



USAID
FROM THE AMERICAN PEOPLE

AFGHANISTAN

AFGHAN SUSTAINABLE WATER SUPPLY AND SANITATION (SWSS) PROJECT

SUSTAINABLE HEALTH OUTCOMES UNIT
PROJECT FINAL REPORT

SEPTEMBER 20, 2012

This publication was produced for review by the United States Agency for

This report was prepared for the United States Agency for International Development, Contract No. EPP-I-00-04-00019-00, the Afghan Sustainable Water Supply and Sanitation (SWSS) Project, under the Integrated Water and Coastal Resources Management IQC II (Water II IQC).

For information in the USA:

Christopher McGahey
Senior Technical Advisor/Manager
Tetra Tech ARD
1611 N. Kent Street, Suite 700
Arlington, VA 22209
Tel. +1 703 807-5700
cmcgahey@ardinc.com

Iain Aitken
Principal Technical Advisor
Management Sciences for Health
784 Memorial Drive
Cambridge, MA 02139
Tel: +34 958 254 737
iaitken@msh.org

AFGHAN SUSTAINABLE WATER SUPPLY AND SANITATION (SWSS) PROJECT

SUSTAINABLE HEALTH OUTCOMES UNIT
PROJECT FINAL REPORT

SEPTEMBER 20, 2012

DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

CONTENTS

- CONTENTS v
- ACRONYMSvii
- EXECUTIVE SUMMARY 1
- 1. Background and Overview..... 5
 - 1.1. Background 5
 - 1.2. The selection of "sustainability" as a guiding value in the approach 5
- 2. Goals and overall strategy..... 6
 - 2.1. Provincial Strategy 6
 - 2.2. Flexible Response Strategy 8
- 3. Implementation: Provincial Strategy..... 8
 - 3.1. Selection of provinces and districts..... 8
 - 3.2. Two rounds of districts 9
 - 3.3. Selection of NGOs and NGO contracts, staffing and SOW 10
 - 3.4. The CLTS Process 11
 - 3.5. Hygiene education 14
- 4. Implementation: Flexible Response Strategy..... 16
 - 4.1. Background 16
 - 4.2. Strategy, Staffing and Location priorities 16
 - 4.3. Program Implementation..... 16
- 5. Roles of SWSS field staff..... 18
 - 5.1. Role of Society for Sustainable Development of Afghanistan 18
 - 5.2. Community Mobilization Master Trainers..... 18
 - 5.3. Provincial WASH Coordinators 18
 - 5.4. Health Education Trainers 19
- 6. Monitoring and Evaluation 19
 - 6.1. Project indicators and activities..... 19
 - 6.2. Monitoring and Evaluation Methods in SWSS 20
- 7. Project Performance and Results..... 22
 - 7.1. CLTS and Improved Latrines 22
 - 7.2. Hygiene education activities and outputs..... 24
 - 7.3. Impact of hygiene education programs: KAP household surveys 26
 - 7.4. Summary of behavior change impact against targets..... 31
- 8. National impact of SWSS CLTS activities..... 32
- 9. Conclusion 33

Annex A: Percentage of households with children aged 0-59 months practicing specific hygiene-related behaviors*, SWSS KAP surveys.....	34
Annex B: Staff of the SWSS Sustainable Health Outcomes Unit	35

ACRONYMS

BCC	Behavioral Change Communication
BPHS	Basic Package of Health Services
CHW	Community Health Worker
CLTS	Community-Led Total Sanitation
CMMT	Community Mobilization Master Trainer
COMPRI-A	USAID, Communication for Behavioral Change: Expanding Access to Private Sector Health Products and Services in Afghanistan project
COTR	Contracting Officer's Technical Representative
DACAAR	Danish Committee for Aid to Afghan Refugees
FHAG	Family Health Action Group
FPO	Field Program Officer
GHWD	Global Hand Washing Day
GIRoA	Government of the Islamic Republic of Afghanistan
HET	Hygiene Education Trainers
HHS	Household survey
KAP	Knowledge, Attitude, Practice
LQAS	Lot Quality Assurance Sampling
M&E	Monitoring and Evaluation
MoE	Ministry of Education
MoPH	Ministry of Public Health
MRRD	Ministry of Rural Rehabilitation and Development
MSH	Management Sciences for Health
NGO	Nongovernmental Organization
ODF	Open-Defecation Free
PC	Provincial Coordinator, SWSS
PNF	Project Nomination Form
PPHD	Provincial Public Health Department
PRA	Participatory Rural Appraisal
PRRD	Provincial Rural Rehabilitation and Development
PRT	Provincial Reconstruction Team
SA	Supervision Area
SHO	Sustainable Health Outcomes (Unit of SWSS)
SSDA	Society for Sustainable Development of Afghanistan
SSDP	Society for Sustainable Development of Pakistan
SWSS	Afghan Sustainable Water Supply and Sanitation Project
USAID	United States Agency for International Development
WASH	Water, Sanitation, and Hygiene

EXECUTIVE SUMMARY

Introduction

The USAID Sustainable Water Supply and Sanitation (SWSS) project, led by Tetra Tech ARD, was designed to improve the sustainability of rural infrastructure and the health of rural populations through a balanced commitment to providing water supply and sanitation facilities and improving community hygiene behaviors. It built upon the significant work done in the water supply, sanitation, and hygiene (WASH) sector in Afghanistan over the previous five years. A national policy framework was in place, engineering standards were set, and over 100 projects had provided facilities in rural communities.

Despite this high level of investment, extremely low percentages of rural Afghans used improved water supplies or sanitation facilities. Widespread utilization of water systems, sanitation facilities, and a core set of hygiene behaviors is the foundation for achieving health impacts. Without health impacts, especially among women and children under the age of five, rural water and sanitation (WatSan) projects were not reaching their goal of reducing the time and money spent by farming families on treating diarrheal diseases, allowing them more time for activities that improve their economic well-being.

Approach: Sustainability

The Sustainable Health Outcomes component of SWSS, implemented by Management Sciences for Health (MSH), had two sub-components; both aimed at achieving sustainability of health outcomes. The first, the Provincial Strategy, was an integrated approach to hygiene and sanitation consisting of Community-Led Total Sanitation (CLTS) and hygiene education. This would be implemented in six selected provinces. The second, the Flexible Response Strategy, aimed to provide hygiene education to beneficiaries of water supplies constructed by SWSS in many parts of the country.

In the Provincial Approach, CLTS was selected as the strategy to overcome the deficiencies in the Afghan rural sanitation and hygiene program. CLTS works by engaging whole communities in examining and acknowledging the extent and shamefulness of open defecation, its importance in the transmission of diarrheal diseases, and the costs of such diseases to well-being and household finances. This motivates the community to achieve open-defecation-free (ODF) status through ensuring that all households have access to a safe latrine and that everyone uses it. This is achieved without any subsidies and within the scope of the community's resources. Combining the CLTS approach to sanitation with behavioral change communication approaches, which also emphasizes other aspects of home and personal hygiene, further strengthened this approach. The behavioral change approaches included Family Health Action Groups (FHAGs) for mothers of young children, training of community and religious leaders to reach men, and school programs to reach children.

Effectiveness and sustainability were further strengthened by integrating the SWSS program with the already successful community-based health services of the Afghan government's rural Basic Package of Health Services (BPHS). SWSS invited the NGOs implementing the BPHS and, therefore, already familiar with the communities, to also implement the CLTS and hygiene education program in the six Provincial Approach provinces.

The Provincial Approach

Six provinces were selected for the Provincial Approach on the basis of accessibility, relative security, and the need to address the problem of diarrhea. The selection of the 34 districts reflected the same criteria, as well as provincial population size. In each province, the program was started in half the districts in April 2010 and the remainder a year later. Since CLTS was completely new to Afghanistan, this allowed for refinement of the program and development of experience before full expansion.

“Triggering” is the term applied to the introduction of CLTS to communities by the NGO facilitators. It includes a transect walk of the village, mapping all the areas of open defecation. People then calculate both the amount of feces and the amount of money spent on medical expenses for diarrhea. Most communities reacted to the disgust and clear chain of infection by collectively determining to build latrines and become an open-defecation-free community. NGO facilitators made follow-up visits and, after two to four months, many communities were ready to be verified and then certified as an ODF community with access to a new or improved latrine for all households.

The parallel program of hygiene education started shortly after triggering with the formation of women's FHAGs. The female Community Health Workers (CHWs) gather a group of respected women leaders, who learn and practice improved personal and home hygiene in their own homes and are then responsible for sharing what they have learned with the women from 8-10 neighboring homes. The women leaders were trained and supported by the CHWs and the NGO female facilitators.

Male community and religious leaders were invited to two-day hygiene education courses held centrally in the province and taught by SWSS staff. School children were reached on the Global Hand Washing Days (GHWD) in October 2010 and 2011. The celebrations focused on teaching children how and when to wash their hands.

The Flexible Approach

The SWSS project constructed wells with hand pumps and some pipe schemes in communities that had been identified by Provincial Reconstruction Team/Field Program Officers (PRT/FPOs). The Sustainable Health Outcomes team was responsible for providing hygiene education to the beneficiaries of these water points. This was done through training community leaders and schoolteachers. In a few districts, it was possible to train community women, but for most parts of the country it was not possible to recruit women trainers.

Project Targets, Monitoring and Evaluation

The Sustainable Health Outcomes program of SWSS was designed to address two sets of deliverables identified in the Task Order. The first was 50,000 improved latrines with an assumed 500,000 beneficiaries. The second deliverable was 3,000,000 recipients of hygiene education.

Numbers of new or improved latrines were reported in the NGO monthly reports. Numbers of beneficiaries were estimated on the basis of the average household size of seven. This set the target at 350,000, rather than the 500,000 based on an earlier assumed household size of ten.

The number of recipients of hygiene education was reported in the NGO monthly FHAG reports and in *ad hoc* reports of training courses for schools and community leaders. It was intended that there be significant overlap between each of these three channels of hygiene education to reinforce the messages for the same population. The numbers of beneficiaries of hygiene education in the Flexible Approach program were estimated by assuming 25 households per water point and seven members per household.

Project Outputs and Performance

CLTS, ODF, latrines and beneficiaries

The program in the first round of districts lasted from April 2010 to June 2012. The second round of districts ran from March 2011 to July 2012. Triggering targets had added up to 916, but 1,031 communities were actually triggered. Of these, 611 were eventually certified as ODF. The targets for latrines in these communities amounted to 37,200, but the final total was 42,129 improved latrines and 294,903 beneficiaries, 113% of the targets. In fact, given the targets that we settled on for the NGOs, it should have been possible to reach the 50,000 latrines if the final year budget cuts had not reduced the program.

Hygiene education beneficiaries

FHAGs were initiated in 952 villages, significantly more than the 611 that reached ODF, but less than the 1,031 that were triggered. This was as expected. The female CHWs and the NGO female facilitators trained 8,626 women leaders. They, in turn, demonstrated and taught what they had learned to another 45,362 women. These 53,916 women represent a total of 377,916 beneficiaries in those households. In support of the hygiene behavior change in the Provincial Approach communities, 2,165 community and religious leaders were trained and a total of 51,186 teachers and students were reached through the schools' Global Hand Washing Day program.

