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PAKISTAN SAFE DRINKING WATER AND HYGIENE PROMOTION PROJECT

FINAL REPORT

December 2010

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FINAL REPORT

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ACRONYMS

AJK	Azad Jammu and Kashmir
BCC	Behavior change communication
CB	Capacity building
CBO	Community-based organization
CBSD	Community-Based Sales and Distribution
CDC	Center for Disease Control and Prevention
CDWA	Clean Drinking Water for All
CDWI	Clean Drinking Water Initiative
CH	Community hygiene
CLTS	Community Led Total Sanitation
CRISP	Community Rehabilitation Infrastructure Support Project
CSO	Civil society organization
DHS	Demographic Health Survey
DID	Difference-in-difference
DIFD	UK Department for International Development
EHP	Environmental Health Project
EOI	Expression of interest
FANA	Federally Administered Northern Areas
FATA	Federally Administered Tribal Areas
FR	Frontier regions
HIF	Hygiene Improvement Framework
GDA	Global Development Alliance
GIS	Geographical information system
GOP	Government of Pakistan
GPS	Global positioning system
HFI	Hardware improvement framework
IMIS	Internal management information system
KAP	Knowledge, attitudes, and practices
KPK	Khyber Pakhtunkhwa
M&E	Monitoring and evaluation
MDG	Millennium Development Goal
MOE	Ministry of Environment
MOSI	Ministry of Special Initiatives
MOU	Memorandum of understanding
NBCCS	National Behavior Change Communication Strategy
NGO	Non-governmental organization
O&M	Operation and maintenance
P&G	Procter & Gamble
PHED	Public Health Engineering Departments
PMP	Performance Management Plan

POU	Point-of-use
PPP	Public-private partnership
PSDW-HPP	Pakistan Safe Drinking Water and Hygiene Promotion Project
RFP	Request for proposals
RSPN	Rural Support Programmes Network
SACOSAN	South Asian Conference on Sanitation
SH	School hygiene
SOW	Scope of work
SPSS	Statistical Package for the Social Sciences
TMA	Tehsil Municipal Administration
TOT	Training of trainers
UC	Union council
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WASA	Water Sanitation Authority
WASH	Water, sanitation, and hygiene
WHO	World Health Organization
WUC	Water user committee

EXECUTIVE SUMMARY

In October 2006, the United States Agency for International Development (USAID) launched the Pakistan Safe Drinking Water and Hygiene Promotion Project (PSDW-HPP) to improve basic health for the Pakistani population in 50 districts and Federally Administered Tribal Areas (FATA) agencies with an estimated population of 50 million. PSDW-HPP aimed to increase the effectiveness and sustainability of the Government of Pakistan's clean drinking water programs by conducting complementary hygiene and sanitation promotion programs, community mobilization initiatives, and capacity-building activities. The objective of the project was to improve the health of vulnerable populations by increasing the use of proven interventions to prevent waterborne infectious diseases such as diarrhea.

The final contract period was four years (2006–2010), with a total budget of US$23.5 million, of which US$7.1 million was used for sub-grants to local non-governmental organizations (NGOs). Annex I presents a financial report of the project, and Annex II lists the technical reports and manuals developed by the project.

Strategy development. Activities implemented under PSDW-HPP supported the three areas of the Hygiene Improvement Framework[1] for Diarrhea Prevention:

1) *Access to Hardware:* The project complemented efforts by the Government of Pakistan (GOP) to improve water supply and treatment by promoting household technologies and materials, including point-of-use (POU) water treatment technologies and soap for hand washing.

2) *Hygiene Promotion:* The project focused on promoting good hygiene by advocating for the adoption of good practices for hand washing with soap, safe disposal of feces, and proper storage of safe water for drinking and preparing foods. Behavior change communications (BCC) for hygiene activities were implemented through schools, villages, women volunteers, religious leaders, health care providers, community volunteers, and the mass media.

3) *Enabling Environment:* The project supported policy development, institutional strengthening, community involvement, and private sector participation. PSDW-HPP established public-private partnerships to conduct mass media campaigns for hand washing, water quality monitoring, and provision of soap and POU water treatment technologies.

Project Implementation and achievements. PSDW-HPP was implemented through 51 NGO partners in 50 districts and FATA agencies, as shown in Annex III. The project provided technical assistance to help local governments and communities safely maintain and operate GOP-funded water treatment systems and to promote good personal and household water hygiene and sanitation, in order to maximize the health benefits of the water supply infrastructure investments. PSDW-HPP trained government officials and community members in the operation, maintenance, and water source protection of water filtration units; implemented interpersonal and mass communication hygiene

1 USAID-EHP, WSP, UNICEF, WSSCC, 2004

promotion activities in the target districts and agencies; and promoted the use of simple household water treatment technologies and community water-quality testing. Highlights of project achievements include the following:

1) *School hygiene program.* This program trained about 800 government education staff and more than 30,000 primary school teachers. It reached nearly 500,000 students.
2) *Community hygiene program.* This program directly reached approximately 300,000 parents, trained about 10,000 women volunteers, briefed over 10,000 Maulvis and 1,000 community health providers, and sponsored close to 1,500 community interactive theatre performances on hygiene promotion.
3) *Capacity-building initiatives.* The project formed more than 100 water user committees at the grassroots level, trained close to 1,000 community members in the operation and maintenance of water filtration plants, conducted over 3,000 water quality tests, trained local governments and organizations to develop water safety plans, and mapped out water supply schemes and their characteristics in FATA.
4) *Private sector partnerships.* The project signed memoranda of understanding (MOUs) with Mobilink, Unilever, Medentech, Merck and Greenstar. The MOUs covered mass media communication, hygiene promotion, and provision of POU water treatment technologies and water quality monitoring.
5) *Mass media campaigns.* The project aired about 170,000 radio spots in seven different languages. In total, the project's media efforts directly and indirectly reached over 10 million people.
6) *Flood relief efforts.* PSDW-HPP participated in flood relief efforts (funded by USAID, the U.S. State Department's Pakistan Relief Fund, and Procter & Gamble) which involved distribution of 13 million PUR water purification packets to about 120,000 families affected by the floods.

Lessons learned and main recommendations. Many lessons were learned throughout the implementation of the project. Specific lessons from dealing with local NGOs and carrying out the project's technical components are described in the body of this report. Key findings, lessons learned, and recommendations for future programs are summarized below.

