. Peace Corps Volunteers helped create three extensive [training and toolkit packages](#) in French on WASH in Schools, household water treatment and storage, and CLTS.

Kenya

The role of WASHplus as a national mechanism ended September 2014. However, MOH and partners at the county level, particularly the APHIAplus projects, will continue implementation, monitoring, and reporting of WASH activities. To mark the transition of activities, WASHplus organized a workshop to share project experiences and lessons learned over the last three years with diverse stakeholders. The WASHplus team documented results and lessons learned over the life of the project, including an end of project [report](#) and success stories, which were showcased at USAID and for government and partners during the handover meetings. During the early part of Year Four the WASHplus team presented the WASH baseline preliminary findings to its study sites. Baseline results provided some insights into the challenges of



As WASHplus/Kenya compiled a number of field stories to illustrate its small doable action approach. Here a bed-bound woman demonstrates inclusive sanitation modifications made to her home.

changing WASH practices in Kenya, including the extent to which nomadic populations and rural areas still practice open defecation, how many urban families rely on shared latrines, and how few have fixed hand washing stations. WASHplus will begin conducting an endline survey to track progress in WASH-HIV integration and sanitation improvement quarter. A revised survey and protocol have been shared with FHI 360's institutional review board (IRB). After necessary revisions it will be submitted to the Kenya IRB.

Other accomplishments of the year include participating in the first-ever Menstrual Hygiene Day in May; training ODF certifiers and early childhood development center owners and families; developing a menstrual hygiene training guide and toilet options card; and participating in technical working groups to standardize hygiene messages and develop national policy guidelines on preventing and controlling jigger infestations; and planning for national celebrations of events such as World Toilet Day. Project staff provided technical assistance to the ongoing National Environmental Policy Review and national documents development, including WASH monitoring and evaluation (M&E) tools.

WASH-HIV Integration

Throughout the year WASHplus provided support to intervention sites in the form of developing implementation plans for WASH activities, conducting WASH-HIV review and refresher training, and sensitizing social and rehabilitation service providers and district health teams on equity and inclusion. Training topics included integrating WASH into nutrition and food security activities in the counties, encouraging households to embrace small doable actions especially saving water for hand washing by constructing tippy taps, and sensitizing new staff on WASH-HIV integration. WASHplus assisted on-the-job community health worker training on negotiation during household visits, using the MOH reporting tools, and tracking monthly indicators. In addition, WASHplus Kenya Project Director Evelyn Makena and Renuka Bery, WASHplus integration specialist, presented a poster at the 2013 UNC Water and Health Conference on integration work in Kenya. The team also provided technical support to the intervention sites in the form of mentoring visits to reinforce how to track progress. WASHplus provided technical assistance to eight Centers for Disease Control and Prevention local partners to train community health workers and volunteers.

WASHplus conducted advocacy meetings on inclusive sanitation, emphasizing why and how to include disadvantaged groups in county plans and trained the participants on hand washing triggering to increase uptake. In addition, the WASHplus team developed an equity and inclusion checklist for implementers to understand how to identify disadvantaged groups, barriers that fuel exclusion, and solutions to remove such barriers feasibly.

Sanitation Uptake

WASHplus expanded its sanitation outreach this year into new areas to fill obvious gaps that have slowed progress in declaring communities ODF. The project targeted early child development center staff for training. Twenty-two teachers in Naivasha subcounty learned hygiene and sanitation small doable actions that would improve their students' health from reducing latrine squat-hole sizes to mobilizing parents to provide safe drinking water, latrine and anal cleansing materials, and tippy tap construction materials to the centers. In addition, WASHplus collaborated with local and national MOH personnel to train 23 public health officers to serve as third-party ODF certifiers to increase capacity for third-party certification. The expected ripple effect of this initiative is an accelerated certification process across the county contributing to the MOH ODF campaign achievements.

To increase sanitation uptake from open defecation to improved latrines, WASHplus supported an artisan's training in Naivasha subcounty for 17 pit diggers. WASHplus shared training outlines and experiences of the third-party certification exercise and of the artisan's training with the MOH so they can be replicated in other counties. Having trained artisans on improved latrine construction and its importance, chances are greater that more improved latrines will be adopted from the outset.

Transition preparations included providing the MOH with a checklist to follow up with the trained artisans, providing technical assistance to MOH Naivasha for certifying and celebrating ODF villages, holding a final review meeting with CLTS+ implementers and stakeholders, documenting success stories, and pretesting the second draft of the latrine option job aid.

Ms. Makena presented a paper on inclusive sanitation at the WEDC conference in Vietnam in September (*see SO3 for details*). And finally WASHplus submitted articles to the MOH's SSHIT newsletter, focusing on the WASHplus-MOH partnership in promoting sanitation uptake, and funded its printing.

Madagascar

Early in the year WASHplus closed out its activities in Madagascar and conducted an informal assessment of the fecal sludge management (FSM) pilot project in Ambositra implemented by Practica. The key learnings from this experience were captured in a briefing note published in November 2013. WASHplus convened a side session on FSM at the 2013 UNC Water and Health Conference to disseminate the findings along with similar FSM experiences from Water and Sanitation for the Urban Poor (WSUP) and the Bill & Melinda Gates Foundation. Although it was hoped that additional funding would be available to continue work in Madagascar, none was made available.