Through the hygiene education training program for the Flexible Approach program, 2,019 schoolteachers and community leaders were trained to pass on the messages to an estimated 196,175 beneficiaries of the new water points. The program started about six months late due to staff recruiting issues and was limited significantly by security issues

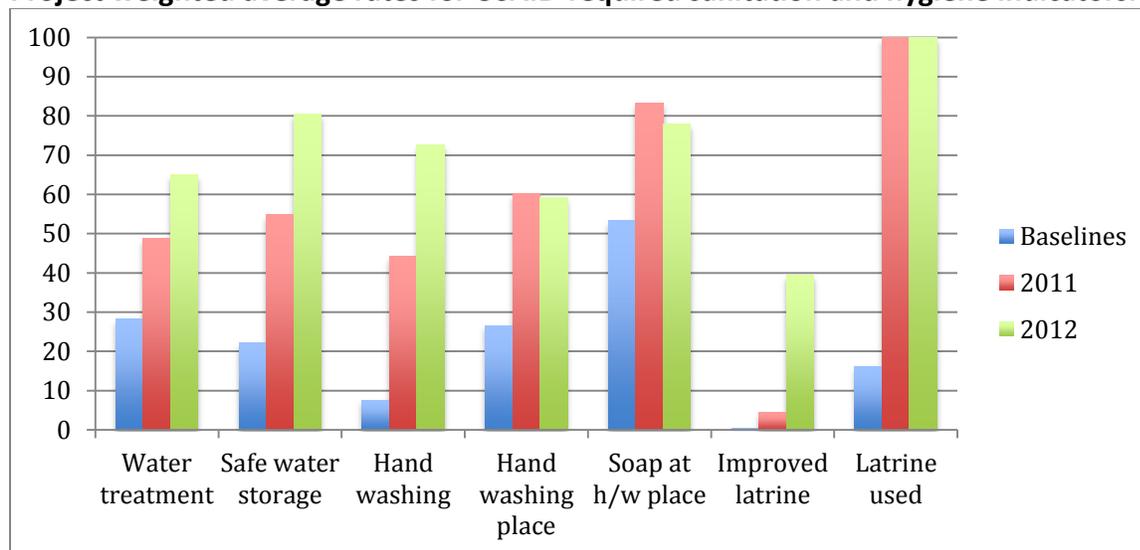
and by the budget cuts of the third year. As a result, only about 32% of the water point beneficiaries expected were reached.

The best estimate of the total number of beneficiaries of hygiene education programs is gained by adding the beneficiaries of the FHAGs (377,916) and those of the Flexible Approach program (196,175). This total comes to 574,091.

Behavior change

The monitoring of behavior change in the CLTS/hygiene education communities was measured by a series of three annual household surveys that provided baseline, follow-up, and end-of-project status on seven required USAID indicators. The findings of the household surveys (see figure) show satisfactory improvements in all areas. The practice of water treatment rose to 65%, and in 80% of homes it was stored safely. Hand washing at all appropriate times was observed by over 70% of women, 60% of homes had a specific place for hand washing, and 80% of those places were provided with soap. The apparently low coverage of improved latrines is explained, first, by the international requirements of an “improved” latrine, many of which are not affordable by poorer households. The second reason is that the requirement that latrines be kept clean was met in only 57% of latrines. The communities surveyed were those that had been certified as ODF, with access for all families to a latrine. The final indicator on use of latrines was at 100%.

Project weighted average rates for USAID-required sanitation and hygiene indicators.



1. Background and Overview

1.1. Background

The SWSS project, led by Tetra Tech ARD, was designed to improve the sustainability of rural infrastructure and the health of rural populations through a balanced commitment to providing water supply and sanitation facilities and improving community hygiene behaviors. It built upon the significant work done in the WASH sector in Afghanistan over the previous five years. A national policy framework was in place, engineering standards were set, and over 100 projects had provided facilities in rural communities.

Despite this high level of investment, extremely low percentages of rural Afghans used improved water supplies or sanitation facilities. A review of the sector commissioned by the Ministry of Rural Rehabilitation and Development (MRRD) concluded that, across multiple provinces, over 40% of the rural water supplies constructed in the previous three years were non-functional, sanitation had not improved at all, and the health status of rural Afghans was not improving. Without health impacts, especially among women and children under the age of five, rural WatSan projects were not reaching their goal of reducing the time and money spent by farming families on treating diarrheal diseases, allowing them more time for activities that improve their economic well-being. Key challenges identified in the review were ineffective community mobilization for water system management, low adoption of household latrines following externally funded “demonstrations,” continued open defecation and use of fresh human excreta as fertilizer, and low commitment to follow-up.

Widespread utilization of water systems, sanitation facilities, and a core set of hygiene behaviors most proximate to diarrheal diseases is known to be the foundation for achieving health impacts. Area-wide use of well-engineered facilities is more important to health improvement than individual family latrines, access to an improved water supply, or purchase of water treatment products. Too much of the sector’s work in Afghanistan had not been designed to achieve widespread coverage and balanced improvements in facilities and hygiene behaviors.

1.2. The selection of "sustainability" as a guiding value in the approach

The Sustainable Health Outcomes component of SWSS, implemented by MSH, had two sub-components aimed at achieving sustainability of health outcomes. The first, the Provincial Strategy, was an integrated approach to hygiene and sanitation consisting of CLTS and hygiene education. The second, the Flexible Response Strategy, aimed to provide hygiene education to the beneficiaries of the water supplies constructed by SWSS.

1.2.1 The selection of CLTS as an approach to maximizing sustainability

CLTS was selected as the strategy to overcome the deficiencies in the Afghan rural sanitation and hygiene program. CLTS, having started in Bangladesh ten years earlier, had proven very effective in many parts of the world, including parts of the region like the

North West Frontier District of Pakistan that shared common ecological and cultural characteristics with Afghanistan. CLTS works by engaging whole communities in examining and acknowledging the extent and shamefulness of open defecation, its importance in the transmission of diarrheal diseases, and the costs of such diseases to well-being and household finances. This motivates the community to achieve ODF status through ensuring that all households have access to a safe latrine and that everyone uses it. This is achieved without any subsidies and within the scope of community resources.

1.2.2 Integration of the sanitation and hygiene approach with the Basic Package of Health Services for synergy and sustainability

The fecal-oral spread of diarrheal pathogens involves several different routes and, therefore, requires several complementary strategies to block those routes. Contamination of water and food may be directly from feces, by flies, or by fingers. Implementation studies have shown that hand washing with soap will reduce the incidence of diarrhea up to 48%, safe disposal of feces by 36%, and point-of-use treatment of water by up to 17%.¹ SWSS included all three approaches to maximize the impact.

The Provincial Approach of the SWSS project adopted several strategies to maximize both effectiveness and sustainability. The first was to combine the CLTS approach to sanitation with behavioral change communication approaches, which also emphasized other aspects of home and personal hygiene. These approaches included the FHAGs for mothers of young children, training of community and religious leaders to reach men, and the schools program to reach children.

Effectiveness and sustainability were to be further strengthened by integrating the SWSS program with the community-based rural health services that were already becoming well-established and effective through the BPHS, and included a network of over 20,000 male and female Community Health Workers nationwide, supported by village health committees (*Shuras*). Implementation of the rural BPHS was being contracted out by the Ministry of Public Health (MOPH) and its donors to NGOs on a province-by-province basis, and these NGOs had developed a good knowledge of and *rapport* with communities. SWSS, therefore, contracted with these BPHS NGOs to implement the CLTS and hygiene education programs in their provinces.

2. Goals and overall strategy

2.1. Provincial Strategy

The goal of the Provincial CLTS program and hygiene education activities is to improve the quality of life of rural communities and reduce the morbidity and mortality from diarrhea diseases, especially among young children.

¹ Cairncross S, C Hunt, S Boisson, et al. Water, sanitation and hygiene for the prevention of diarrhea. *Int. J. Epid.* 2010; 39:i193-i205.

2.1.1. CLTS

The objectives of CLTS are that:

- All intervention communities achieve an ODF village environment.
- All households have access to an improved and safe sanitation facility and use it.

At the heart of CLTS lies the recognition that providing toilets does not guarantee their use, nor does it result in improved sanitation and hygiene. CLTS focuses on the behavioral change needed to ensure real and sustainable improvements: investing in community mobilization instead of hardware, and shifting the focus from latrine construction for public locations or individual households to the creation of ODF villages. By raising awareness that, as long as even a minority continues to defecate in the open, everyone is at risk of disease—CLTS triggers the community’s desire for change, propels them into action, and encourages innovation, mutual support, and appropriate local solutions, thus leading to greater ownership and sustainability.

Key features of CLTS include:

- CLTS concentrates on the whole community rather than individual households.
- The first step is to stimulate the realization of the collective benefit from stopping open defecation.
- The community then decides how together they will create a hygienic environment, including access to a safe, hygienic latrine for everyone.
- The success of CLTS relies on collective community motivation and achievement, and avoids prescription of latrine models and individual household hardware subsidies.
- Community responsibility leads to community solutions to problems of household participation or issues in design or resources for latrine construction.
- Achievement of ODF status frequently leads naturally to adoption of improved home and personal hygiene behaviors, safe disposal of animal and domestic waste, and gradual improvement in the structure and design of latrines and toilets.

2.1.2. Hygiene BCC

The objectives of hygiene behavioral change communication are to:

- Increase the use of effective household point-of-use water treatment methods;
- Increase the number of households that correctly store water;
- Increase the number of households that have a specific place for hand washing;
- Increase the number of households with soap at the place of hand washing;
- Increase the number of mothers of young children who know all critical times for hand washing.

CLTS is the mechanism by which a community reaches ODF status and ensures that all households have safe, hygienic latrines. The complementary behaviors necessary to prevent diarrheal diseases include:

- Hand washing with soap at all appropriate times;

- Proper handling of children’s feces;
- Safe collection, treatment and storage of water; and
- Safe handling and storage of food.

The original plan was to promote these home and personal hygiene behaviors through multiple channels in order to achieve maximum coverage with and reinforcement of the messages. The four activities were to be:

- Women’s FHAGs within the community;
- Education meetings for community and religious leaders to reach men;
- Schools program to reach children; and
- Radio messages.

2.2. Flexible Response Strategy

In October 2009, the SWSS project began implementing water infrastructure initiatives. These water supplies, mostly wells and pumps with a few pipe schemes, were constructed following receipt of COTR-approved Project Nomination Forms (PNF) forwarded by the Provincial Reconstruction Team/Field Program Officers (PRT/FPOs). These activities were implemented in all parts of the country.