1) *Engaging local NGOs as project implementation partners proved to be a successful strategy.* The NGOs gained experience and knowledge about BCC and capacity building for water, sanitation, and hygiene programs. This acquired knowledge and experience has allowed them to continue to be involved in similar government or donor-funded projects now that PSDW-HPP has ended. Efforts to strengthen local NGOs should continue, since these organizations have become the best advocates for creating awareness and behavior change for water, sanitation, and hygiene.

2) *Creating awareness about the importance of safe water and hygiene was an effective mechanism for engaging communities in safeguarding water infrastructure.* The project's target communities responded by investing their own resources to work with local governments to rehabilitate and maintain water infrastructure, such as non-operational filtration plans. Strategies for community mobilization and awareness creation should be developed around all WASH components.

3) *The private sector's response to invitations to participate in project implementation was overwhelming.* As a result, future water, sanitation, and hygiene (WASH) programs need to develop a strategy to ensure that the needs and interests of the private sector and project objectives are effectively matched. This needs to be done before the private sector is engaged. PSDW-HPP's success

working with the private sector was due to partnerships based on this strategy, which enabled both the project and the corporate partners to achieve their goals.

4) *Despite the fact that access to an improved water source in Pakistan is high (92 percent[2]), the quality of drinking water remains a concern.* For instance, the PSDW-HPP survey of the water supply schemes in FATA found that about half of them had bacteriological contamination. Less than 10 percent of people in Pakistan treat their water—in rural areas, this figure was found to be less than 3 percent. More than 80 percent of respondents to PSDW-HPP surveys believed that if water is clear and does not smell, it is good to drink. For this reason, water is not treated and water quality is not tested. This perception is a common misunderstanding, and it reinforces the need for future projects to focus on water testing and public dissemination of results. Given the broad understanding that contaminated water can cause diarrhea, sharing results may increase the demand for water treatment and lead to an increase in treatment of water at home. POU technologies need to be promoted since a large percentage of the population does not receive piped treated water.

5) *Communities need to receive proper training in the use of POU products.* Recent flood relief operations conducted by PSDW-HPP showed that a lack of good training can lead to the misuse of POU products. The distribution of POU products during the flood relief operations resulted in demand for POU products; this has created an opportunity for WASH programs to work with the private sector to improve the supply and distribution of affordable POU products. In addition, complementary training on hygiene education should be conducted concurrently with the distribution of POU products.

[2] DHS (2006-2007)

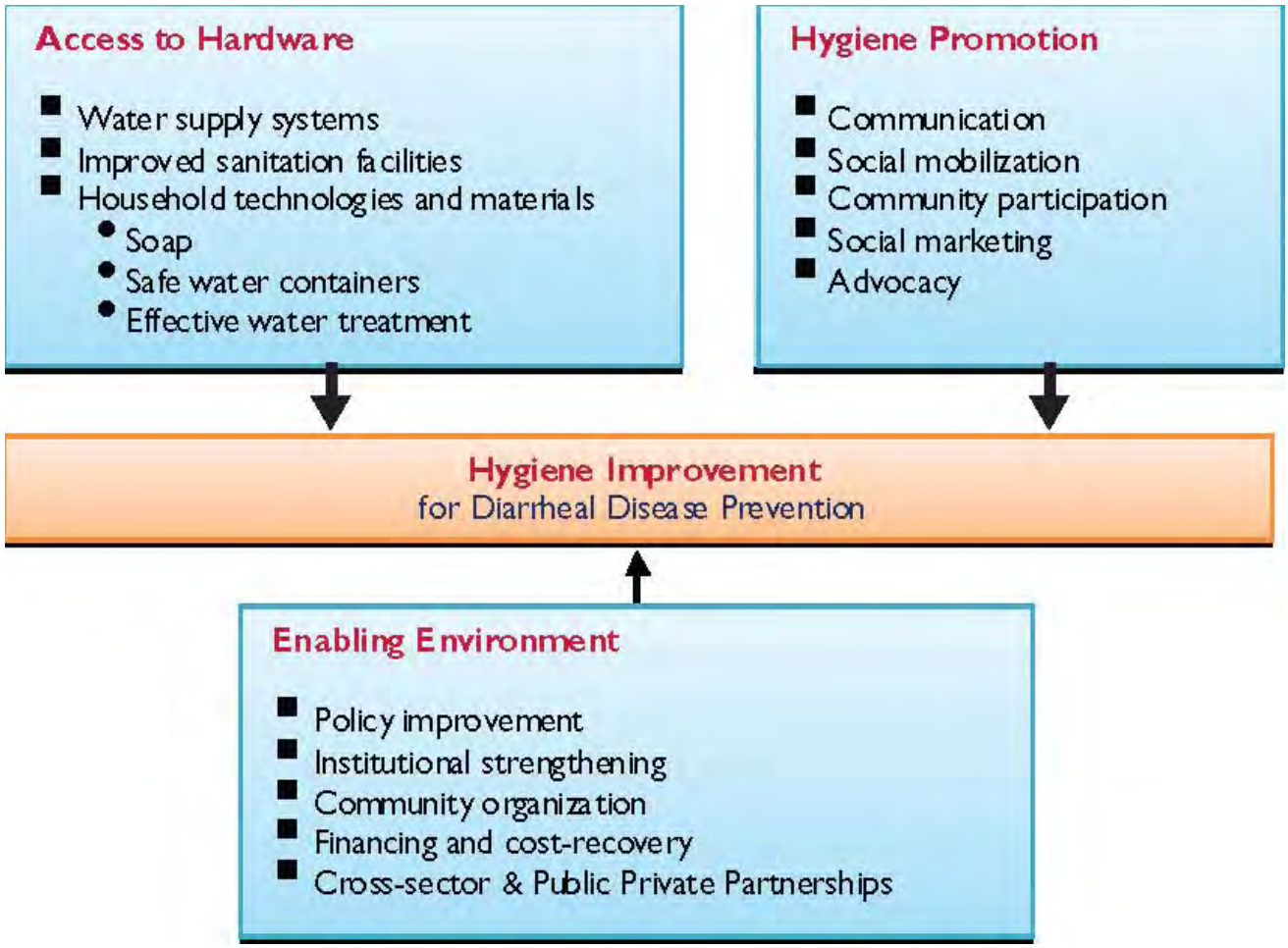
I—INTRODUCTION

This final report presents the results of the implementation of the Pakistan Safe Drinking Water and Hygiene Promotion Project. PSDW-HPP was launched by USAID in 2006 to improve the basic health of the Pakistani population in 50 districts and FATA agencies with an estimated population of 50 million. The project's target areas included four provinces—Sindh, Baluchistan, Punjab, and Khyber Pakhtunkhwa (KPK)—and the Federally Administered Tribal Areas and Azad Jammu and Kashmir (AJK), including earthquake-affected areas in KPK, FATA, and AJK. The specific objective of the four-year project was to improve the health of vulnerable populations by increasing the use of proven interventions to prevent waterborne infectious diseases such as diarrhea. The project was also designed to increase the effectiveness and sustainability of the GOP's clean drinking water programs—the Clean Drinking Water for All (CDWA) program and the Clean Drinking Water Initiative (CDWI)—by conducting complementary hygiene and sanitation promotion programs, community mobilization initiatives, and diverse capacity-building activities. This report describes the activities carried out, their results and their impact, and the lessons learned through implementation of the activities by NGOs and the private sector. The report is organized into the following sections: I—Introduction, II—Context and Challenges, III—Project Components, and IV—Implementing Partners. Annex I contains a financial report of the project. Annex II presents a list of project reports. Annex III contains a list of NGO partners. Annex IV includes the Performance Monitoring Plan, and Annex V describes selected success stories.