Mali

Mindful of the military crisis that delayed its start, the WASH and nutrition activity in Mali received an extension through April 2015. Working through local partners, WASHplus continued implementing a range of community-driven WASH and nutrition activities in the three target health districts of Mopti, Bandiagara, and Bankass. Year Four saw a baseline survey conducted and completed; 180 villages triggered through CLTS+; community health volunteers, known locally as *relais*, trained in malnutrition screening, point-of-use water treatment, and nutrition demonstrations; completion of a diagnostic study of water points and selection of those to be rehabilitated; and an investigation of supply chain of sanitation products and consumer preferences in the urban centers.

The report from the household-level baseline survey was completed in March. Using data collection tools translated into two local dialects, enumerators collected data from 1,720 households equally distributed among the intervention and the control study groups. Findings included that nearly 60 percent of households surveyed practiced open defecation, and only 7 percent of mothers with children 7–24 months feed their children using a minimum acceptable diet.

Prior to beginning the community screening and referrals for malnutrition, a total of 349 relais participated in a series of three-day trainings to learn how to screen infants for malnutrition and refer at-risk children to commune or district-level rehabilitation centers for food supplements. WASHplus equipped 378 relais and other community health workers with upper arm tapes and bicycles to facilitate the screening and referral process; a total of 19,579 children were screened, 5,171 of which were

referred to community centers and 849 were referred to the health centers at the commune or district level.

To continue improving hygiene and nutrition practices WASHplus held a two-day workshop for technicians from the Regional Directorate for Health to design modules for the training of relais in water treatment and nutrition demonstrations. Training subsequently took place for relais and other community health workers to promote water purification using Aquatabs and organize demonstrations using locally available nutritious foods for cooking and infant feeding. A total of 325 nutritional demonstrations were organized over the course of the year. In addition WASHplus agreed to cover the costs of transport of severely malnourished children and one caretaker to and from the Bankass district health clinic and provide three meals a day to the caretaker while the child is receiving treatment. This safety net dropped the percentage of children who abandoned treatment from more than 20 percent to less than 2 percent in the past six months.

WASHplus finished adapting the WASH and nutrition behavior change communication toolkit, which was approved by the MOH in Bamako. WASHplus and the USAID Hygiene and Nutrition project jointly organized a regional training-of-trainers workshop in Mopti to introduce the tools and the small doable actions approach to negotiating behavior change. These trainers then organized training sessions for pools of facilitators and relais in each district.



Community health volunteers (relais) trained by WASHplus to screen for malnutrition can refer at-risk children to a community or district health center to receive food supplements.

As a forerunner to launching CLTS+, WASHplus worked with the district offices from the MOH to design low-cost latrine models tailored to the different environmental conditions encountered in the project zone (i.e., flood-prone sandy soils, rocky). Based on the models developed, the project trained three local masons in each of 16 communes to build latrines using locally available materials. CLTS triggering events began immediately after completion of the mason trainings and 180 villages were targeted, resulting in 4,930 public commitments by households to build latrines. WASHplus monitored the progress of latrine construction and behavior change in partnership with representatives from the district technical services and local elected officials. Monitoring visits indicate that 6,241 new latrines were constructed and 1,650 latrines were rehabilitated. More than 9,000 latrines in the project communities (a combination of existing, newly constructed, and rehabilitated) now include fixed point hand washing stations or tippy taps. The project also trained three evaluation committees, one in each district, to certify the achievement of ODF status. These committees have evaluated and certified 34 ODF communities to date¹. Additional work in this area included WASHplus support to the Regional Directorate of Sanitation and Pollution and Nuisance Control in Mopti to organize a regional workshop to harmonize, coordinate, and

¹ Thirty-one of the certifications occurred in the first week of October due to the availability of representatives from the district Office of Sanitation.

plan CLTS activities happening in the region. The meeting produced commitments to establish a regular forum for discussion and planning among all stakeholders and to share monitoring data needed to regularly update the regional database of sanitation coverage. WASHplus's pioneering work in developing low-cost latrine models for difficult terrain was recognized during a national CLTS workshop in Bamako and will be included as part of the revised national guidelines for CLTS co-published by UNICEF and the Government of Mali.

WASHplus also completed diagnostic studies of improved water points in all 180 villages. Common problems included a lack of adequate protection surrounding the water points; poor sanitation and drainage around water points; and nonfunctioning hand pumps. Fifty water points, selected from the 32 highest performing villages in terms of latrine construction, are in the process of being rehabilitated.

And finally, to formulate a broader sanitation marketing strategy WASHplus, conducted a study of the supply chain of sanitation products and consumer preferences in the urban centers of Mopti and Bandiagara. The project organized two roundtable discussions with sanitation product suppliers and consumers to share the topline results and identify a model latrine to promote during the campaign.

Nepal

Because of the keen need and interest, WASHplus selected Nepal to replicate its HAP consumer research using remaining Asia Regional Bureau funding along with WASHplus core funds. This activity will support the refinement and replication of the consumer research methodologies and tools developed in Bangladesh. WASHplus research will help inform clean cookstove promotion in a country that recently launched an ambitious Clean Cooking Solutions for All by 2017 (CCS 2017) initiative to combat very high levels of household air pollution. Working in close consultation with Alternative Energy Promotion Center (AEPIC), which is the Government of Nepal's focal agency charged with renewable energy implementation and the lead agency for the CCS 2017 program, WASHplus will undertake a consumer research study that includes trials of improved practice, willingness to pay assessments, CCTs, and kitchen performance tests. WASHplus is currently working with AEPIC to make final stove selections and purchases. Survey tools are also being revised based on which questions provided the most useful data in Bangladesh.