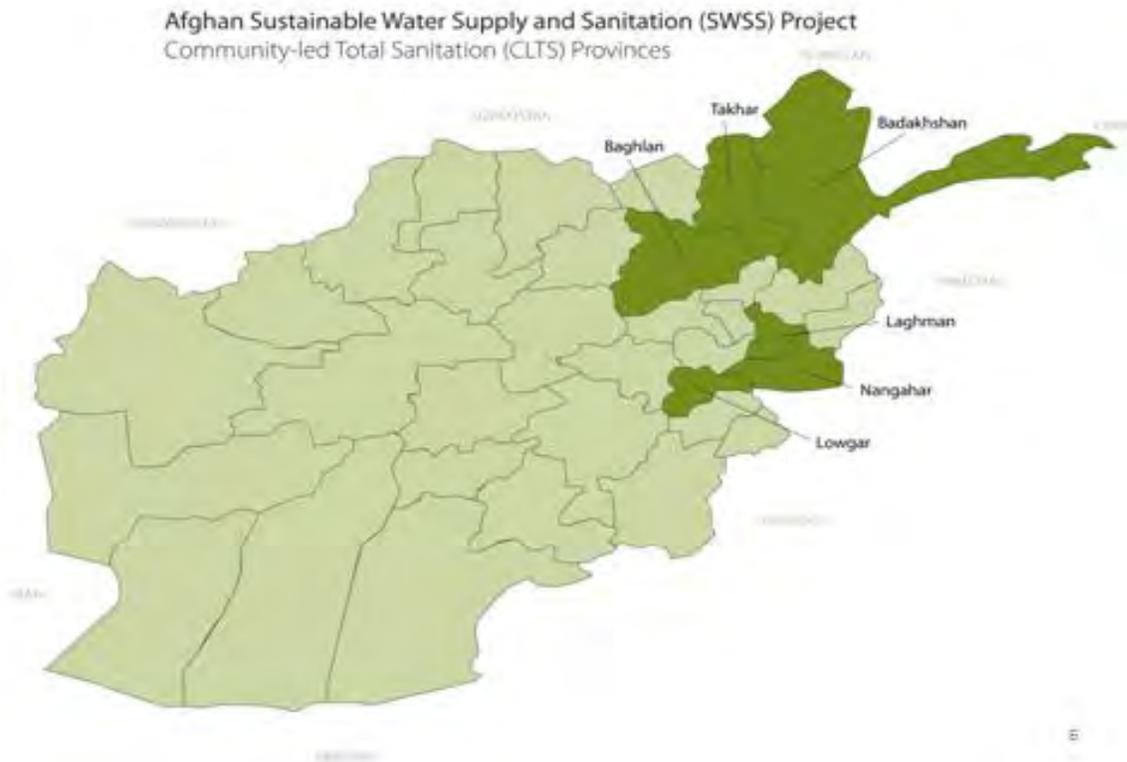
The policy of the MRRD is that that all sector partners use an integrated approach for the provision of water, sanitation, and hygiene. However, such an integrated approach has proven difficult when SWSS infrastructure investments are responsive to the PRT PNFs and often geographically dispersed, while SWSS’ sanitation and hygiene promotion programming (the Provincial Strategy) has employed a community development methodology that is geographically fixed. SWSS did not attempt to provide “demonstration” latrines to all communities receiving water supplies, let alone achieve a latrine for all households. It did agree, however, to provide a program of hygiene education to all beneficiary families of the new water supplies.

Because women are so crucial to the achievement of improved personal and home hygiene, the original plan was to use FHAGs as well as education for community and religious leaders. In the end, we were unable to implement the FHAGs because of the lack of female field workers (see below).

3. Implementation: Provincial Strategy

3.1. Selection of provinces and districts

Selection of provinces for the implementation of the Provincial Strategy was made in consultation between SWSS management, USAID and MRRD. The selection attempted to achieve representation among the different regions as well as security for a program that would last three years. The provinces chosen were Nangarhar, Laghman, Logar, Baghlan, Takhar and Badakhshan. The first two are in eastern, Logar is in the central region and the last three are in the northern region of Afghanistan. The criteria for selection of districts within these provinces were easy accessibility, relatively good security, and a high



diarrheal case load. The districts were selected in close coordination with partner NGOs and the provincial staff of MRRD and MOPH. The final number of districts selected in each province was based on a combination of these criteria and the size and population of the province. The numbers of districts by province were:

- Nangarhar: 6 districts
- Laghman: 4 districts
- Logar: 4 districts
- Baghlan: 6 districts
- Takhar: 6 districts
- Badakhshan: 8 districts (4 districts in cluster one and 4 in cluster two)

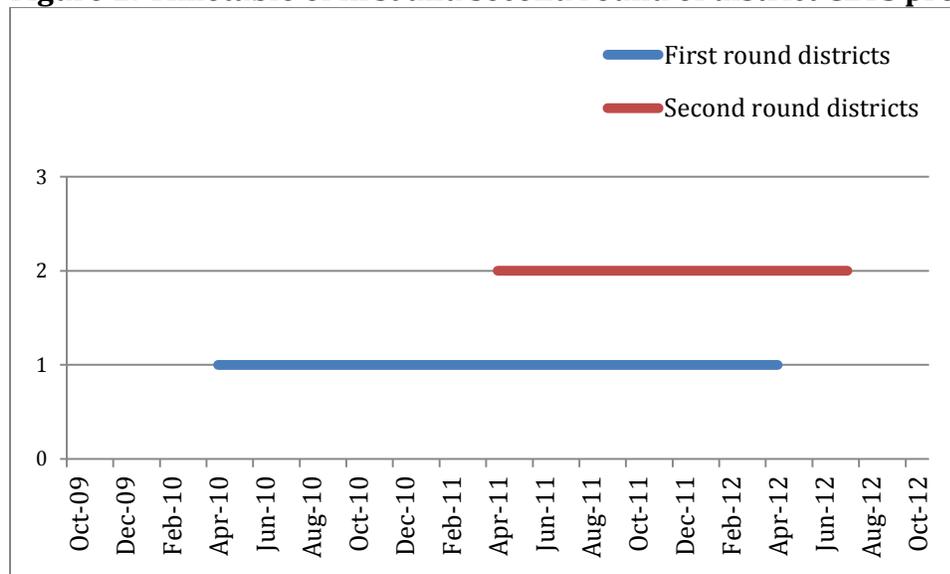
In the final quarter of the project’s second year, two remote districts in Bamyan province were added on account of the needs in those districts. Unfortunately, the work was cut off after three months because of the budget cuts of the final year. Also in the second year, there were serious discussions about implementing CLTS in communities in Istaliff in order to provide convenient “demonstrations” close to Kabul. This was rejected because the communities were not considered “favorable” for CLTS (see 3.4.1.).

3.2. Two rounds of districts

In anticipation of having all three years of the project, and because no one had undertaken this in Afghanistan with its unique circumstances, we decided to start with half the districts in the first year and then move to the second set of districts in the second year (Figure 1).

We expected that to allow us all to gain experience in CLTS and make for what we hoped would be the most efficient use of the human and financial resources.

Figure 1: Timetable of first and second round of district CLTS programs



3.3. Selection of NGOs and NGO contracts, staffing and SOW

The selection of the NGOs to implement the CLTS and hygiene education programs in the Provincial Strategy provinces was all done according to normal Government of Afghanistan procurement regulations. NGOs were required to be BPHS implementing NGOs. In most cases the NGOs who won the contracts were those implementing the BPHS in that particular province. In some cases, and for different reasons, the NGOs selected were those delivering BPHS (usually) in an adjacent province.

Contracts to the NGOs were generally up to six months long. Managing the program would have been easier with longer contracts, but this shorter length kept the contracts within financial limits that did not require additional, time-consuming US government approvals. Most of the contracts were renewed with the same NGOs, but some of the contractors were changed in the second year. The contract in Nangahar was terminated in year three because of poor performance.

The NGO staff included a part-time Kabul-based project manager and a full-time provincial team. This consisted of a provincial project manager, a field supervisor and eight or twelve facilitators. The facilitators were organized into teams of two males and two females for each district.

3.4. The CLTS Process

3.4.1. Community selection

Selection of communities at the beginning of the program was concerned with maximizing the possibility of early successes. The characteristics of favorable communities are:

- *Favorable community size (50 to 60 households),*
- *There has been and is no program of water and sanitation hardware subsidies and none is proposed,*
- *High incidence of diarrheal disease and child mortality,*
- *Where open defecation is common, the village is very dirty and human excrete could be seen everywhere,*
- *Wet, moist and/or visibly filthy and disgusting conditions where fecal contamination is offensive,*
- *Where it is easy for people to see and analyze the links between their defecation habits and ingestion of feces,*
- *Where people defecate near their houses during rains or at night,*
- *The community is accessible and follow-up easy.*

NGO staff made the selections in coordination with staff of the PRRD and PPHD.

3.4.2. Triggering

Triggering is the process by which the facilitators use participatory rural appraisal (PRA) tools to stimulate a social awakening and determination by community members to change their sanitation habits. The male and female facilitators implement the activities separately for men and women. The process takes three to four, and sometimes five, hours in which the villagers analyze their own hygiene and sanitation situation, finally realize the real problem, and come up with appropriate solutions. The facilitators do not prescribe anything, but only facilitate the process. If triggering was successful, communities generally, spontaneously formed a committee of concerned men to coordinate and oversee activities.

Initial responses to the triggering experiences were varied. In many cases, there was immediate enthusiasm for action. In some cases, there was little response or desire to change. In some of these cases, they later changed their minds on hearing about the much-praised success of a nearby community that did achieve ODF status.

The CLTS “Triggering” process

On the day of triggering, the NGO facilitators and as many residents of the targeted community as possible:

- Participate in a transect walk and map the areas of open defecation,
- Identify the dirtiest neighborhoods or locations,
- Calculate the amount of feces and medical expenses for treating diarrhea,
- Trigger disgust of fecal contamination,
- Collectively realize that, due to open defecation, all are ingesting each others’ feces and that this will continue as long as open defecation continues.

3.4.3. Follow-up

The NGO facilitators returned to communities every two to four weeks after triggering in order to monitor progress, encourage the community and give technical advice on latrine construction if requested. After two or three weeks of progress, the facilitators proposed the formation of a FHAG among the women and invited community and religious leaders to participate in one of the hygiene education meetings designed for them.



The “walk of shame” (above), and mapping the areas of open defecation (left).

3.4.4. Latrine construction

Latrine construction by communities has been totally subsidy-free. Construction materials have been those that could be afforded by families, sometimes with assistance from wealthier individuals in the community who saw it in their own interests for the whole community to become ODF. In most areas, households built their own latrine. In Nangahar and Laghman provinces, some latrines were shared by two or more households (usually brothers) where they shared the same compound.



Most latrines have been pit or vault latrines depending on the geology and terrain. Cement slabs have been recommended for safety and cleanliness reasons, but not all households have been able to afford them. Only a minority has afforded ventilation pipes. The priority criteria have been to have a latrine that is safe for adults and children and that provides basic privacy. Covers should prevent flies from entering either through the hole at the top or through the hole at the back of a vault latrine that is required for emptying it periodically.

3.4.5. ODF verification and certification

Once the community and facilitators are agreed that all households have and use a latrine, a team consisting of the NGO staff, the representatives of government line departments (PRRD, PPHD and NEPA), leaders of a neighboring village, Kabul SWSS team representative, other stake holders, and the villagers undertake a full walk in the target village and observe each and every latrine, as well as the previous places used for defecation before CLTS implementation. The investigation team members complete the verification form and sign it.

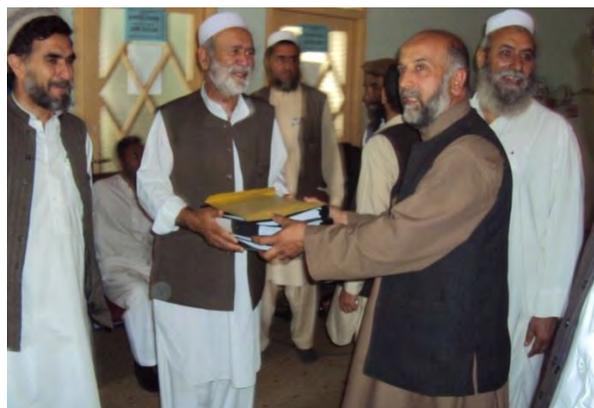


After the village has been verified (no open defecation found and 100% latrine coverage and use), the ODF certification process is carried out. This usually happens one to three weeks after verification. The team, usually with the PRRD Director, investigates the village again and the latrines on a sample base. Once the team is convinced, the village is granted the ODF certificate at a public ceremony and the ODF board (clean village board) is installed at the entrance gate of the village.



3.4.6. Post-ODF Follow-up

Three to six months after the ODF certification, the provincial CLTS team with some SWSS staff from Kabul, visit the ODF community in order to check for any recurrence back to open defecation. This has not been possible for communities reaching ODF at the end of the project.



However, the recurrence rate back to open defecation in earlier ODF communities has not exceeded 1%.

3.4.7. Delivery and submission of ODF certified communities to the MRRD

At the end of the project, communities that had been certified as ODF, were officially handed over to the PRRDs for follow-up.