Activities implemented under PSDW-HPP supported the three areas of the Hygiene Improvement Framework[3] (see Figure 1) for Diarrhea Prevention: 1) Access to Hardware, 2) Hygiene Promotion, and 3) Enabling Environment. In the access to hardware area, the project complemented GOP efforts to improve water supply and treatment by promoting household technologies and materials, including POU water treatment technologies and soap for hand washing. In addition, the PSDW-HPP engaged in community mobilization and provided capacity-building support to complement Pakistan's substantial investments in hardware for safe drinking water. In the hygiene promotion area, the project focused on promoting good hygiene, advocating for the adoption of good practices for hand washing, safe disposal of feces, and proper storage of safe water for drinking and preparing foods. Behavior change communication for hygiene interventions were implemented through schools, villages, women volunteers, religious leaders, health care providers, community volunteers, and the mass media. To improve the enabling environment, PSDW-HPP supported policy implementation, institutional strengthening, community involvement, and private sector participation. To do this, the project supported the Ministry of Environment (MOE) in developing a National Behavior Change Communication Strategy and Action Plan for water, sanitation, and hygiene. PSDW-HPP also established partnerships that engaged the private sector in mass media campaigns, handwashing campaigns, water quality monitoring, and provision of soap and POU water treatment technologies.

3 USAID-EHP, WSP, UNICEF, WSSCC, 2004

Figure 1. Hygiene Improvement Framework (HIF)



II—CONTEXT AND CHALLENGES

In Pakistan, the mortality rate for children under age five is 101 deaths per 1,000 children.[4] Diarrhea is responsible for 11 percent of deaths for children under five years.[5] The main causes of diarrhea in children are unsafe drinking water, inadequate sanitation, and poor hygiene. Diarrhea is also a significant cause of undernutrition and can affect a child's overall health. Unsafe drinking water also has a disproportionate effect on the poor.[6] The combination of consumption of unsafe water and poor hygiene practices causes hardships, as it leads to high-cost treatments for waterborne illnesses and decreases both economic productivity and educational achievement (due to reduced school attendance by children). The presence of improved sanitation facilities is very low in rural areas—about 35 percent. According to the Demographic Health Survey (DHS 2006–2007), 22 percent of Pakistani children under age five had an episode of diarrhea during the two-week period before the survey, and about 30 percent of Pakistanis practice open defecation (above the world average, which is 18 percent).[7]

As a signatory to the Millennium Development Goals (MDGs), Pakistan has committed to meeting the targets set at the World Summit on Sustainable Development. Millennium Development Goal 7: Target 10 aims to halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation. In Pakistan, this means increasing water and sanitation coverage to 93 percent and 90 percent, respectively. The GOP has made allocations to achieve these targets in its Medium Term Development Framework 2005–2010. The government has committed to investing in safe drinking water, sanitation, and hygiene education and promotion; international development partners are launching programs to complement the government's initiatives.

POLICY ENVIRONMENT FOR DRINKING WATER AND SANITATION

Pakistan has a positive enabling environment for improving access to safe drinking water and sanitation and for promoting hygiene. There is a national Policy for Sanitation and Drinking Water. Local policies exist in some locations (Punjab, AJK, and Baluchistan) and drafts have been prepared in others (Federally Administered Northern Areas [2008 draft] and Sindh [2008]). While there has been a strong move in the past two years to assess the situation in each area and to create policies, all partners in civil society and government face challenges in implementing these policies effectively. The key to ensuring successful implementation of these new policies and plans is coordination among the many government ministries

4 UNICEF, 2006

5 DHS 2006-2007

6 Asian Development Bank, 2004; UNDP 2006

7 UNICEF-WHO 2008

and agencies (at the federal, provincial, district, tehsil, and union council levels) and among donors and the myriad civil society organizations working on water and sanitation issues.

At the South Asian Conference on Sanitation, the Government of Pakistan committed to expanding the coverage of sanitation services. Several government agencies at various levels are considered stakeholders for water, sanitation, and hygiene issues, including the MOE, the Ministry of Health, the Ministry of Population Welfare, the Ministry of Special Initiatives (MOSI), and the Ministry of Local Government and Rural Development. In addition to government efforts, several civil society organizations (CSOs) have worked intensively to establish community-based programs, which have had different degrees of success and levels of engagement with local or national governments. The CSOs, however, have indicated that they have not been sufficiently engaged in the government programs. As a result, they are concerned that the plans and models being developed by the government do not fully reflect the understanding and lessons learned from civil society's many years of work at the community level. The National Behavior Change Communication Strategy (NBCCS) and Action Plan (2010–2015), which was developed by the MOE with support from PSDW-HPP and the United Nations Children's Fund (UNICEF), will provide a significant platform for government and civil society to improve the coordination of activities.

WATER AND SANITATION SECTOR IN PAKISTAN

Overall access to improved drinking water sources and improved sanitation facilities in Pakistan is estimated at 90 percent and 58 percent, respectively. Huge disparities exist, however, among and within urban and rural areas and the provinces and regions. The quality of services is extremely poor, and data from multi-indicator cluster surveys suggest that as many as half of the latrines in the country may be unsanitary. The systems for wastewater disposal and solid waste management are inadequate; they act as transfer systems rather than treatment systems. Presently, only 50 percent of urban waste is collected, and only a fraction of that is disposed of in an environmentally safe manner. Similarly, only an estimated 50 percent of wastewater is collected at all, and only 10 percent of the amount collected is effectively treated. (PACOSAN, 2009) Inadequate water supply, sanitation, and hygiene result in the high incidence of water- and sanitation-related diseases in Pakistan, which in turn increases morbidity and mortality rates and poses a major threat to the survival and development of Pakistani children.