Uganda

In three target districts (Kisoro, Kanungu, and Kabale) of Uganda WASHplus supports district capacity to plan, budget, implement, and monitor WASH activities. WASHplus works in collaboration with USAID's Strengthening Decentralization for Sustainability (SDS) program as it administers USAID WASH grants in areas such as WASH-Friendly Schools/MHM; ending open defecation through CLTS and sanitation marketing; and addressing water shortages through household rainwater harvesting. Specific inputs besides the technical areas outlined above include: providing technical advice on report writing; reviewing implementation work plans and revising indicators; and supporting district WASH focal persons in the development of supervision checklists/field monitoring tools for hygiene promotion activities. The construction process of WASH facilities in selected health units and schools is ongoing.

Through hands-on training and technical assistance of district governments as well as USAID HIV implementing partners such as STAR SW, and nutrition/Feed the Future partners, SPRING and Community Connector, WASHplus has spent Year Four further building capacity in WASH integration at clinic, community, and household levels. The project has succeeded in making small doable actions the

cross-cutting approach for district planners and implementers as they face the formidable challenges of improving WASH and food hygiene in the districts.

Training activities this year included a master training of trainers (TOT) on CLTS implementation; a TOT that added a WASH focus to Nutrition Assessment, Counseling and Support (NACS); and capacity building for health workers, outreach volunteers, and peer educators on integrating WASH–HIV related activities into health centers, communities, and households. In addition, WASHplus supported the introduction of MHM in schools and to health units with teenage-friendly services. WASHplus also conducted trainings of village health teams and other outreach workers in various aspects of WASH/nutrition integration to support a focus on WASH behaviors critically linked to diarrhea and growth of young children, including food hygiene small doable actions based on the WHO Five Keys to Safer Food.

Technical support extends beyond training; a few examples from Year Four include:

- Participating in Menstrual Hygiene Day events in Kampala, as a member of the national sanitation forum of NGOs. This was followed up with a Menstrual Hygiene Conference under the theme “Break the Silence and Keep the Girls in Schools” attended by over 60 agencies. Recommendations included empowering girls with funds to purchase sanitary materials or make reusable pads as a small doable action.
- Adding a WASH focus, literally a “seventh tent” to the STAR-SW/district government Six Tent Roadshow that reached more than 10,000 people per quarter in subcounties in six selected districts. Relevant WASH themes were incorporated into HIV dramas, and demonstrations of key enabling technologies—potties, tippy taps, improved latrines—encouraged participants to make similar WASH upgrades in their homes and communities.
- Engaging local community-based organizations from neighboring districts that have developed cottage industries manufacturing reusable menstrual pads to train males and females to make the pads as a small doable action that enhances MHM. WASHplus also supported training Ariel Clubs geared toward teenagers on reusable pad making; more than 40 schools are participating.
- Supporting Community Connector to integrate WASH into its Field Day Campaign in four subcounties, reaching more than 16,000 people, including school children.
- Providing WASH input/messaging to the behavior change communication drama scripts for Community Connector’s nutrition and livelihood campaign as well as radio programs and radio spots; and working with the SPRING project to develop discussion guides on WASH to accompany its traveling video showcase.
- Participating in the Pediatric Medical Outreach Campaign for Children Living with HIV/AIDs and assessing how STAR-SW might better engage children and affected families in WASH-related activities to improve their health and resiliency.

WASHplus is in the process of finalizing job aids and assessment cards to help guide improved WASH small doable actions for a range of WASH behaviors. Materials include latrine construction, particularly small doable actions for shallow latrines suitable for the rocky and sandy soils found in the districts, do it yourself rainwater catchment systems, and improving WASH–nutrition sensitive practices (food hygiene) at household level. Partners have been trained on how to use the above tools to integrate WASH and improve the nutrition of people living with HIV/AIDs. In addition, WASHplus is finalizing WASH and nutrition and WASH and HIV capacity building manuals based on trainings over the past year and drawing on WASHplus materials from other countries.

Zambia

In Year Four SPLASH (Schools Promoting Learning Achievement through Sanitation and Hygiene) expanded into a fourth district, Chadiza, kicking off activities with a stakeholder strategic planning meeting—dubbed a mini Indaba—for all district actors concerned with school WASH. SPLASH work in Chadiza is being accomplished through a partnership between UNICEF, which provides the latrine construction, and SPLASH, which provides overall management, software, and water supply improvements. USAID and UNICEF are key school WASH players in Zambia and a combined effort makes the sector highly visible.

To date, SPLASH has intervened in 375 basic schools located in four districts of the Eastern Province in Zambia: Chadiza, Chipata, Lundazi, and Mambwe. In these schools, SPLASH has either built/renovated infrastructure or implemented software-related activities, including training staff and pump menders, setting up WASH Committees or WASH Clubs, or triggering communities to stop open defecation.

In the category of hardware, SPLASH has: rehabilitated or constructed 310 water points; constructed 1,243 latrine compartments for male and female students and school staff, 88 washrooms for senior girls, and 285 permanent hand washing facilities; and installed 203 drinking water facilities.

SPLASH's software work includes training 622 teachers in hygiene, 100 teachers in borehole drilling monitoring, 78 artisans, and 46 pump menders; forming 291 WASH Committees (at the community level) and 106 (school) WASH Clubs; supporting 291 existing PTAs; and igniting 250 schools in school led total sanitation.