3.5. Hygiene education

3.5.1. FHAGs

Women’s FHAGs have been a key strategy in the hygiene behavioral change communication program because women play such a central role in the collection and storage of water in the home, the preparation of food, and the care of young children. FHAGs were introduced as a new official activity in the national community-based health care system of the BPHS (2009). They had previously been shown to be an effective way of introducing various healthy behaviors and changing social norms in the community. Previously, some FHAGs had been started around community nutrition activities, others around birth spacing and maternal and child health; in SWSS the starting point was hygiene and sanitation.



Most communities in Afghanistan now have both male and female CHWs that are trained to treat common illnesses, provide birth-spacing methods, and lead health promotion. Each FHAG is a group of respected women leaders, selected by the female CHW. Each of these women is a leader of a group of eight to ten women with young children from her neighborhood group of homes. The female CHW meets with the FHAG leaders regularly to share what she has learned about keeping healthy. The FHAG leaders then apply what they have learned in their own homes and demonstrate the changes to their neighborhood groups of women. The approach is, “Come and see how I do it in my kitchen.”

The creation of the FHAGs has been one of the most important tasks of the female NGO facilitators. They have helped the CHWs to train the FHAG leaders. In those communities where there was no CHW, the facilitators have done all the training and motivation of the FHAG leaders.

3.5.2. Schools and Global Hand Washing Days

The Global Hand Washing Day is celebrated every year on October 15. SWSS used this opportunity in both 2010 and 2011 to reach school children. In 2010, the activities were held in the six Provincial Strategy provinces and over 10,000 boy and girl students washed their hands with water and soap and conveyed the message of washing hands to their families and villages. In 2011, the schools program was also done in Bamyan province,

which had been added to the Provincial Strategy program, and three other secure provinces where the SWSS Health Section was providing hygiene education to communities with new water supplies. These provincial schools programs were implemented in close coordination with the MoPH, Ministry of Education, MRRD, and their provincial departments. SWSS provided training and materials, and the actual programs were implemented in the schools by the NGO staff.



In October 2011, this day was celebrated in 40 schools, one in each of the target districts of the target CLTS provinces. More than 41,000 students and teachers participated, washed their hands, and later transferred the message of washing hands to their families and villages.

3.5.3. Community leaders

Men remain the main decision-makers in Afghan communities. It was, therefore, very important that in each community involved in the CLTS and hygiene education program the community and religious leaders fully understood the key issues and their roles in achieving program goals.



Two-day education meetings were arranged in a central place in each province. About three to four key leaders from each of the CLTS villages were identified by the NGO facilitators and invited to attend. The SWSS Community Mobilization Master Trainers (CMMTs) from Kabul implemented the training programs. A total of 2,165 leaders were trained.

3.5.4. Radio

Radio spots and programs had been prepared and were available for broadcasting through provincial radio stations. However, this was not considered sufficient of a priority by SWSS management to justify the funding.

4. Implementation: Flexible Response Strategy

4.1. Background

By the end of the project, SWSS had a target of 3,032 wells and 37 pipe schemes for construction, with a total estimated number of beneficiaries of 619,400. Over 80% of these were in the eastern regional command area. In addition to mobilizing communities for the ongoing maintenance of the water points, SWSS undertook to provide hygiene education to the beneficiaries of each of the water points.

This aspect of the program was delayed for several reasons. In the first year, the construction program took some time to get started and the SHO section was concentrating on establishing the new CLTS and hygiene programs in the six CLTS provinces. During the second year, considerable time and effort was consumed in an effort to resolve several significant human resource issues including the transfer of all MSH staff onto MSH salary scales, from which they had earlier been effectively excluded under USAID contract instructions to the SWSS project. This, followed by a complex hiring process, took longer than expected, so that the HETs required for the Flexible Response strategy were not hired until the middle of the second year.

4.2. Strategy, Staffing and Location priorities

4.2.1. Strategies and staffing

The plan was to hire ten HETs and allocate them in teams of one male and one female to the SWSS regional offices, in collaboration with which they would do their fieldwork. The female HETs were considered essential for reaching the women in the community. Although female HETs were initially selected, most of them withdrew almost immediately. The program ended up with only two females out of a total of nine HETs, and they were not able to travel anywhere from which they could not return home at the end of the day. This meant that only in Parwan province were community women reached directly with the hygiene education. The program thereafter concentrated on promoting the program through community leaders and schoolteachers.

4.2.2. Prioritization of locations

Because of the delays in starting the program it was clear that it would be impossible to reach the beneficiaries of all the water points. In addition, it was clear that security concerns would preclude some areas. The decision was made, therefore, to work in communities in which there were ten or more water points. This anticipated economies of scale, as well as synergies of effect.

4.3. Program Implementation

The HETs coordinated their programs with the SWSS regional offices, which supplied details of the locations of water points, the names of water user committee members and the names and locations of the hand pump mechanics.

The training programs lasted for two to three days and made use of the SWSS hygiene and sanitation messages and IEC materials that had already been proven in the CLTS provinces. Table 1 shows who was invited to the trainings.

Table 1: Hygiene Education Training Participants

No	Trainee	Number	Remarks
1	Teacher	2-6 per school	Depending on the total number of teachers
2	Mullah Imam	1 per Masjid	
3	CDC members	2 per committee	
4	Health Shura members	2 per committee	
5	Community influential leaders	4 per community	2 female leaders will be invited in case there are female leaders in the community
6	CHW	1 per community	In case there are other female trainees, female CHW will also be invited to the training
7	Water point hand pump mechanic	1	As there will be 1 hand pump mechanic assigned for around 50 water points

The trainings were initially facilitated by the CMMT in order to train and mentor the HETs, who later took over the role of training the hygiene promoters. At the end of the training, the trainees from the communities developed a plan on how they would disseminate the newly acquired information.

Once the teachers had participated in the Hygiene Education Training, they were expected to impart hygiene and sanitation related information to the students in their respective schools. The teachers were also encouraged to ensure that students practiced good hygiene inside the school and also conveyed the hygiene related messages to their families and the community at large.

The community leaders were expected to share the information they gained in the training with their neighbors and to make efforts to contribute to positive behavior change. The Mullah Imams were encouraged to play a pivotal role in motivating the people to improve their hygiene and sanitation practices through providing examples from Islamic literature on the importance of hygiene and sanitation.

It took about a week to organize, set up, and deliver each two-day training and to then ensure that everyone understood what his or her role was. A plan for follow-up visits to these communities by the HETs was drawn up, but priority was given to reaching as many new communities with water points as possible in the short time available.

5. Roles of SWSS field staff

5.1. Role of Society for Sustainable Development of Afghanistan

Because CLTS was a completely new program for Afghanistan, ARD subcontracted with the Society for Sustainable Development of Afghanistan (SSDA) as a partner to help start implementation of CLTS. SSDA's parent organization in Pakistan (SSDP) had been successful in implementing CLTS on a wide scale in Pakistan. SSDP staff oversaw preparation of the CLTS training manual in Dari, Pashtu, and English. This was adapted from the Handbook on CLTS produced by Kamal Kar, the original developer in Bangladesh. The initial CLTS training was facilitated by SSDP staff. This one-week hands-on and hands-off training workshop trained the key staff members of SWSS's health section (the two specialists and four CMMTs), as well as the Social Development, Water Infrastructure and M&E representatives. SSDP advisors also supported the CMMTs in their first two training exercises with NGO field staff.

5.2. Community Mobilization Master Trainers

The CMMTs were the key technical people in the establishment and oversight of the CLTS and hygiene education program in the Provincial Strategy provinces.

- Over 150 NGO staff were trained and later given refresher trainings in CLTS and hygiene education;
- The CMMTs made follow-up mentoring visits to the provinces, accompanying the NGO staff in their community work;
- They participated in all the ODF verification and certification exercises, and conducted the follow-up visits to ODF villages with the provincial WASH coordinator;
- They conducted the trainings for community leaders;
- They assisted the WASH coordinators in the GHWD schools program;
- They helped oversee the annual KAP household surveys;
- They initiated the Flexible Response program in non-CLTS provinces while training and mentoring the new HETs.

5.3. Provincial WASH Coordinators

One provincial WASH coordinator (PC) was assigned for each of the six CLTS provinces. These PCs, in addition to representing SWSS in the province, were responsible for:

- Organizing all project-related trainings facilitated by SWSS staff in their province. They frequently assisted the CMMTs with the training courses.
- Monitoring and follow up of the NGO field activities. They solved any problems with the partner NGO.
- Verification and forwarding to Kabul of the NGOs' monthly reports.
- Coordination of the ODF verification and certification process with the NGOs. They were responsible for completing the verification and certification forms and making sure that the process was in line with the standard.
- Provincial Coordination. In provinces with no intersectoral WASH Committee, PCs brought the relevant ministries together to form a WASH committee (WASH committees already existed in some provinces.). They assisted the PRRD to hold

monthly WASH coordination meetings. Specifically for the project, they assured the committee's involvement in selection of communities for CLTS and in ODF verification and certification.

5.4. Health Education Trainers

HETs were the staff responsible for the program of providing hygiene education to the beneficiaries of the wells and pumps constructed by the SWSS program. They were posted in the regional offices. Their responsibilities included:

- Identify communities with ten or more new water points in collaboration with the regional office staff;
- Identify user committee members and pump mechanics with help from the Community Mobilization Section;
- Plan with communities the participants and program for the 2-3 day training programs;
- Help community participants to make realistic plans for passing on the hygiene education to school children and community members;
- When possible return to the community to monitor and encourage progress.

6. Monitoring and Evaluation

6.1. Project indicators and activities

The Sustainable Health Outcomes component of the SWSS project was responsible for the project's outputs of improved latrines, recipients of hygiene education, and demonstrated improvements in a set of hygiene-related behaviors. The deliverables detailed in the Task Order were:

- 50,000 improved latrines (estimated beneficiaries: 500,000)
- 3,000,000 recipients of hygiene education.

6.1.1. CLTS and latrines

SWSS determined that all the latrines built or improved would be done through the CLTS program. The estimates of the numbers of beneficiaries of the new or improved latrines were made based on the average household size. The Task Order target of 500,000 beneficiaries was based on an average household size of ten, which was the official assumed household size at that time. Subsequent national household surveys found an average household size of seven. The modified target on this basis would be 350,000. During the project and in this report, reported estimates of beneficiaries of water supplies, latrines, and other activities at the household level have been based on an average household size of seven.

While SWSS had clear project targets for the number of new or improved latrines to be constructed, the actual targets required for the CLTS program in order to build those latrines was not clear at the beginning of the project. The two main uncertainties were:

- a) The average size of communities that would participate in the CLTS process. Initially, 50 to 60 households was considered a good size. In the end, communities reaching ODF averaged almost 70 households.
- b) The proportion of communities where triggering had been attempted that would actually go on to be certified as ODF. International experience suggested that we expect about 60%. That turned out to be accurate for Afghanistan.

Preparation and training for the CLTS program took about six months, and it took another six months for the NGO teams and SWSS staff to gain experience and work out the remaining procedures for the program. After that there was a general acceleration of the program. Earlier targets for the NGOs were increased, and finally performance in CLTS exceeded those targets by about 13%.

6.1.2. Hygiene Education

The indicators of behavioral change provided by the Task Order were as follows:

1. The percentage of households with children aged 0-59 months that are practicing effective household water treatment;
2. The percentage of households with children aged 0-59 months where water that is treated is correctly stored;
3. The percentage of mothers of children aged 0-59 months who know all the critical times for hand washing;
4. The percentage of households with children aged 0-59 months that have a specific place for hand washing;
5. The percentage of households with children aged 0-59 months that have soap at the place for hand washing;
6. The percentage of households with children aged 0-59 months that have access to an improved sanitation facility;
7. The percentage of households with children aged 0-59 months that are using an improved sanitation facility.