The water and sanitation sector faces major challenges to the quality of services, due at least in part to the Pakistani water policy's decades-long primary focus on irrigation. This focus appears to be changing, following the passage of the Medium Term Development Framework (2005–2010), which provides for about US$400 million per year for water supply and sanitation and for policy support to improve water and sanitation coverage and quality.

Recently, the MOE and MOSI launched a number of initiatives, including the CDWA program, the National Sanitation Policy, the National Drinking Water Policy, National Drinking Water Standards, a National Sanitation Action Plan, the NBCCS and Action Plan, and provincial sanitation and drinking water policies and strategies. In addition, provincial and district behavior change communication action plans are being developed.

III—PROJECT COMPONENTS AND ACTIVITIES

The project had three main components, as laid out in the Task Order Contract: 1) Hygiene Promotion, 2) Capacity Building, and 3) Technical Reviews and Other Studies. In addition, PSDW-HPP worked on two special projects that were not in the original scope of work. Activities, results, and lessons learned are described briefly below. Table 1 summarizes the main activities carried out under each of the components.

Table 1: Main Project Activities

Hygiene Promotion	Development of a behavior change strategy and a behavior change communication (BCC) plan for the project
	Development of hygiene promotion media materials, including printed matter and radio programs
	Design and implementation of a community hygiene promotion program
	Design and implementation of a school hygiene promotion program
	Implementation of hygiene promotion campaigns through public-private partnerships with Mobilink, Medentech, Unilever, Merck, and Proctor & Gamble's Greenstar Social Marketing
Capacity Building	Development of training manuals for water treatment plan operators and staff from the Public Health Engineering Departments (PHEDs) and the Water and Sanitation Authority (WASA)
	Implementation of training for Tehsil Municipal Administrations and PHEDs on filtration plan operation, water source protection plans, water testing, and cost-recovery models
	Study tours to Bangladesh and Southeast Asia for non-governmental organization (NGO) representatives and government officials
	Training of traditional birth attendants and community midwives for household communication in hygiene promotion and water, sanitation, and hygiene (WASH)
	Training of NGOs and communities on Community Led Total Sanitation
	Training on water quality testing in Federally Administered Tribal Areas (FATA)

Table 1: Main Project Activities	
Technical Review and Other Studies	Qualitative Study on Hygiene and Safe Water Practices in Pakistan
	Assessment of the Clean Drinking Water Initiative (CDWI) filtration plants
	Technical review of point-of-use and community water treatment technologies
	Water resources assessment in FATA
	Study of Aquatabs product acceptability and willingness to pay
	Baseline and endline surveys
	Study on WASH knowledge, attitudes, and practices in Peshawar Town-I
	Market assessment study for WASH
Special Projects	Assistance to the Ministry of Environment and the United Nations Children's Fund (UNICEF) in the development of a National Behavior Change Communication Strategy (NBCCS) and Action Plan for WASH; assistance to provincial governments to develop regional BCC strategies based on the NBCCS
	Implementation of flood relief activities

HYGIENE PROMOTION

PSDW-HPP conducted formative research to document current local water, sanitation, and hygiene practices. Critical findings from this research led to the development of a behavior change communication strategy for the hygiene promotion program. The most intensive hygiene promotion interventions were conducted in the 136 union councils within 31 districts and agencies where filtration plants had been installed. NGO partners implemented PSDW-HPP's hygiene promotion component by directly conducting activities in schools and communities and training others to engage in interpersonal communication initiatives. Radio spots were aired nationwide to raise awareness of critical hygiene messages and to reinforce the interpersonal communication activities conducted at the community level. The hygiene promotion component targeted parents of children under age five from lower socioeconomic backgrounds who were living in peri-urban and rural areas. To reach this key audience, PSDW-HPP relied on NGO workers; schoolchildren; community theater volunteers; female community volunteers; religious leaders (Maulvis); basic health units, doctors, and other health care providers; and filtration plant operators.

PSDW-HPP reached district-level target groups through NGO partners, which implemented hygiene promotion activities at the village and household levels while also integrating hygiene messages into their existing programs and interventions. PSDW-HPP trained the NGOs in order to build their capacity in a

number of areas: interactive community theatre performances, word-of-mouth campaigns conducted by community volunteers, training on water quality testing and monitoring (supported by guidelines), school hygiene promotion protocols and training for classroom teachers, and behavior change training using case study examples in hygiene promotion.

SCHOOL HYGIENE

The project, in consultation with provincial education departments, selected fourth-grade primary school children as the target audience for the school hygiene promotion program. The project delivered behavior change messages and used school activities to create sustainable improved hygiene practices. The primary-school-age children were reached at school using participatory activities. They served as key links for hygiene messages to reach the home, particularly mothers and fathers. Project messages emphasized proper handwashing techniques at critical times, purification of household drinking water, and safe storage of household drinking water to prevent contamination of water. Teachers, including at least one teacher of a grade 4 class from every school, were trained by NGO partners to conduct activities with students. The project provided a calendar and behavior monitoring sheet for each student participating in the program to reinforce the messages and behaviors learned at school.

COMMUNITY HYGIENE

The project's community hygiene program used seven channels to promote hygiene: 1) *NGO partner workers* (the primary channel), who led groups of mothers and fathers in discussions about hygiene promotion; 2) *Maulvis,* who conveyed hygiene promotion information to fathers and children and who provided information on hygiene during sermons; 3) *female volunteers,* who gave hygiene messages that targeted mothers at home and in the community, motivated and encouraged mothers to adopt hygienic methods, and demonstrated hygiene behaviors; 4) *filtration plant staff,* who pasted hygiene promotion posters on filtration plant premises and gave out cards to community members that invited them to take safe water from filtration units; 5) *doctors,* who discussed hygiene promotion messages with mothers and presented signed certificates recognizing mothers' efforts in promoting hygiene when they brought their children for care; 6) *other NGOs* trained by the PSDW-HPP NGO partners, which supported hygiene promotion efforts at the local level, integrated hygiene promotion messages into their ongoing programs, and enhanced the outreach of hygiene promotion messages through their interventions; and 7) *local retail outlets* selling soap and water purification products, which supported the hygiene promotion campaign by hanging danglers to remind people to buy soap for hand washing at their outlets and responded to the community's demand for soap and drinking water purifying products (water purification packets, tablets, etc.).

MASS MEDIA

PSDW-HPP's mass media initiatives consisted of radio spots and talk shows that aired hygiene promotion content nationwide, with an emphasis on the project's districts. Newspapers, magazines, interactive theater, fairs, and other community events also emphasized key hygiene promotion messages.