Through SPLASH, WASH has been incorporated into different layers of the Ministry of Education: the new national curriculum, in-service teacher training, classroom activities for teaching WASH, and school monitoring. Thanks to the efforts of the provincial Ministry of Education, Science, Vocational Training and Early Education (MESVTEE) and SPLASH, the official school inspection instrument for Eastern Province now includes an extensive WASH section with subsections not just on water and sanitation, but also on hygiene/hand washing, MHM, operations and maintenance (O&M), and gender/equity considerations. SPLASH also developed O&M guidelines for district education boards and schools.

To further its commitment to integrate WASH into the national curriculum, SPLASH held a five-day teacher education and materials development workshop in Chipata for curriculum specialists from the National Curriculum Development Center. The main objective of the workshop was to develop teaching guides for WASH in Schools. In a move toward sustainability SPLASH now follows the zonal cascade model of teacher in-service training rather than the school-by-school model.



Pump menders training is an important component of SPLASH's sustainability efforts and O&M plan. This year 46 workers were trained in settings like this in Chadiza District.

SPLASH participated in the commemoration of Menstrual Hygiene Day held at Kabulonga Girls Secondary School in Lusaka in May. USAID mission director Dr. Susan Brems was a keynote speaker. As part of this effort, SPLASH lobbied YASH and Pharmanova pharmaceuticals to support the celebrations. The two companies donated cleaning supplies and 150 menstrual hygiene kits. The project also published its “Menstrual Hygiene Management (MHM) [Mini-Toolbox](#) for Teachers and Schools in Zambia,” which was designed to help school personnel in Zambian primary schools carry out MHM programs or activities. As a result of this collaboration, SPLASH and YASH Pharma have entered into an MOU where YASH will produce reusable pads for school girls and distribute them to all SPLASH schools, and eventually nationwide.

In October, SPLASH conducted a four-day training in USAID rules and regulations, financial management, procurement, and compliance for 20 provincial and district MESVTEE and SPLASH staff to equip the trainees with knowledge and skills in the management of subawards, donor regulations, and reporting requirements in preparation for the district management of SPLASH grants. In addition SPLASH held a meeting in December with Zambia Read to Succeed, MESVTEE, the Ministry of Local Government and Housing, and the MOH to update the 2005 school health and nutrition draft policy to incorporate new trends and developments, especially in school WASH.

In September, SPLASH organized the first-ever community of practice meeting for SPLASH hygiene behavior change technicians and partners from the District Resource Centers, in Chadiza. WASHplus Senior Hygiene Program Adviser Sarah Fry participated during her TDY to Zambia. The community shared best practices, challenges, concerns, and shaped a common plan for the hygiene education and promotion part of SPLASH for the next fiscal year.

In Year Four, the School Outcome Study was launched with the hiring and training of data collectors and first round data collection. This 10-month longitudinal study in 64 SPLASH schools and 64 control schools in a non-SPLASH province will measure how WASH improvements lead to improved learning outcomes measured by attendance/absenteeism and pupil-teacher contact time. SPLASH also reviewed, revised, and deployed the district online database, and data from three of four districts have been captured.

Integration

Overview

In recognition of the important impact that WASH can have on so many other development outcomes—health, nutrition, education, poverty—every WASHplus country-level activity looks for opportunities to integrate on approaches, with partners, and to ensure sustainability. It was a big year for menstrual hygiene management. Not only did many WASHplus countries commemorate the first-ever Menstrual Hygiene Day May 28, numerous activities leading up the event and following—from toolkit development to reusable pad making workshops to global conversations—indicate that this long overdue topic is finally receiving the needed programmatic attention it merits. WASHplus also began implementation of its first WASH and Neglected Tropical Disease (NTD) activity in Burkina Faso, adding a new country to its portfolio.

Implementation

WASH & HIV

As an outcome of the Uganda WASH work, both capacity building materials and job aids have been updated and should prove useful in a range of countries. On a more global level WASHplus contributed to an Orphans and Vulnerable Children strategy and guidance document developed by FHI 360, “Supporting Adolescents in Care and Support Programs,” adding a section on the role of WASH-Friendly Schools in supporting girls’ comfort and self-esteem, educational performance, and retention in schools. In addition, WASHplus revised the 2014 version of the Country Operational Plan Toolkit to help USAID country officers incorporate WASH into their HIV country plans funded through the President’s Emergency Plan for AIDS Relief, which was widely circulated to country missions. For more details on integration work in this area see the individual country write ups for Kenya and Uganda above.

WASH & Neglected Tropical Diseases

At the assessment team lead, Renuka Bery completed two country assessments for WASH-NTD integration during the year. The NTD team visited Bangladesh last year and Burkina Faso this year to assess the landscape for WASH and NTD activities and identify opportunities for a pilot program. As a follow up to both assessments, WASHplus developed a plan of activities for a pilot activity in Burkina Faso. WASHplus prepared and shared a draft work plan and budget with USAID and other stakeholders and began recruiting for the project coordinator.

Ms. Bery took advantage of a number of global fora on this timely integration topic, participating in a side session at the UNC Water and Health Conference; presenting with USAID’s Marci van Dyke at the Agency’s Mini-University; participating in the European Roundtable on WASH and NTDs and contributing to the discussion on developing joint indicators and research; and attending the NTD-NGDO Network annual meeting, the International Coalition on Trachoma Control meeting, the WASH Working Group, and the STH-SCHISTO meeting.