Hygiene education has been offered through two main programs. The first was the hygiene education provided in association with the CLTS program in the six CLTS provinces. This was done through the women's FHAGs, school programs, and the education of community and religious leaders. The second main program was the hygiene education provided to beneficiaries of the SWSS water supply projects.

6.2. Monitoring and Evaluation Methods in SWSS

6.2.1. NGO Monthly reports

6.2.1.1. CLTS outputs

The NGOs that were implementing the combined CLTS and hygiene education program in the six provinces were required to complete monthly reports of their activities and achievements. These included the numbers of communities that had been triggered and

those that had been verified and certified as ODF. They also reported on the numbers of new and improved latrines that had been inspected and approved.

6.2.1.2. Hygiene Education outputs

Hygiene education activities were reported in various ways because different hygiene education activities were implemented by different groups and with differing timetables.

- The formation and training of FHAGs was an ongoing activity alongside the CLTS program. The NGOs, therefore, reported monthly on the numbers of communities where FHAGs had been formed; the numbers of women leaders that had been trained in hygiene; and the numbers of women from their neighboring households that they in turn would be educating.
- The schools activities in the six CLTS provinces were mostly associated with the Global Hand Washing Day celebrations. Reports were submitted according to a template by the NGOs for each of the school programs.
- The educational activities for community leaders were taught by the CMMTs. Individual reports according to a template were prepared for each course.
- The hygiene education training courses for schoolteachers and community leaders for communities with new SWSS water supplies were implemented by the HETs based in the regional offices. Reports were prepared for each course and compiled into monthly summary reports.

6.2.2. Annual KAP Household Surveys

The changes in hygiene-related behaviors were monitored by a series of annual Knowledge, Attitudes and Practice (KAP) household surveys. These were organized each year during the summer months, which is the time when diarrheal diseases are usually most frequent. Baseline surveys were done for the first and second sets of districts in 2010 and 2011. A mid-project survey was done in the first set of districts in 2011, and an end-of-project survey was done in both sets of districts in 2012 (see Figure 2).

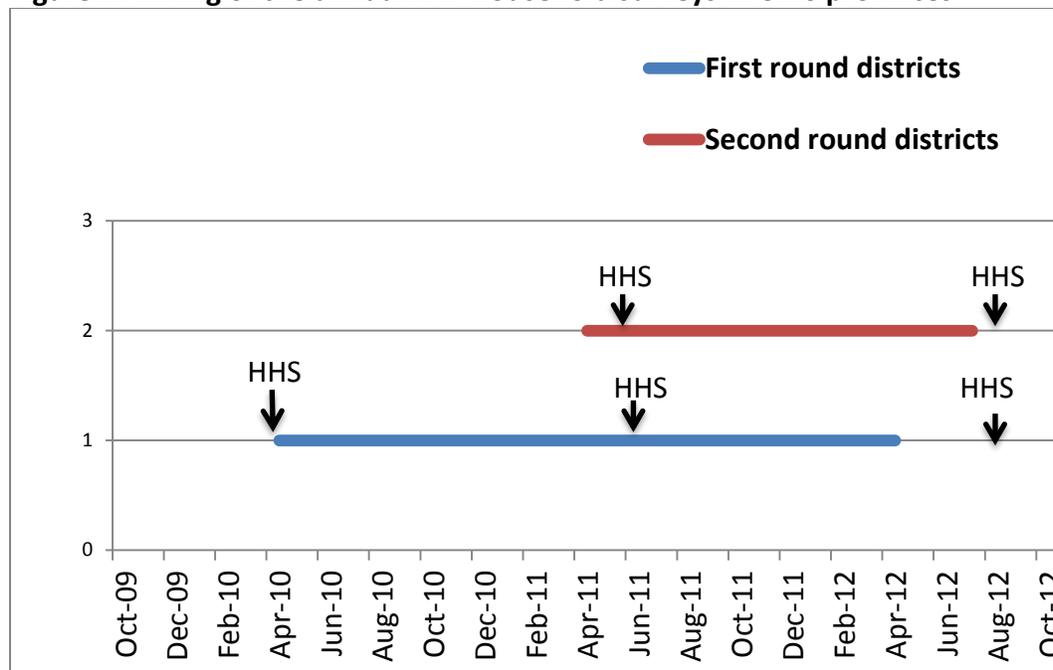
The surveys used the Lot Quality Assurance Sampling (LQAS) approach each year. For the first and second years the sampling frames included all the communities that had been involved in the CLTS program. For the final year, the sampling frame included only those communities that had been certified as ODF.

Targets for hygiene behaviors had not been set in the Task Order. In order to place these targets at sensible levels, we used the opportunity of the Task Order's required Baseline Analysis Report². In this report we compiled the results of baseline and follow-up surveys that had been carried out in representative regions of the country by DACAAR, an NGO with a long track record of successfully implementing WASH projects in Afghanistan. These

² Sustainable Water Supply and Sanitation (SWSS) Project: Baseline Analysis Report. January 27, 2010 (revised March 13, 2010). ARD, Kabul. This had been intended by the TASK ORDER as a baseline survey for the project. The timing did not fit with the plan for the annual monitoring KAP surveys, nor at that stage was it clear where such a survey should be done. The provinces for CLTS had been selected, there was some but not complete certainty about the districts, and the selection of the communities would usually be made at the beginning of each NGO contract period.

findings indicated both baseline levels of behaviors and the levels of improvement that might be expected from good hygiene education programs.

Figure 2: Timing of the annual KAP household surveys in CLTS provinces



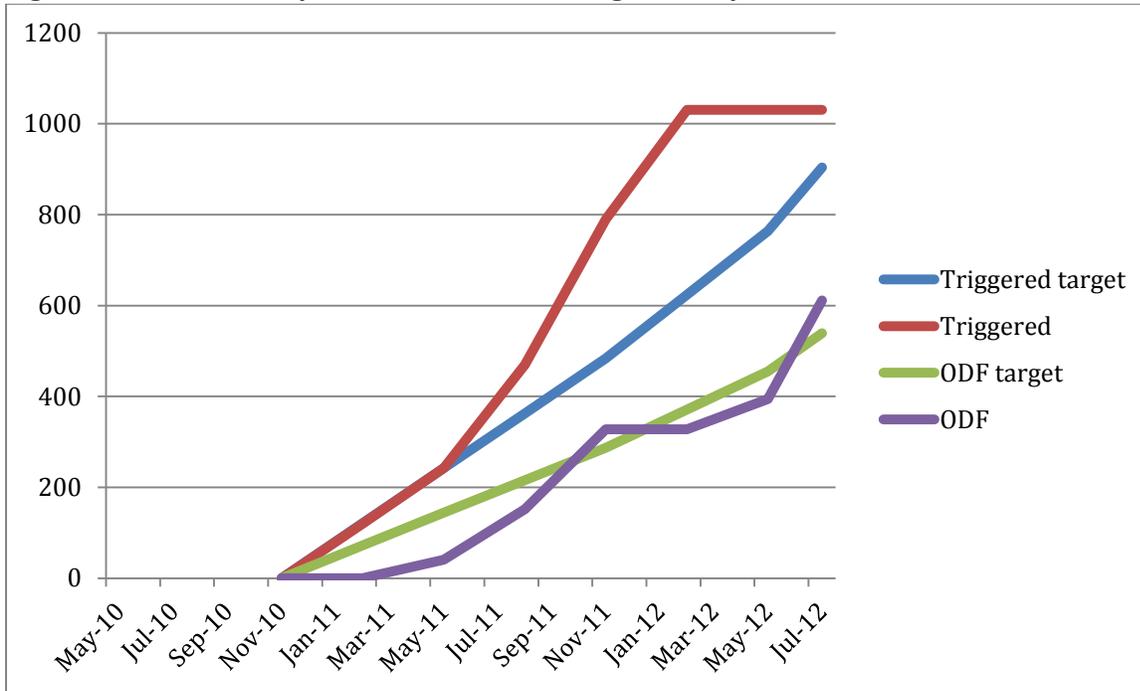
No monitoring surveys were done for the communities that received hygiene education following a new water supply from SWSS. There was a plan to do some limited surveys in communities involved in some of the larger water schemes. However, time became a major factor and the budget cuts of the final year finally precluded them.

7. Project Performance and Results

7.1. CLTS and Improved Latrines

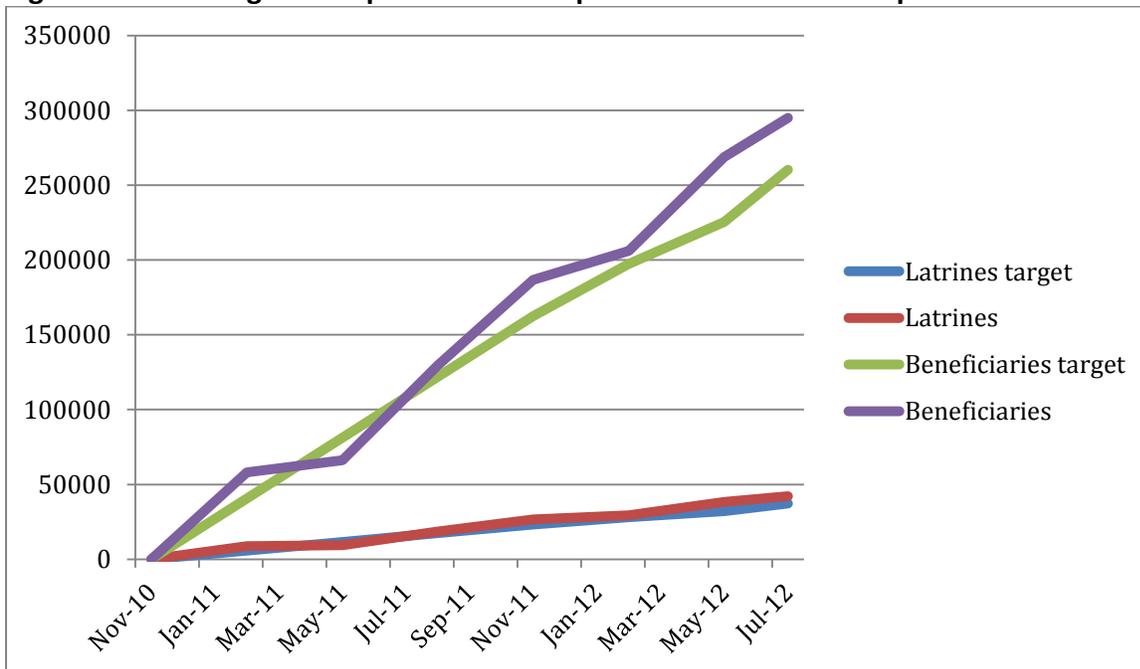
SWSS was the first project in Afghanistan to implement CLTS in more than one or two villages. The slow start to the CLTS program for preparation, training, and gaining experience was followed by a steady acceleration in the program’s implementation and improvements in its effectiveness and efficiency. In just over two years, the project implemented the program in 36 districts. They triggered 1,031 communities and assisted 611 of them to be certified as ODF. Figure 3 shows the progress of triggering and ODF as monitored by the NGO monthly reports.

Figure 3: SWSS CLTS Open Defecation Free targets and performance.



ODF certification requires ensuring that all households have access to a safe latrine. Figure 4 shows the progress of building new or improved latrines and the numbers of beneficiaries of those latrines. The original project target for improved latrines was 50,000. The project achieved 42,129 toilets through the CLTS approach. As a result of the third year budget cuts, three of the provincial programs were ended, and the contracts for the

Figure 4: SWSS targets and performance in production of new or improved latrines



remaining first-round districts were shortened by a month or two. It is certain that without the cuts, we would have been much closer to reaching the original target. Follow-up inspections of ODF villages 6-9 months after certification indicated that less than one percent of communities had any evidence of open defecation.