LESSONS LEARNED AND RECOMMENDATIONS

Listed below are the main lessons learned from implementation of PSWD-HPP hygiene promotion activities through NGO partners.

School Hygiene

- *The project found that regular stakeholder meetings at the provincial level were necessary from the planning stage onward and during implementation*. These regular stakeholder meetings were an important means of coordinating activities, given the wide reach of the program (which covered all schools in the target districts). It is recommended that consultative workshops be held with provincial education departments so that school programs can be adopted province-wide.
- *Students were a very effective channel for promoting hygiene messages.* They quickly learned the messages and were able to clearly communicate them to family members and demonstrate what they had learned in school. The colored school monitoring sheets, which were liked very much by school children, provided an opportunity to re-emphasize the project's messages on a daily basis. Given the program's success, some provincial educational departments adopted program manuals to cover all grades. It is recommended that middle school and high school children be included in future school hygiene promotion programs.
- *The impact of the program was diminished by a lack of hardware for water supply and sanitation facilities in many participating schools.* Where such facilities were lacking, it was not possible to put into practice the lessons learned through the hygiene promotion program. The school program would have benefitted from having a hardware provision. It has been demonstrated that an effective program for diarrheal disease prevention require all elements of the hygiene improvement framework (HIF), including access to hardware, as shown in Figure 1 on page 2.

Community Hygiene

- *Sessions with parents were most effective if both mothers and fathers were involved* in learning the new behaviors and could model and reinforce them at home. In addition, working with mothers of children under age five proved to be effective, as they were the most accepted by communities to influence behavior change on hygiene practices.
- *Street theatres were a good reinforcement for messages and were well attended.* Over 150,000 people attended street theatres during the contract period.
- *Danglers were a success.* Shopkeepers quickly put up danglers and asked for more. Informal reports from shopkeepers stated that sales were up as a result of the danglers. The project did not perform any impact evaluation on sales, but the high demand for danglers from shopkeepers provides a good indication of their success.
- *Integration of the private sector (particularly for provision of soap) was an important complement to the community hygiene program.* It re-emphasized the hygiene messages and provided a practical approach for hand washing with soap. It is recommended that hygiene programs incorporate materials such as soap (based on the HIF shown in Figure 1 on page 2).

Religious Leaders and Doctors

- *Working through religious leaders required engagement with influential community leaders.* In many instances, it was important to first engage and win support from the official district Chief Clergy. Once he understood and accepted the messages, he played an important role in communicating to all molvis attending the training session, the importance of WASH messages. Religious leaders, by virtue of their position, have a platform to continue disseminating the hygiene promotion messages far beyond the life of the project. It is recommended that any further work in this sector include religious leaders as key stakeholders.
- *It was difficult to engage doctors in hygiene promotion due to their workload.* Doctors were not good disseminators of the hygiene promotion lessons because they did not take the time to receive proper training. A strategy should be developed to work with this group as a channel for sensitizing community members.

CAPACITY BUILDING

Capacity building was a significant component during the implementation of PSDW-HPP. NGO partners received capacity building support in financial management, program activity monitoring, reporting, and technical areas. NGO staff trainers were trained in relevant technical areas, including hygiene promotion, water supply, water quality monitoring, water source protection, POU technologies, and operation and maintenance of filtration plans. NGOs provided training to government officials (Tehsil Municipal Administrations, known as TMAs, and Public Health Engineering Departments, or PHEDs), community-based organizations, and other local NGOs. Also under the capacity building component, the project conducted three study tours for NGO partners and counterpart government officials in Southeast Asia and Bangladesh.

BUILDING THE CAPACITY OF NGO PARTNERS

Capacity building activities started early in the project. Potential NGO partners were invited to bid and given background information about the project. They were also provided with training on how to respond to PSDW-HPP requests for proposals (RFPs). NGOs selected for grants also received training on financial compliance, program monitoring, and reporting, in addition to technical training in the different project implementation areas. (Chapter IV—Implementing Partners describes the processes followed throughout the project in dealing with all project partners, which were instrumental in delivering activities in the field.) A survey of the NGO partners conducted at the end of the project indicated that PSDW-HPP helped significantly increase both the technical and managerial capacities of the NGOs. These results confirmed early indications that NGOs' capacity to conduct BCC activities increased as a result of the project.

A lack of proper accounting and funds management capacity is a significant barrier for NGOs applying for funding from international donors. An indirect but important aspect of cooperation with PSDW-HPP was to increase NGO partners' capacity to work with USAID-funded projects and to manage funds according to international accounting standards. A large proportion of the project's NGO partners

rated their experience communicating with project staff and working with the project grants and finance unit as excellent. These local NGOs now have increased accounting capacities, which are vital for sustainability. Based on their experience implementing PSDW-HPP activities, a number of NGO partners have received recognition as WASH experts and are currently implementing projects for other donors, including the World Health Organization (WHO), UNICEF, and the UK Department for International Development (DFID).

LESSONS LEARNED AND RECOMMENDATIONS

- *Working through smaller local NGO partners enabled the project to maximize the proportion of the population reached and the impact of the activities, while also strengthening NGO partners' capacity to implement WASH programs*. However, this approach required the project to provide continuous mentoring and monitoring support to local NGO implementing teams to ensure the quality of activities. Future programs should plan for and provide enough resources to provide capacity building and performance evaluation.
- *It was more effective to have NGOs working on all project components,* as was done during the final phases of PSDW-HPP. During the project's initial phases, separate NGOs were engaged for separate components (i.e., one for hygiene promotion, one for school hygiene promotion, and one for capacity building). The later approach facilitated communication and resulted in NGOs with broader knowledge about WASH and more capacity to carry out activities.

ASSISTANCE TO PAKISTAN'S CLEAN DRINKING WATER PROGRAMS

PSDW-HPP provided technical assistance to support the Government of Pakistan's CDWA program by implementing capacity building and community mobilization activities to promote the use of the installed filtration plants. These activities were complemented by hygiene promotion and POU technology campaigns. PSDW-HPP provided training to TMA and PHED staff and civil society on filtration plant management, operation and maintenance (O&M), water source protection plans, water quality testing, and hygiene. The project assessed the operational status of 93 filtration plants located in the tehsils of the project's districts, which had been installed by the CDWI. Only half of them were found to be operational. NGO partners worked with TMAs, PHEDs and local communities to make the non-functional plants operational. The NGOs were trained to form and mobilize water user committees (WUCs) to devise ways and means to ensure sustainable operation and maintenance of the facilities. This finding led to implementation of a program to make non-functioning plants operational through community mobilization and local government partnerships and through pilot cost-recovery models. Tri-partite memoranda of understanding (MOUs)—among the TMA/PHED, the respective WUC (registered as a community based organization), and the NGO partner—were signed. These agreements succeeded in bringing about 20 non-functioning filtration plants back into operation. This success demonstrated the effectiveness of community mobilization and capacity building in addressing water management problems at the local level.