WASH & Nutrition

WASHplus presented the Clean, Fed, and Nurtured concept and consultative meeting at the 2013 UNC Water and Health conference with UNC and the Global Public-Private Partnership for Handwashing (PPPHW). Ms. Rosenbaum presented “Why WASH Matters for Nutrition” at a USAID Economic Growth, Education and Environment (E3) Learning Day, together with the SPRING project, which linked WASH to strategic nutrition outcomes and highlighted the environmental enteropathy hypothesis and its programmatic implications. WASHplus also supported USAID’s presentation on WASH and nutrition at the Stockholm World Water Week Conference, highlighting WASHplus field activities.

The joint USAID-WHO-UNICEF WASH and nutrition document has gone through numerous rounds of internal review and revision and is currently in the hands of external reviewers. The USAID NACS guidance developed by FANTA was published in December on the FANTA website. The section on counseling contains pertinent WASH information as well as links to other WASH-related documents. Ms. Bery and USAID AOTR Merri Weinger held a well-attended session at the USAID Mini-University, “The Baby and the Bathwater: Nutrition, WASH and Rubber Ducks.” Ms. Bery and WASHplus Project Director Sandra Callier attended the USAID presentation on the nutrition strategy and provided extensive comments. In addition, Ms. Bery reviewed and commented on the global consultation “Every Newborn Counts” in a webinar on sustainable sanitation.

Finally, WASHplus Sanitation and Innovation Advisor Jonathan Annis reviewed and edited the WASH section of a technical brief from the Community-Based Management of Acute Malnutrition Forum on Preventing Moderate Acute Malnutrition through Nutrition-Sensitive Interventions.

WASH in Schools

Most of the WASHplus activities under this integration category are detailed under SPLASH/Zambia above, as well as in additional country-level activities in Bangladesh and Uganda. Global-level WASH in Schools activities included SPLASH/Zambia Chief of Party Justin Lupele presenting at a UNC Water and Health Conference side session on “Integrating Learning Outcomes in WASH in Schools Programs.” In November, Ms. Rosenbaum attended the (virtual) MHM in Schools conference co-sponsored by UNICEF and the Columbia/Mailman School of Public Health. In December, Ms. Fry, senior hygiene program advisor, and PPPHW’s Hanna Woodburn attended the annual UNICEF-led WASH in Schools (WinS) Call to Action partnership meeting in New York. Ms. Fry subsequently participated in WinS Global Partnership web-based monthly meetings. She also attended and made two presentations at the Project WET Sustaining the Blue Planet conference in Montana: one was on “SPLASH: Integration of WASH and Education” and the other was an overview of SPLASH and MHM for a panel on gender issues.

Global Partnerships & Technical Leadership

Overview

Much of WASHplus partnership and technical leadership work takes place at the country level, but in several notable areas the project has taken a more global approach in Year Four, including advocacy for the inclusion of hygiene measures in the post-2015 agenda and participation in key household air pollution related events. Year Four began with WASHplus staff kicking off the 2013 UNC Water and Health Conference with two keynote addresses, six presentations (in conjunction with many of its resource partners), and a poster. In other global fora WASHplus technical experts were called on to serve as hand washing track lead for the 2014 WASH Sustainability Forum in Amsterdam; as an expert panelist on clean cooking technical committees; and to discuss WASH and schools integration, fecal sludge management, menstrual hygiene, and hand washing cost analysis, among other topics at conferences listed at the end of this section.

Implementation

The Global Public-Private Partnership for Handwashing

The PPPHW’s current business plan outlines the partnership’s work around two strategic areas: Advocacy and Knowledge Leadership. The Secretariat for the PPPHW is additionally responsible for managing partner relations. In Year Four the PPPHW Secretariat made major strides in these areas.

On October 15, 2013, the PPPHW celebrated the sixth annual Global Handwashing Day. In addition to tracking and supporting events around the world, the PPPHW hosted an event at the UNC Water and Health conference, held a virtual celebration over Google Hangout, and debuted a hand washing [video](#) created in partnership with Sesame Workshop. Planning for the 2014 Global Handwashing Day began in the second quarter of the year and included development of updated social media tools and planner’s

guide. The PPPHW Secretariat also increased outreach efforts to organizations that had not previously celebrated Global Handwashing Day on a large scale.

The partnership undertook many additional advocacy initiatives this year. Most notably, PPPHW took a leading role in advocating for the inclusion of hygiene in the post-2015 development agenda. This was done through ongoing involvement with the Joint Monitoring Programme (JMP) Communications and Advocacy Working Group; posting and promoting the JMP's proposed WASH targets; promoting and participating in two post-2015 consultations; and co-convening a session during Stockholm World Water Week on the importance of hygiene in the post-2015 development agenda. The PPPHW additionally partnered with USAID and Plan International to draft talking points for April's Sanitation and Water for All High Level Meeting. Staff live-Tweeted during the event, which allowed PPPHW to highlight the importance of hygiene for achieving health outcomes of water and sanitation investment.

As part of its knowledge leadership activities, the PPPHW hosted a Handwashing Behavior Change Think Tank in February and corresponding webinar in March. More than 120 people participated in the Think Tank in person or virtually, and more than 50 people from 25 countries attended the webinar. Findings from the Think Tank were disseminated online via the PPPHW [website](#) and elsewhere.