7.2. Hygiene education activities and outputs

7.2.1. Women's Family Health Action Groups

Women's FHAGs were initiated within the first month after the triggering exercises in a community if there was interest on the part of the community. Support for the FHAGs continued as part of the follow-up to triggering, and many communities were certified as ODF. FHAGs were set up in 952 villages. This is less than the 1,031 communities that participated in triggering exercises, but more than the 611 that reached ODF. As part of setting up the FHAGs, 8,626 FHAG leaders were trained in all aspects of home and personal hygiene by the CHWs and NGO facilitators. These FHAG leaders, in turn, shared the messages and skills with 45,362 other young women in their neighboring households. Again, assuming an average household size of seven, this implies an estimated 377,916 beneficiaries of the FHAG program.

7.2.2. Hygiene education for community and religious leaders

The second strategy for hygiene behavioral change in the CLTS districts and communities was the education of community and religious leaders. Between two and three leaders from each community participated, making a total of 2,165.

7.2.3. Schools program

The schools program was held in association with the Global Hand Washing Day each October. In 2010, 10,000 students participated in the six CLTS provinces. In 2011, schools in Bamyan, Panjshir, Parwan and Kapisa were included in the program. Forty schools participated and involved 1,357 teachers (489 female, 868 male) and 38,654 students. An additional 1,175 local leaders were invited.

7.2.4. Hygiene education for communities with new water supplies

Hygiene education was provided for communities with new water supplies in both non-CLTS provinces, as well as non-CLTS districts in the provinces where CLTS was being implemented (see Table 2).

There were 1,809 male and 210 female schoolteachers and community leaders who were given the hygiene education training over two to three days and who then returned to tell others in their communities. We estimated the number of beneficiaries based on the MRRD standard of one water point for 25 households, and each household with an average of seven persons. Approximately 196,175 out of the estimated 619,400 total beneficiaries of new water supplies were reached with hygiene education.

Table 2: Outputs of health education program for new water points

Province	Well-points	Teachers/Leaders trained		Estimated beneficiaries
		Male	Female	
<i>Non-CLTS districts</i>				
Bamyan	0	17	0	33,775
Logar	193	373	0	
Laghman	155	292	0	
Nangahar	368	677	5	
Subtotal	716	1359	5	125,300
<i>Non-CLTS provinces</i>				
Parwan	107	142	42	18,725
Panjsher	74	44	47	12,950
Kapisa	32	34	116	5,600
Kandahar	85	58	0	14,875
Ghazni	26	40	0	4,550
Kunar	44	98	0	7,700
Paktya	37	34	0	6,475
Subtotal	405	450	205	70,875
Total	1,121	1,809	210	196,175

7.2.5. Total beneficiaries of the SWSS hygiene education activities

The possibility of community and household behavioral change for improved hygiene has been maximized through the use of different channels. These are summarized in Table 3. Especially in the CLTS communities, these channels overlapped. Over 42,000 households built new or improved latrines as a result of the CLTS program. As a result, 294,903 people could live in ODF communities. In 952 communities, including the 611 that reached ODF, FHAGs were formed with 377,532 estimated beneficiaries. The 2,165 community and religious leaders that were trained came from the same communities. The schools program took place in both CLTS and non-CLTS districts.

Table 3: Hygiene education programs and beneficiaries

Hygiene education program	Teachers & leaders trained	Estimated beneficiaries
<i>CLTS districts</i>		
CLTS promotion of latrines & ODF		294,903
FHAGs	8,626	377,916
Community leaders	2,165	
<i>Non-CLTS districts</i>		
Water points	2,019	196,175
<i>Schools</i>		
	2,532	48,654
Totals	15,342	574,091

We estimate the total number of beneficiaries of health education programs from each of the larger numbers in both the CLTS and non-CLTS districts. This comes to about 574,000 persons. From a sustainability perspective, the 15,342 teachers and community leaders who underwent the hygiene education training are a most important resource.

7.3. Impact of hygiene education programs: KAP household surveys

This section describes the impact of the project on the seven key behaviors identified in the Task Order as important means of reducing diarrheal diseases.

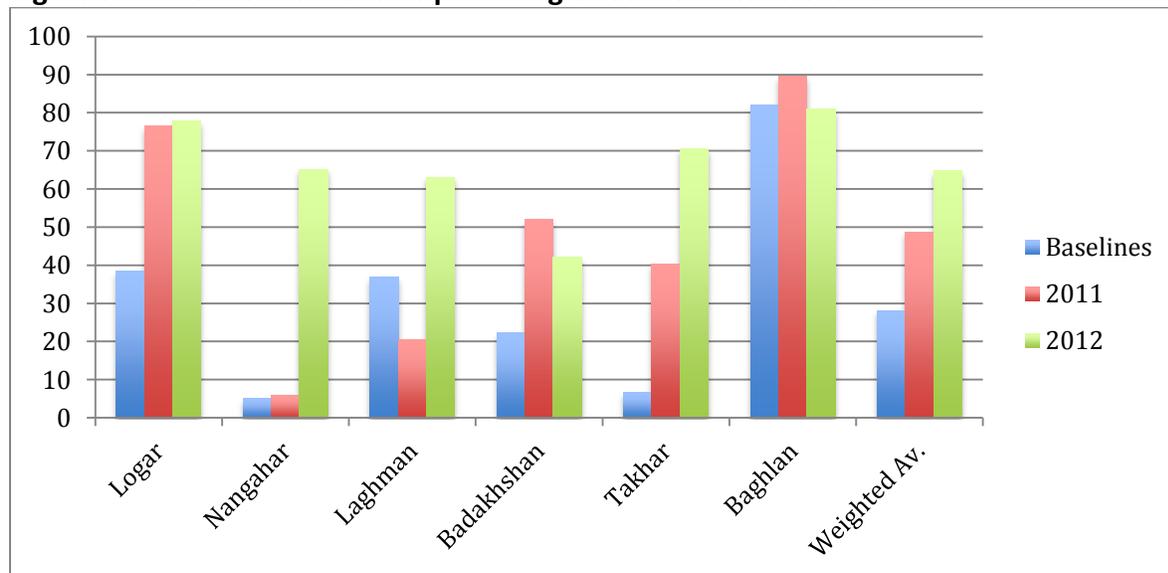
7.3.1. The surveys and presentation of data

The data presented as baseline data are weighted averages from the baseline survey of the first round of districts in 2010 and the baseline of the second round of districts done in 2011. Although separated by a year, both surveys were done in the same provinces, before any interventions in the communities, and at the same season of the year. The mid-project follow-up survey in 2011 was only done in the first round of districts that had commenced the CLTS/FHAG program a year earlier. The sampling frame included all communities that had been involved regardless of whether they eventually reached ODF or not. The end-of-project survey sampling frame included all, but only, those communities from both rounds of districts that had reached ODF.

7.3.2. Water treatment and storage

The first indicator is point-of-use treatment of water prior to it being drunk or used with food. Figure 5 shows the change in the rates of water treatment across the project period. The overall rate of water treatment has risen from 28% to 65%, although the individual provincial patterns have made irregular progress.

Figure 5: Percent of households practicing effective water treatment



More than half the households treat water by boiling and another 36% use chlorine tablets (Table 4). Much smaller numbers use water filters and sunlight. The main fuel for boiling is

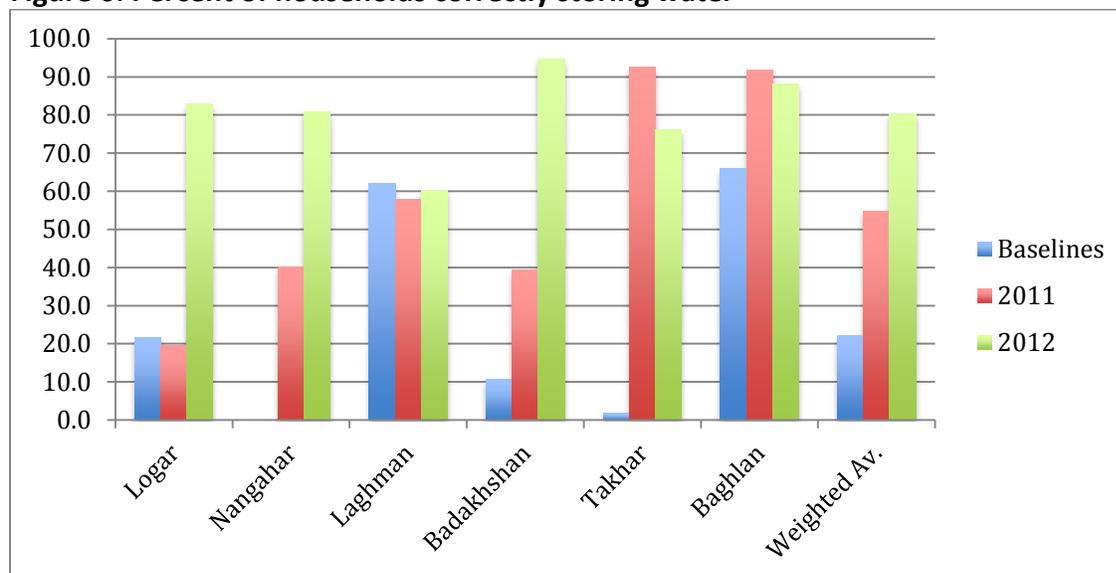
firewood. This is generally scarce, but is reported by the Afghan Energy Information Center to be particularly scarce in the lowland areas of Nangahar, Logar and Laghman.³ The proportion of households that treat water with chlorine has increased (16% in 2011 to 36% in 2012). SWSS approached COMPRI-A to discuss an integrated approach to promoting water treatment, but no joint activities came about.

Table 4: Rates and methods of water treatment

	Treated	Boil	Chlorine	Filter	Sun
Logar	77.8	47.2	47.2	0.0	6.7
Nangahar	65.2	69.3	21.0	9.6	0.0
Laghman	63.1	33.3	60.0	0.0	6.7
Badakhshan	42.1	62.5	35.0	0.0	2.5
Takhar	70.5	55.2	32.8	5.9	5.9
Baghlan	81.0	45.4	42.8	10.3	1.2
Weighted average	64.9	54.7	36.3	5.8	3.3

Not all households that treat water also store water. Of those that do store water, 52% used a jerry can and another 36% use a clay pot. Figure 6 shows that the care with which the water is stored has rapidly increased to about 80% over the two years.

Figure 6: Percent of households correctly storing water



Interestingly, 90% of households claimed to get their water from protected sources: a tap (6.8%), hand pump (53.5%), protected well (21.7%), or protected spring or Karez (6.9%). An unprotected well, Karez or river was mentioned by only 10.8% of householders. The

³ Afghan Energy Information Center, <http://www.afghaneic.org/biogaz.php>. Accessed 9/3/12.

high levels of water treatment, in addition to use of protected sources, suggest a significant level of concern for safe drinking water.