LEASONS LEARNED AND RECOMMENDATIONS

The conceptualization, design, and execution of the GOP's clean drinking water programs (CDWI and CDWA) were the responsibility of the Government of Pakistan. CDWI, led by the MOE, installed one filtration plant per tehsil. The CDWA program was supposed to install one filtration plan per union council. It was originally led by the MOE, but responsibility for implementing CDWA was transferred to the Ministry of Special Initiatives (MOSI). PSDW-HPP developed a workplan based on the assumption that the GOP would fully execute the CDWA program within the time frame of the project. This did not happen, however. Because the CDWA program was not fully executed by the GOP, both PSDW-HPP and the government lost an opportunity to effectively deliver and fully take advantage of the project's complementary technical assistance. On the positive side, the GOP's clean drinking water programs brought national awareness and created dialogue on drinking water quality. Lessons learned in relation to the delivery of this component and the implementation of CDWI and CDWA include the following:

- *Local ownership of the GOP's clean drinking water programs was not realized, due to local governments' and communities' low level of involvement in the design of the programs*. In addition, the transfer of CDWA from the MOE to the MOSI slowed down project implementation. The transfer of ownership of the plants was also problematic, due to some plants' bad locations and to a lack of promised O&M funds. As a result, many TMAs did not want to take over the plants.
- *Project MOUs between USAID and GOP ministries facilitated PSDW-HPP assistance.* An early MOU signed by USAID and the MOE allowed the project to begin implementation with existing filtration plants installed under CDWI rather than waiting for completion of the CDWA program, which was the responsibility on another ministry.
- *Water quality testing performed by PSDW-HPP confirmed that some plants were not properly located since the water source from the tube well met drinking water quality standards and no treatment was necessary.* Water quality testing was carried out at the water source for the filtration plants and after filtration at the CDWI plants within the project's districts. In some plants, treated water was more contaminated than the water source entering the plant, illustrating the depth of negative consequences from the lack of maintenance.
- *Water quality testing in communities also proved to be an important educational tool to raise awareness about the need to treat water,* since overall most Pakistanis believe that water that it is clear and does not smell is good to drink. Water quality testing demonstrated to communities that in many cases the water had pathogens that can cause diarrhea.
- *It would have been better if the project had shifted efforts earlier to focus more on the promotion of POU technologies for water treatment,* given that the CDWA programs did not materialize, that they did not provide sufficient O&M funds for existing filtration plants, that water quality laboratories were not completed at the local government level, that there were problems with the ownership of filtration plants, and that PSDW-HPP lacked contingency funds for minor infrastructure repairs. Despite these challenges, the project achieved some good results: community mobilization made plants operational, successful pilots for cost recovery were implemented, and manuals were created that were useful and applicable whether there were plants or not and that were in high demand.
- *Social mobilization requires time and continued engagement with communities and local organizations.* The project found it difficult to achieve social mobilization, largely due to the broad area covered by PSDW-HPP (50 districts and agencies) combined with an effective implementation time of less than three years.

- *More involvement by the beneficiary communities, the district governments, the TMAs, and other important local stakeholders is vital for water infrastructure sustainability.* PSDW-HPP demonstrated how social mobilization and community involvement, in partnership with local governments, was effective in making some of the non-functioning plants operational. All this was accomplished because of the involvement of all relevant stakeholders.

STUDY TOURS

The project conducted three study tours to WASH programs in Indonesia, the Philippines, and Bangladesh. Participants included representatives from the MOSI (including the Minister and the project directors for CDWA), provincial governments, and NGOs. The study tours in Indonesia and Philippines included visits to projects from the USAID Environmental Services Program and the USAID ECO-ASIA program. In Bangladesh, the study tour focused on visiting NGO-led programs that included WASH components. An important outcome of these study tours was that participants recognized the need to integrate hygiene promotion, basic sanitation, and POU technologies into existing water programs in Pakistan. Conclusions from meetings with participants after the study tours highlighted the following points from the site visits:

- *Community empowerment is key* for their members' involvement in water infrastructure maintenance and, ultimately, for the sustainability of the infrastructure.

- *Communities are willing to pay for water delivery and treatment services* if they are properly informed and aware of the benefits.

- *Integrated approaches involving water service delivery, water treatment, and hygiene and sanitation are key to reducing diarrhea and improving the overall health of communities.*

- *Use of inexpensive water treatment technologies at the household level, to complement community filtration plants, are important for effective diarrhea reduction.*

- *Water service delivery under a public-private partnership can be an effective way to provide water delivery and treatment services to all segments of the population.*

- *Developing livelihoods programs that are linked to water infrastructure is an important component in raising awareness about sustainability of water infrastructure and creating economic conditions that allow communities to pay for services.*

TECHNICAL REVIEWS AND OTHER STUDIES

PSDW-HPP conducted a number of technical reviews and other studies, which were useful in developing strategies and in implementing and evaluating project interventions. These include knowledge, attitudes, and practices (KAP) studies, water resources assessments, water treatment technology assessments, and market assessments of WASH products. In addition, baseline and endline surveys were conducted to measure project impact for certain hygiene indicators. Reports from these studies are listed in Annex 1. General conclusions from these reports are summarized in this section.

KNOWLEDGE, ATTITUDES, AND PRACTICES STUDIES

The project implemented qualitative and quantitative studies on WASH knowledge, attitudes, and practices. A qualitative assessment[8] was conducted at the beginning of the project, which was used as the basis for designing the BCC strategy. This study was followed by the baseline survey to be used to evaluate the impact of the project in certain indicators. Finally, a KAP study was conducted for Peshawar Town-1 in support of the USAID Community Rehabilitation Infrastructure Support (CRISP) project. Conclusions common to all these studies include the following:

- Almost all respondents believed that their water was safe to drink because it appeared to be clean and did not have bad odors. For this reason, very few households practice water purification.
- For those households that do use a method of purification, boiling water is the preferred method, although adherence to this practice is low. Barriers to boiling water include its difficulty, the amount of time required, and the high cost of fuel needed, particularly in rural areas.
- Hand washing with soap—both before handling food and feeding children and after washing a child's bottom—is not widely practiced. One of the largest barriers to regular hand washing with soap at critical times was the lack of soap at work or school.
- Most people store water; in general, safe storage did not emerge as a major problem in households.