In light of the Ebola virus outbreak, the PPPHW coordinated with partners to provide knowledge leadership on hand washing and issue and promote an evolving [factsheet](#) that provides up-to-date information, explaining the importance of hand hygiene in preventing the spread of Ebola.

In July, Layla McCay was hired as the new Secretariat Director. WASHplus was instrumental in facilitating the recruitment and hiring process for Katie Carroll's replacement, as well as providing necessary backstop support to ensure that the PPPHW could continue to fulfill its business plan in the interim.

Joint Monitoring Programme Post-2015 Hygiene Working Group

As part of the efforts to ensure that hygiene remains in the JMP post-2015 agenda, WASHplus drafted talking points for a USAID presentation at a meeting of JMP working group leads in London, in January. This support is part of the advocacy strategy to have hand washing with soap included as an indicator that should be tracked as part of the post-2015 Sustainable Development Goals. The PPPHW shared a hand washing advocacy flyer distributed at UNC Water and Health Conference with the Water Supply and Sanitation Collaborative Council advocacy working group, which will be added, along with the talking points, to the official set of JMP advocacy materials.

Rotary International (RI)/USAID International H₂O Collaboration

The WASH Sustainability Index Tool, which assesses the likelihood of sustainability of WASH programs, was released this year. The RI/USAID partnership hosted a webinar, with support from WASHplus, to promote and introduce the tool to the WASH sector in November. Access the tool or the webinar [here](#).

The Board of Trustees approved the funding mechanism for the RI/USAID collaboration and planned activities were approved to begin July 1, 2014. A memorandum of understanding was drafted to extend the partnership for an additional three years. Both parties are reviewing the draft. Formal invitation letters were sent to Rotary clubs in four focal countries—Ghana, Zambia, Uganda, and Madagascar—to participate in the collaboration.

Rotary.org will feature a webpage exclusive to the RI/USAID partnership that will be used as a marketing and communication tool. Key messages about the partnership, its vision, and monthly updates of focal country activities will be featured. The site will serve as a platform to share data and lessons learned.

Menstrual Hygiene Day

In support of the first ever Menstrual Hygiene Day held this year on May 28, WASHplus joined forces with WASH Advocates, PLAN International, CARE, and Save the Children to host a “Menstravaganza” at FHI 360 on June 4. The event featured the Washington, DC, premiere screening of the movie “Menstrual Man,” about an Indian entrepreneur who developed a low-cost, franchise-type enterprise for local production of sanitary pads. The well attended screening was followed by a discussion and reception. Country-level celebrations of the day are detailed under country updates.



A sampling of kits and materials distributed during Zambia's celebration of Menstrual Hygiene Day.

Household Air Pollution Collaborative Activities

In October WASHplus co-hosted a meeting with TRAction of the Working Group to Address Increasing Adoption of Improved Cookstoves. WASHplus subsequently contributed a section on cookstove adoption and actual use to a follow-on, peer-reviewed journal article entitled, “Maximizing the Benefits of Improved Cookstoves: Moving from Acquisition to Correct and Consistent Use.” WASHplus also provided edits and comments on the overall article, which addresses the most critical factors affecting successful cookstove adoption identified at the meeting. The article was published in the August issue of *Global Health: Science and Practice*. It is now available [online](#).

Elisa Derby, household air pollution specialist, and Ms. Rosenbaum also submitted a research report manuscript entitled “Understanding Consumer Preference and Willingness to Pay for Improved Cookstoves in Bangladesh” to the *Journal of Health Communication's* TRAction-organized Behavior Change Special Supplement. The authors participated in a special editorial board roundtable event with other journal contributors in March.

HAP Conferences

It was a busy year for conferences for HAP staff who attended the following:

- Colorado State University Cookstove Summit
- GACC's Measuring Social Impacts meeting
- ETHOS 2014
- Inaugural meeting of ISO Technical Committee 285 on Clean Cookstoves and Clean Cooking Solutions
- Yale University-sponsored Workshop on the Adoption Gap: Design, Development and Diffusion of Household Energy Technologies
- CORE Group's Global Health Practitioner Conference.

WASHplus also co-developed and participated in joint WASHplus/World Bank Clean Stove Initiative two-day online Q&A session; Ms. Derby served as one of three expert panelists. Through Winrock WASHplus also participated fully in the International Standards Organization Technical Committee 285 new work item proposal review process and accepted invitations to join the Technical Committee 285 Communications Task Group, TC 285 Social Impacts Working Group, and the Global Alliance for Clean Cookstoves Social Impacts Working Group.

WASH Conferences

As part of its global leadership mandate, WASHplus staff participated in panel discussions and made presentations at the following WASH fora this year:

- 2013 UNC Water and Health Conference (WASHplus staff gave behavior change and M&E keynote addresses)
- American Society of Tropical Medicine and Health conference
- WASH in Schools Global Partnership Meeting
- USAID Mini-University
- Interaction Annual Forum
- Project WET Sustaining the Blue Planet
- 2nd Annual Virtual MHM Conference
- CORE Group's Global Health Practitioner Conference Spring Meeting
- M&E Symposium in West Africa
- The Future of Global Health 2014
- WASH Sustainability Forum
- Stockholm World Water Week
- Global Health Council Young Professionals Forum
- European Roundtable on WASH and NTDs
- NTD-NGDO Network annual meeting, the International Coalition on Trachoma Control meeting, the WASH Working Group, and the STH-SCHISTO meeting