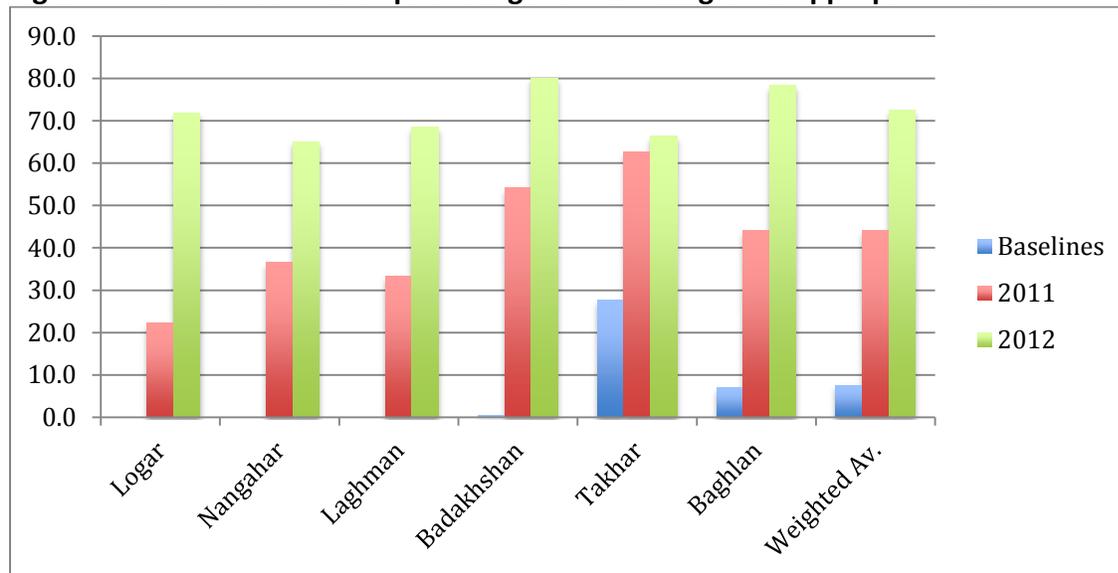
Regular hand washing requires a sufficient supply of water. No information was requested on the amount of water collected, however, the average time for water collection of 13.8 minutes suggests that the time required for water collection should not be a barrier to collection and use of sufficient quantities of water.

7.3.3. Hand washing

Hand washing with soap is the single most effective intervention in the prevention of transmission of diarrheal diseases. It was a key message in all programs of hygiene education. Because of their central role in the care of small children and in the preparation and management of food and drinking water in the home, women’s correct knowledge and practice is essential (Figure 7).

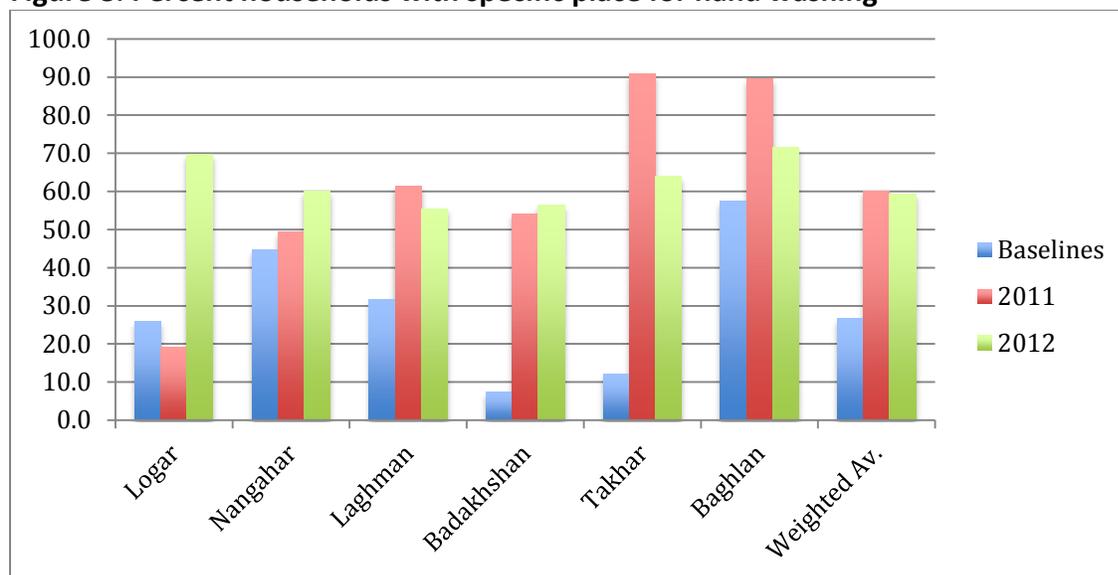
The two occasions of hand washing most commonly identified were after defecation (87%) and before eating (85%). Importantly, ‘before preparing food’ was mentioned by only 57% of women. Not all women will have small children in the home, so perhaps a smaller number mentioning hand washing after dealing with a child’s feces (53%) and before feeding a child (43%) could be understandable.

Figure 7: Percent of mothers practicing hand washing at all appropriate times



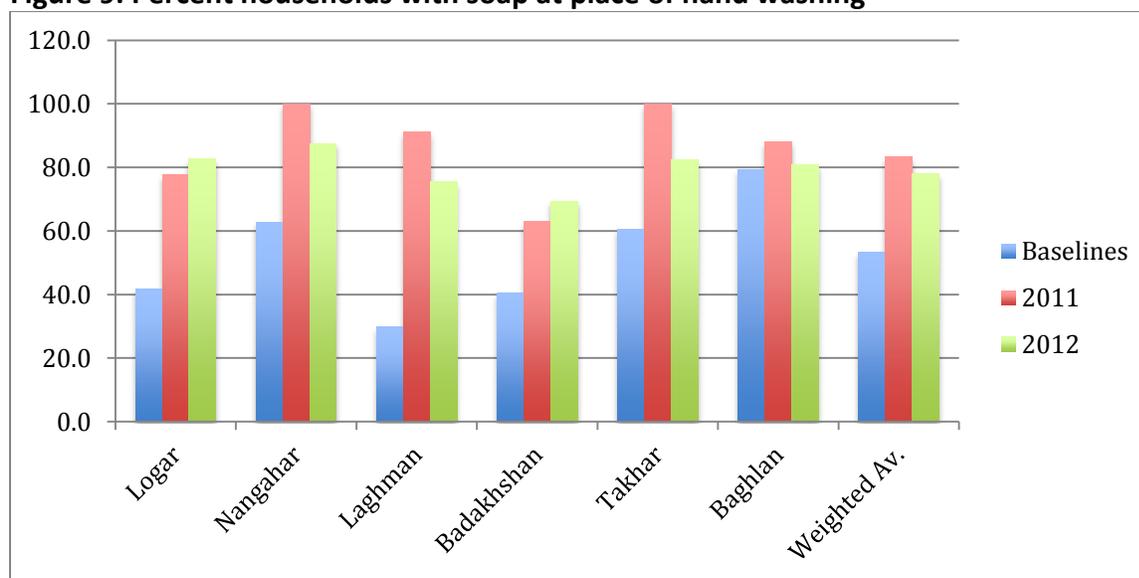
The proportion of households with a specific place for hand washing is shown in Figure 8. It shows a fairly uniform 60% in the final survey, much increased from the baseline level of 27%. No explanation can be offered for the higher and more variable rates in the mid-project survey in the first round of districts.

Figure 8: Percent households with specific place for hand washing



In Figure 9 it can be seen that soap was present at the hand washing place in 78% of households. Again, it is not clear why the 2011 survey should have found higher rates in some provinces than the final year survey.

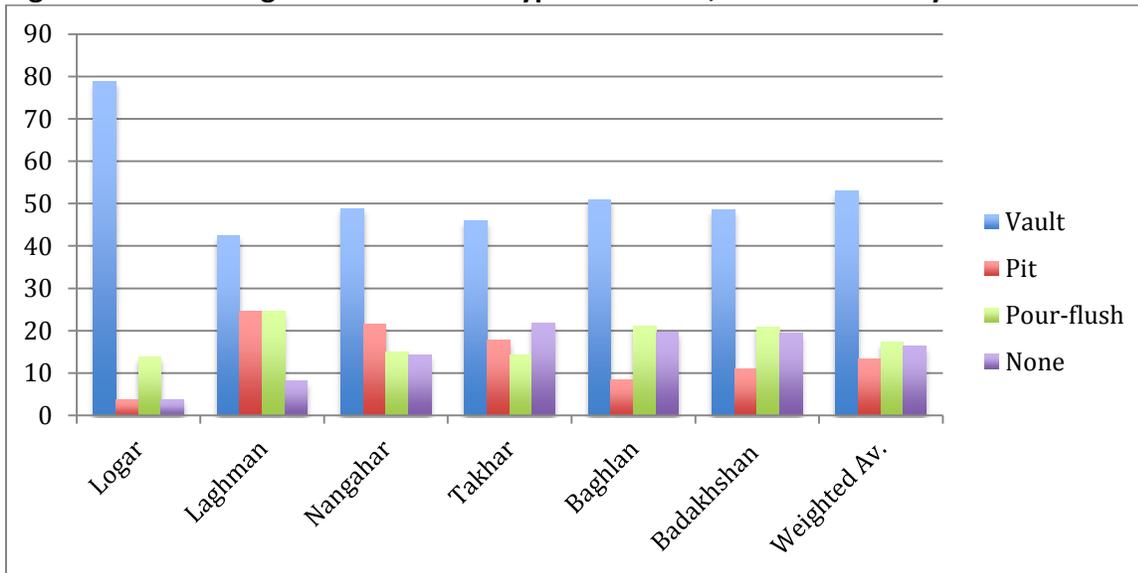
Figure 9: Percent households with soap at place of hand washing



7.3.4. Latrines: access, quality and use

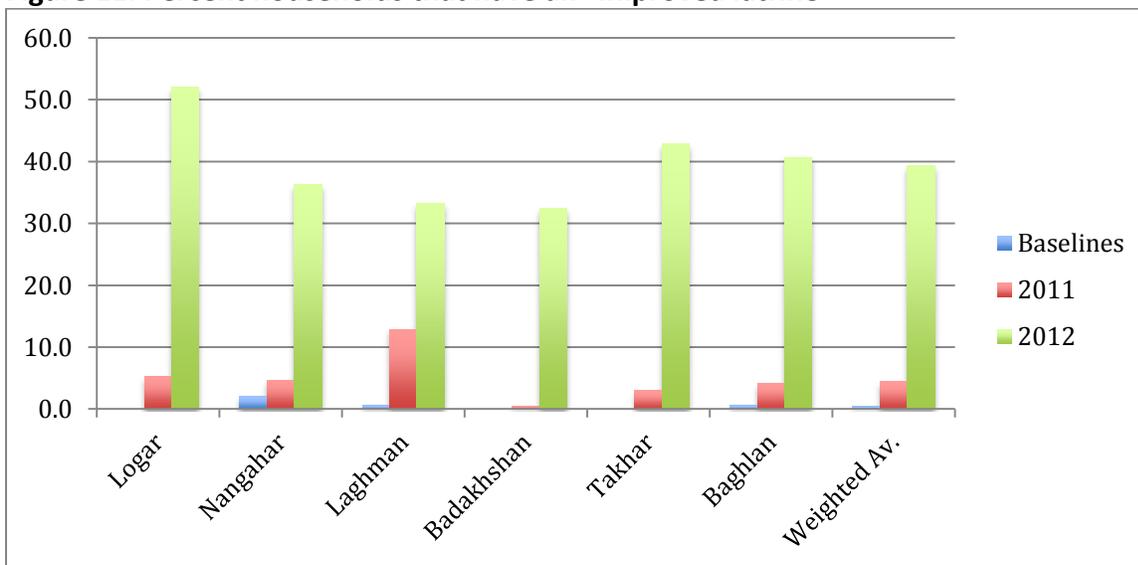
The CLTS process is supposed to ensure that all households have access to a latrine so that there is no excuse for open defecation. It is surprising, therefore, that the survey found that 16% of the households interviewed had no access to a latrine. Figure 10 shows that the predominant type of latrine in all provinces was the vault latrine (53%), followed by the pour-flush (17%), and simple pit types (13%).