WATER QUALITY TREATMENT TECHNOLOGY STUDIES

PSDW-HPP performed a technical review of water treatment technologies in Pakistan, including both community treatment systems and household POU technologies. The review focused primarily on four types of POU technologies: 1) chlorination, 2) solar disinfection, 3) flocculation/disinfection through chlorination, and 4) ceramic filtration. Given that all of these technologies are available in Pakistan and that no single POU technology is applicable for all communities, all four of these field-proven POU technologies were promoted as options for household water treatment. Boiled water was also promoted.

[8] A Qualitative Study on Hygiene and Safe Water Practices in Pakistan

MARKET ASSESSMENT FOR WASH PRODUCTS

During the project's extension period (April–November 2010), PSDW-HPP carried out a market assessment for WASH products, including drinking water POU treatment, soap, and sanitation. The scope of the study was to assess the marketing, sales, and distribution infrastructure for WASH products in seven districts. The study aimed to identify opportunities and bottlenecks; assess technical and financial constraints that negatively impact availability, costs, promotion, sales, and distribution; provide recommendations for measures to improve access to POU water purification technologies, hygiene products (i.e., soap), and sanitation products. The plan was to conduct the study in two phases. Phase I identified the stakeholders marketing WASH products, including private sector manufacturers, distributors, retailers, technical specialists, microfinance institutions, NGOs working in the field, and public sector units working on these issues. Phase I also developed a sampling frame and research protocols and questionnaires to gather data for Phase II. Phase II could not be completed as initially planned because the market assessment could not be initiated until July 2010 (for a variety of reasons) and because the floods precluded data collection in the selected districts. The reasons for the delay in starting this activity varied, but the primary one was the project's focus on other priorities, such as the KAP study for Peshawar Town-1. It was originally anticipated that the delay would be easily managed since most of project staff would be available to assist with Phase II activities, field work, and data collection after August 2010. However, the catastrophic flooding and resulting flood-related work undertaken by the PWDW-HPP prevented project staff from assisting in Phase II of the assessment. A modified Phase II approach was implemented, however, in an attempt to collect information that could help fulfill the assessment's objectives. Under this modified approach, interviews were conducted with 15 manufactures and distributors working in Pakistan.

This assessment found no major manufacturers and national distributors of POU and sanitation products. Only small machining workshops were identified that are manufacturing sanitation accessories such as steel and iron doors, roofing materials, doors, pre-fabricated concrete slabs, bricks, block works, and wooden doors for latrines. In general, hygiene products (i.e., soap) and sanitation products were much more accessible than POU products. Except for hygiene products, no significant promotional activities were observed for sanitation or POU products. Occasionally, hygiene products are subject to price discounts and trade and consumer promotion offers. Pricing policies for the hygiene products were found to be consistently uniform in all seven districts, whereas price variations in sanitation products were found from within the districts and between districts. The main barriers identified for the marketing of the main three categories of WASH products are summarized below.

POU water purification products. The supply chain for the POU water purification products is the least developed of the three categories' supply chains. POU products do not have a properly developed supply chain in Pakistan that connects manufacturers to distributors and wholesalers and to retailers and customers in the rural areas. The underlying factor in the weak supply chain for the POU products is the lack of demand. As a result, supply chain development is constrained and the products are supplied to the market only when there is generation of sales orders or a humanitarian emergency.

Hygiene products. Regulatory policies, such as high taxes on 80 percent of the imported raw materials to make soap, are constraints for the soap industry. In addition, the reformed general sales tax will further increase soap prices. Imports of similar brands manufactured locally and of soaps smuggled back into Pakistan via the Afghan transit trade are disturbing the market and hurting the soap industry's growth and profitability.

Sanitation components and accessories. The sanitary hardware market is not as fully developed in rural areas as the market for hygiene products. This hardware is not a fast-selling consumer item and brand preferences are not strongly established. Hardware style, design, and color preferences change in response to consumer demand and market trends, so dealers prefer to order small quantities of sanitary hardware that can be sold quickly without holding inventory for too long.

Furthermore, sanitary hardware is also more fragile and transportation costs are much higher due to the bulk and weight of the sanitary components. Since unit costs of sanitation products require high levels of investment, manufacturers prefer to develop supply chains close to their manufacturing base so that they can supply their products to trade channels through their selected distributors. The distributors then place orders in bulk and make substantial investments to lift stocks from the manufacturers.

WATER RESOURCES ASSESSMENT IN FEDERALLY ADMINISTERED TRIBAL AREAS

PSDW-HPP conducted a water resources assessment between July and September 2008 in all areas of FATA except South Waziristan. The study developed a geographic information system (GIS) database of existing drinking water schemes and assessed water quality. The study was implemented through North West Development Associates; it mapped existing PHED water supply sources in six agencies and six frontier regions (FRs) and provided vital technical information, including key water quality parameters. In addition, staff members from the FATA Secretariat ware trained to use GIS and to conduct water quality testing using field test kits. At the end of the assessment, the GIS database and the water quality testing equipment were handed over to the FATA Secretariat so that basic-level water quality labs could be later established for six agencies. The survey was designed to involve PHED in all key stages: the data needs assessment, design of the questionnaire, data collection (which used PHED staff), feedback on the database, and training in using and updating the GIS database.

The study was carried out in extremely unfavorable circumstances. Immediately after it was launched in July 2008, the army operation started in Bajour Agency. In September 2008, FR Peshawar and FR Kohat also became hubs of army and militant operations. Kurrum Agency remained inaccessible as a result of ethnic infighting. The area has still not opened up to travel; the only access route is through Afghanistan, a route that was used by the field survey teams. Operating in FATA was and still is an extremely difficult task, and carrying a sensitive instrument such as a global positioning system (GPS) invited a lot of suspicion. As a result, only 554 water supply schemes—representing 52 percent of the total—were surveyed.

Based on the survey of 554 schemes, the study found that 399 (72 percent) are functional, while the remaining 155 (28 percent) are non-functional. Regarding the quality of water at the source, only 180 (45 percent) were found free of fecal contamination; 219 (55 percent) of the collected samples were found contaminated. At the user end point, 314 (79 percent) of the samples were found contaminated and only 21 percent were non-polluted.