Innovation

As part of its strong commitment to meaningful partnerships, WASHplus promoted innovation in Year Four through collaboration with resource partners that are global leaders, tackling systemic WASH/HAP challenges. Examples include: working with WaterAid to use a mobile-based monitoring platform in Bangladesh for real-time reporting by partner NGOs; introducing consumer perspective and a strong behavior change orientation (e.g., small doable actions) for HAP in Bangladesh; and introducing and integrating MHM activities in Zambia and Uganda. Smaller scale innovations continue to emerge and are nurtured within country programs. In Mali, for instance, WASHplus-trained local masons now cut large sheets of rock into latrine slabs that fit the JMP definition of a hygienic platform and do not rely on the use of cement or any other nonlocal building material. In Zambia schools are devising interesting ways of organizing children to bring consumables like toilet paper and cleaning supplies to school as part of the O&M strategy for SPLASH-built infrastructure. The project has incorporated new applications of the small doable actions methodology in Kenya and Uganda. WASHplus continues to maintain the Innovation Exchange [blog](#), which serves as a platform to explore the connection between innovation and development.

The 12-month fecal sludge pilot in Ambositra, Madagascar, wrapped up in October, and Practica officially handed over activities to the commune at the end of November. The pilot proved successful in demonstrating that demand for an environmentally safe sludge removal and treatment service exists in urban/peri-urban Madagascar. The activity introduced innovations in the areas of sludge removal tools, transport equipment, and disposal technologies that were new to Madagascar, thus contributing valuable learning to the emerging global fecal sludge management subsector that continues to gain prominence in the post-2015 agenda. Key lessons from the pilot are captured in a [briefing note](#).

Also in Year Four WASHplus designed a public call for proposals seeking Bangladeshi agencies to investigate the scientific validity and technical feasibility of sand/earthen barriers to reduce pathogen loading from pit latrines in coastal areas. The Water and Sanitation Research Group of ICDDR,B (a prominent Bangladesh research organization) submitted the winning proposal. Through ICDDR,B, WASHplus is designing a series of field experiments at demonstration plots in project zones and expects the results of these tests to lead to a series of small doable actions that households and service providers can adopt to modify new or existing latrines to make them less polluting. The findings from this research are of global significance as the number of people using pit latrines built in coastal areas with high water tables increases exponentially each year.

In May 2014, the project launched a request for proposals from resource partner organizations to pilot or expand on promising innovations in the WASH sector. Two projects were selected in August. The first, from iDE Bangladesh, prototypes and tests a new [point-of-use product](#) that uses thin filter paper coated with silver nanoparticles to remove bacteriological contamination from water. The pilot will compare consumer preferences of the prototype to other products readily available on the local market. The second proposal—from iDE Ethiopia—looks to scale up a UNICEF-funded sanitation marketing proof of concept pilot that ended earlier this year. The sheer size of Ethiopia's population suggests an enormous potential for market-based solutions to increase access to hygienic toilets. iDE Ethiopia proposes to build on learning and experiences from its seminal sanitation marketing work in Cambodia to scale sanitation markets in eight *woredas* (districts) within four regions. WASHplus investments will be used to improve the service delivery value chain and support the refinement of the product (a circular slab with a tight-fitting lid and vent pipe) to better respond to consumer preferences. Other innovative products to prevent pit collapse will also be prototyped. This investment aligns closely with USAID's global interest in sanitation marketing and will add significant learning to WASHplus's experience in this area.

In Zambia, WASHplus proposed the use of core innovation funding to finance a workshop to introduce life cycle cost analysis to Ministry of Education staff and other local stakeholders. WASHplus continues to believe that understanding the costs of maintaining a basic level of WASH services at schools is fundamental to ensuring their sustainability and that the use of life cycle cost analysis at the district level will become indispensable as USAID moves ahead with its plan to increase direct government-to-government financing of school WASH in the coming years. This activity will be developed as part of next year's work plan.

Cross-Cutting Issues

Monitoring, Evaluation, Research, and Learning

At the 2013 UNC Water and Health Conference WASHplus presented [findings](#) from an analysis of the relationship between the presence of functional hand washing stations (HWS) and diarrheal prevalence in households of children under 5 using Demographic and Health Surveys and Multiple Indicator Cluster Survey data from five countries—Ethiopia, Ghana, Malawi, Sierra Leone, and Zimbabwe. The analysis explored households in three categories: households with no HWS, households with an incomplete HWS (either water or soap was absent), and households with a fully functional HWS with needed supplies. Children in households with no HWS were 2.3 times more likely in Malawi, and 1.8 times more likely in Zimbabwe, to have reported diarrhea than children with a full HWS. Children in households with a HWS with no supplies were 2.5 times more likely in Malawi and 1.5 times more likely in Sierra Leone to have reported diarrhea. Having a HWS with incomplete supplies was also a predictor of diarrhea. This analysis has been written up as a manuscript for a peer-reviewed journal and is under review within FHI 360.

WASHplus also initiated a costing study to determine the economic implications if no measures are taken to increase hand washing with soap among child caretakers. The analysis used the same costing methodology the World Bank's Water and Sanitation Program developed in response to advocates for the achievement of the sanitation millennium development goals back in 2007. Kenya is the first country for which findings are available, and they indicate that Kenya could save \$153 million per year if the benefits from disease aversion connected with hand washing materialized. This figure represents about two-thirds of the USAID program in Kenya in FY12 and about one-third of the published budget of the Kenyan MOH for 2013. These results were presented at Stockholm World Water Week. WASHplus will proceed with similar analyses for the other countries where it has country programs.