Figure 10: Percentage of the different types of latrine, 2012 KAP survey



The percentage of households with access to an “improved latrine” is the sixth indicator required by the Task Order. The international standard for an “improved latrine” includes: a concrete slab that can be cleaned and is kept clean, a hole that is safe for children, a cover for the hole, a door or curtain, a window with netting, a ventilation pipe, and a secure cover for the hole at the back of a vault latrine from which feces are later removed. Figure 11 shows the percentages of households that achieved that standard. The final overall rate of 39% represents a big improvement.

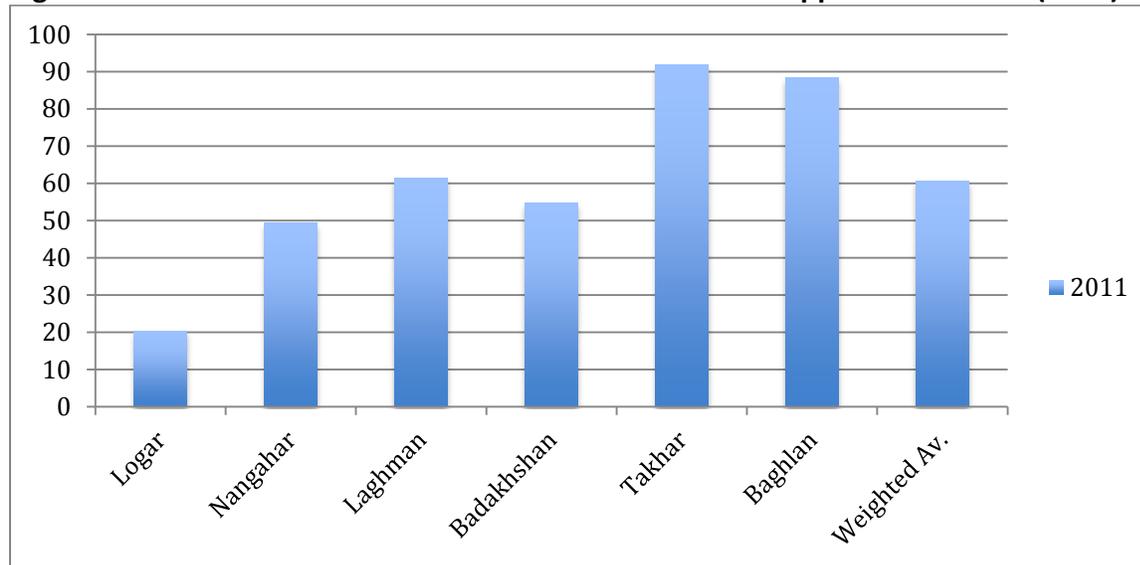
Figure 11: Percent households that have an “improved latrine”



The CLTS-ODF standard is more pragmatic. In particular, it recognizes that many households cannot afford a concrete slab and a ventilation pipe. Approval of a household’s

latrine in certifying a community for ODF requires that it be safe, keeps flies away from feces, and is kept clean. Data are not yet available from the final survey, but Figure 12 shows the rates of latrines that met ODF-standards in the 2011 follow-up survey. The overall rate was 60%.

Figure 12: Percent households who have access to an ODF-approved latrine (2011)



A significant factor in keeping the rates low is that only 57% of the latrines examined at the end of the project were clean. This is an important factor for disease control and use. 100% of latrines showed signs of use in the final survey, but in the future, excessively dirty latrines can be expected to deter people from using them.

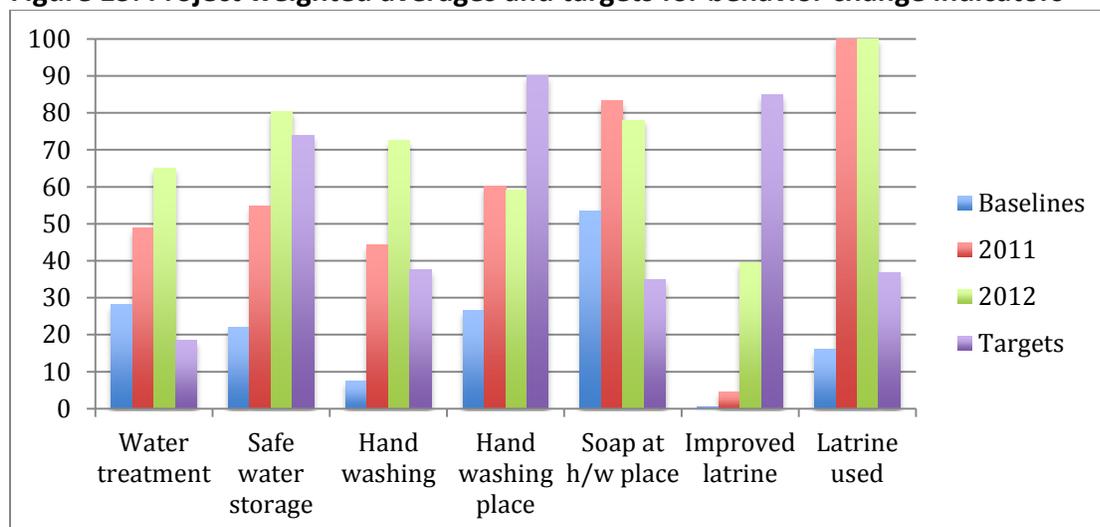
7.4. Summary of behavior change impact against targets

The PMP contained targets for each of the seven key indicators. These are shown together with the weighted averages for each of the indicators from the three rounds of surveys in Figure 13.

Levels of water treatment are greatly in excess of the target set (18.5%) and also much higher than the rate found in earlier DACAAR projects (including Nangahar and Takhar) described in the 2010 Baseline Analysis Report. The safe water storage target (73.9%) is set at an appropriate level and has been met overall.

Given the prime importance of hand washing, the target set for hand washing practice at appropriate times is set surprisingly low (37.5%). Expectations for the availability of soap are also low (34.8%), compared with the availability of a specific place for washing hands (90%). Only 60% of project households had a specific place for hand washing, however, the availability of soap and the practice of hand washing far exceeded the targets.

Figure 13: Project weighted averages and targets for behavior change indicators



The CLTS target for access to a latrine is 100%. The PMP target for an improved latrine, using the international standards for “improved,” was set at 85%. As already pointed out, a CLTS-approved latrine that can be afforded by all households does not necessarily meet the international standards. This PMP target has not been met, but it has been met with latrines that are effective and safe. The target for using latrines was set at a surprisingly low rate (36.9%), given the high target for access. The surveys found that 100% of the toilets were being used.

8. National impact of SWSS CLTS activities

SWSS was the first major project to implement CLTS. Its success has resulted in the incorporation of CLTS into the MRRD’s national water and sanitation policy and strategy.

The national capacity for implementing CLTS has also been given a good start. Not only have the staff of the NGOs contracted to implement the program been trained, but staff of several other NGOs active in water and sanitation have been trained by SWSS staff, together with staff of MRRD and the MOPH. Altogether, 682 people were trained by SWSS to implement CLTS.

9. Conclusion

The mounting of the Community ODF Board at the entrance to 611 villages represents the fruit of the collaboration over three years between the SWSS project, its partner NGOs, and those communities. It is a very good example of the Tao of Leadership:

Go to the people

Live with them

Love them

Learn from them

Start with what they have

Build on what they know.

But of the best leaders

When their task is accomplished

Their work is done

The people will all remark—

We have done it ourselves.



Annex A: Percentage of households with children aged 0-59 months practicing specific hygiene-related behaviors*, SWSS KAP surveys.

Province	Logar			Nangahar			Laghman			Badakhshan			Takhar			Baghlan			Weighted average		
Date of survey	Base line	2011	2012	Base line	2011	2012	Base line	2011	2012	Base line	2011	2012	Base line	2011	2012	Base line	2011	2012	Base line	2011	2012
% households practicing effective household water treatment	38.5	76.6	77.8	5.1	5.9	65.2	36.8	20.4	63.1	22.2	52.1	42.1	6.7	40.4	70.5	82	89.5	81	28.2	48.8	64.9
% households correctly store drinking water treated at the household	21.5	19.4	82.8	0	40	80.7	62	57.9	60.3	10.7	39.4	94.7	1.8	92.5	76.1	66	91.8	88	22.1	54.8	80.4
% mothers know all critical times for handwashing	0	22.3	71.8	0	36.5	65.1	0	33.3	68.4	0.5	54.2	80.1	27.6	62.6	66.3	7.1	44.2	78.4	7.6	44.2	72.5
% households with a specific place for hand washing	26	19.2	69.8	44.7	49.4	60	31.7	61.3	55.5	7.4	54.2	56.3	12.2	90.9	64	57.4	89.5	71.5	26.6	60.2	59.2
% households with soap at the place of hand washing.	41.8	77.8	82.8	62.6	100	87.5	29.7	91.2	75.4	40.5	63.1	69.4	60.4	100	82.4	79.3	88.2	80.8	53.4	83.2	78
% households with access to an improved sanitation facility.	0	5.3	52	2	4.7	36.3	0.6	12.9	33.2	0	0.5	32.4	0	3	42.8	0.6	4.2	40.7	0.4	4.4	39.4
% households that have an improved sanitation facility and use it.	0	100	100	0	100	100	62.8	100	100	0	100	100	0	100	100	55.8	100	100	16.2	100	100

* Key USAID required behavioral indicators.

Annex B: Staff of the SWSS Sustainable Health Outcomes Unit

	Name	Position	Location
1	Bimal Chapagain	Former Director of Sustainable Health Outcome (SHO)	Kabul
2	Dr.Abdul Shakoor Hatifie	Director of Sustainable Health Outcome	Kabul
3	Dr.Mohammad Javed Logarwal	Behavior Change Com. Spec.	Kabul
4	Dr.Mohammad Naeem Shnizai	Community Mobilization Master Trainer	Kabul
5	Dr.Sayed Shamsulhaq Banuri	Community Mobilization Master Trainer	Kabul
6	Mohammad Ashraf Hotaki	Community Mobilization Master Trainer	Kabul
7	Dr.Esmatullah Shinwari	Community Mobilization Master Trainer	Kabul
8	Dr.Ehsanullah Ehsan	Provincial WASH Coordinator	Badakhshan
9	Dr.Abdul Qawi Qadiri	Provincial WASH Coordinator	Baghaln
10	Dr.Nasir Maidanwal	Provincial WASH Coordinator	Nangarhar
11	Dr.Abdul Habib Alam	Provincial WASH Coordinator	Logar
12	Zarghoon Mamozai	Provincial WASH Coordinator	Laghman
13	Ahmad Fahim	Provincial WASH Coordinator	Takhar
14	Dr.Tooba Nassim	Hygienic Education Trainer	Parwan
15	Massouda Arif	Hygienic Education Trainer	Parwan
16	Hizbullah Haikal	Hygienic Education Trainer	Nangarhar
17	Nazifullah Khan	Hygienic Education Trainer	Paktya
18	Ahmad Shekib Stanikzai	Hygienic Education Trainer	Nangarhar
19	Dr. Mohammad Sharif Ashrafi	Hygienic Education Trainer	Nangarhar
20	M. Taher Rezai	Hygienic Education Trainer	Parwan
21	Habiba Attae	Hygienic Education Trainer	Baghaln
22	Rabia Hasaani	Hygienic Education Trainer	Nangarhar
23	Massouma Rezai	Administrative Assistant	Kabul
24	Shir Mohammad Sharafat	Community Mobilization Master Trainer	Kabul
25	Dr. Mohammad Mashal Esar	Community Mobilization Master Trainer	Kabul
26	Enzir gul Nikmal	Hygienic Education Trainer	Kabul/Paktia
27	Dr. Fazal Yamin	Community Mobilization Master Trainer	Kabul