In an effort to look at the sustainability issue of hand washing, WASHplus has started exploring the extent to which the science behind habit formation could be useful to guide the design of hygiene promotion programs. The initial results of this exploration will be presented at the 2014 UNC Water and Health Conference as part of a panel.

Baseline studies were completed in Bangladesh, Benin, and Mali this year as was a follow on to a facility assessment conducted in Zambia, which integrated data collected from its newest district Chadiza. Highlights from the baselines are included in individual country write ups.

Other research got underway this year, including the SPLASH School Outcome Study in Zambia. Five data points are being collected during the 10-month study. Approximately a quarter of the schools to be surveyed in Eastern Province have a full WASH package, including both hardware (i.e., new/rehabilitated water points, sanitation facilities that meet government standards) and software elements (i.e., teacher training in hygiene promotion, presence of WASH Clubs). WASHplus is also collecting information on attrition by comparing initial enrollment to final completion of school year, discounting for in-year school transfers. WASHplus M&E Specialist Orlando Hernandez and SPLASH M&E Specialist Reford Mihova worked closely together to plan the study, update the sampling framework, select intervention and control schools, pretest instruments, develop a timeline for data collection, establish major guidelines for data analysis, and incorporate major USAID concerns related to enrollment and attrition.

Other work this year included finalizing the Bangladesh WASH M&E plan after considerably reducing the number of indicators to be tracked; coordinating a response to the Demographic and Health Surveys proposing suggestions to modify questions dealing with water, sanitation, and hand washing; and reviewing the M&E section of the WASH and nutrition integration document.

Knowledge Management

This year the WASHplus KM team continued to expand its networks and find new ways to share and collect WASH and HAP information and resources. Toward that end the WASHplus KM team co-organized and participated in a side event at the UNC Water and Health conference called “Putting Knowledge into Action.” The KM team also co-hosted, along with the K4H project, a knowledge cafe at USAID’s Mini-University in March, and facilitated discussions on using social media and overcoming barriers to knowledge sharing. At the end of Year Four the WASHplus team worked together to develop a poster “The WASHplus Approach for Discovery, Collecting, Curating, and Disseminating WASH Sector Knowledge and Information,” which will be presented at the UNC conference in October 2014.

The KM team supported a number of webinars (see list below) as well as several project events, including the June 4 Menstrual Hygiene Event (*see SO3*) and WASHplus participation at the CORE Group spring meeting. On the HAP side, the KM team worked with Ms. Derby on planning for a World Bank-sponsored [online discussion](#) “What Have We Learned About Consumer Preferences of Cookstoves in Bangladesh and Indonesia?” held Sept.30-Oct.1, 2014.

Knowledge Sharing Resources and Products

- The project’s quarterly newsletter, *WASHplus News*, were circulated electronically in December, March, June, and September. Find all the past issues [here](#).

Activity briefs/publications (available [here](#) on the WASHplus website):

- Integrating WASH into HIV Interventions and Advancing Improved Sanitation Uptake: WASHplus Kenya End of Project Report
- Downstream of the Toilet: Transforming Poo into Profit
- Expanding Coverage and Promoting Sustainability of WASH Infrastructure and Hygiene Investments in Madagascar (a joint WASHplus and WSUP brief)
- Cooking Should Nurture, Not Kill
- SPLASH Menstrual Hygiene Management Mini-Toolbox
- What Do Cooks Want? What Will They Pay?
- Baseline Survey School WASH Facility Assessment, February 2014. Revised to include Chadiza.
- Exploring the Potential of Schoolchildren as Change Agents in the Context of School WASH in Rural Zambia

Webinars

- **WASH Sustainability Index Tool.** USAID-Rotary International H2O Alliance [webinar](#). November 21, 2013.
- **Behavior Change Approaches to Enable Uptake and Use of Clean Cookstoves.** May 7, 2014. This [webinar](#), co-hosted with the USAID TRAction Project, highlighted lessons learned from three TRAction projects.

- **The Power of Creative Thinking: Working Within and Around Challenging Institutional Frameworks.** June 23, 2014. Presenters for this [webinar](#) co-hosted by WASHplus and WSUP, included WSUP’s Baghi Baghirathan and WASHplus’s Orlando Hernandez.
- **WASH, Nutrition, and Early Childhood Development: New Evidence in ECD and Findings from the Field.** June 25, 2014. Helen Petach, USAID/GH/HIDN moderated the [webinar](#). Presenters included Jennifer Orgle, CARE, and Maureen Black, Johns Hopkins University.

This year the project launched a new LinkedIn community called the Clean Cookstove Community, which now has more than 130 members. Posts and discussion questions are added each week, not only by WASHplus but by members of the community. Also new this year is the WASHplus [blog](#), which is being used by HQ as well as field staff to highlight program efforts from a personal perspective.

Annual KM Social Media Statistics

- The WASHplus Weekly updates continued to go out each week; 45 issues were published on such topics as Community-Led Total Sanitation, WASH & Monitoring, and Disease Outbreaks
- Statistics for WASHplus blogs/news sites: Sanitation Updates— 170,119 visits during the year; IAP Updates—77,082 visits; Urban Health Updates—64,689 visits; Household Drinking Water Quality—89,147; WASH/Nutrition Library—31,045. The Innovation Exchange recorded 7,567 visitors this year.
- The WASH Twitter account now has 1,605 followers and the newer IAP Twitter has 109 followers.