BASELINE AND ENDLINE SURVEYS

PSDW-HPP conducted impact evaluation surveys to measure the changes in key program indicators between the time the baseline survey was conducted and the end of the project. The surveys measured project participants (the treatment group) and non-participants (the control group); project participants were those households that participated in *any* of the project's components or activities, including the radio program, the school program, and the intensive hygiene promotion activities. The survey sample

size was approximately 4,000 households with children between the ages of 0 and 59 months. The impact of the project was evaluated as the difference-in-difference (DID) of indicators (e.g., the percentage of mothers who reported washing hands before feeding children) between the baseline survey and the post-project period across the treatment and control households. The DID approach ensures that any systematic differences in the control and treatment groups in the baseline are removed when measuring project impact.

The baseline and end line surveys collected information on household characteristics that would affect access to safe drinking water and sanitation.

In terms of **access to water,** the results indicate that before project implementation, 66 percent of project participants had access to water inside the house, of which 95 percent was from improved sources such as tap water. After the project, access to water inside the house for project participants increased to 76 percent, of which 99 percent was from improved sources. Comparatively, there was no increase in the percentage of non-participants with access to water inside the house (76 percent), or the percentage of water from improved sources (99 percent). In terms of access to toilets, the results indicate that before the project, 73 percent of project participants had access to either a flush toilet or a pit-latrine; the access increased dramatically to 93 percent after the project. The increase in access to toilets among the non-participants, on the other hand, was not as dramatic. Before the project, 81 percent of non-participants had access to a flush toilet or pit-latrine; this increased to 87 percent after the project.

Table 2 : Access to Water and Sanitation

	Baseline		Endline	
	Non-Participants	Participants	Non-Participants	Participants
	Total	Total	Total	Total
Access to Water	76%	66%	76%	76%
Access to flush Toilet or pit-latrine	81%	73%	87%	93%

Data sources: 2008 PSDW Baseline Survey, 2009 PSDW End line Survey

The impact evaluation surveys measured the impact of the project's key areas, including drinking water storage, hygiene practices, and knowledge and treatment of water. They also assessed the extent to which project interventions changed the indicators that measured these outcomes. The results were presented for both the DID estimate using the pooled data and the DID estimate where the analysis was limited to individual panel data.[9]

The results indicate that **safe drinking water storage practices**—including covering drinking water containers with a hard cover, storing containers in a raised area, and safely taking out water from the containers—increased after project implementation but that these changes cannot be attributed exclusively to project interventions. On average, in the baseline, the percentage of households that stored drinking water safely was similar across the project participants and non-participants. After the project, both of these groups reported a large percentage increase in this indicator. Among the project participants, the percentage of households that safely stored water increased from 82 percent to 93

[9] The panel data analysis was restricted to households for which there was information both in the baseline and the endline surveys. While the latter is a powerful tool to measure project impact, it is limited in this case because information was lost on several households. The pooled data analysis included all the households, including those for whom there was not information both in the baseline and the endline surveys, but ignored the time series information on the households in the panel data.

percent, compared with an increase from 81 percent to 91 percent among non-participants. Since both project participants and non-participants experienced an increase in the indicator, the DID estimate indicates a very small positive (1 percent) but insignificant impact on this outcome.

The results of the DID estimate using pooled data suggest that households that participated in any of the project activities had a statistically significant 6 percent increase in the **practice of washing hands after defecating.** In the baseline, 68 percent of the mothers/caretakers in the treatment households reported washing hands with soap after defecating compared with 92 percent in the endline survey. This compares to a change of 74 percent to 91 percent in the control group, although the panel data DID estimate does not corroborate this result. The results indicate that there were dramatic changes in the **other promoted hygiene behaviors** between the baseline and endline surveys, but these cannot be attributed to the project because the increases were similar across the control and treatment groups. This could have happened because the PSDW-HPP radio programs were nationwide and even though households reported not listening to the radio programs, they may have received similar messages from neighbors and community members who did listen to the messages. There is no way to isolate these spillover effects, but they do provide a potential explanation for the dramatic increase.

Several studies have noted that indicators of self-reported handwashing behavior have significant measurement errors. An indicator that does not have this problem is the interviewer-observed **location of soap.** The impact evaluation survey results indicate that participation in any of the project activities had a positive and significant impact on the practice of keeping soap near the toilet (11 percent increase) and a positive but marginally significant impact on the practice of keeping soap near the kitchen (4 percent increase). As expected, the project also had a positive and significant impact on the practice of keeping soap in at least one of these areas: the kitchen or the toilet (13 percent increase). The results of both the pooled data and the panel data analysis suggest that participation in the intensive community hygiene promotion program had a positive and significant impact on the practice of locating soap in at least one location. The magnitude of the increase was greater according to the pooled DID estimate (17 percent) than the panel data estimate (7 percent).

Even after proper washing of hands with soap, there can be a chance of contamination if **hands are not dried in a safe manner** (by either using a clean towel or air drying). Although using a clean towel would normally be considered safe, the definition of "clean" can be confused by a cloth that looks clean but is not actually clean or by a different understanding of what clean actually is. The DID estimate using pooled data suggests that participation in the project led to an increase in the percentage of mothers and caretakers who reported air drying their hands (5 percent), although the impact was just shy of the level considered significant (10) percent. The DID estimate using panel data suggests a higher magnitude of impact (a 9 percent increase) and also finds that participation in the intensive community hygiene promotion program had a positive and significant impact on the practice of air drying hands. Overall, it appears that the project did have a positive impact on the practice of air drying hands.

An important component of PSDW-HPP was to increase knowledge of and attitudes about safe drinking water and the correct treatment of drinking water. The pooled data DID estimate suggested that the project did not have a statistically significant impact on **knowledge of safe drinking water.** The results suggest that participation in any of the project activities did not change participants' perception that clear water is safe to drink or increase the percentage of mothers and caretakers who understood the correct reasons for diarrhea. The results suggest that for all these indicators the percentage of households that reported positive behavior change increased. That increase was also observed in the control group, however, suggesting that the increase was not attributable to the project.

Interestingly, the DID panel data estimate found that the project had a significant impact on the percentage of households that **reported treating their water.** These results indicated that the

project led to a 4 percent increase in the percentage of households that reported treating their water correctly, although the DID pooled estimate did not find this effect to be significant.

SPECIAL PROJECTS

NATIONAL BEHAVIOR CHANGE COMMUNICATION STRATEGY AND ACTION PLAN

UNICEF and the MOE approached PSDW-HPP to support the development of the NBCCS. The project prepared the NBCCS, which provided an overarching national strategy and conceptual framework, including a set of recommendations and considerations for a national-level communication campaign that would address basic behaviors related to water, sanitation, and hygiene. The NBCCS provided a framework to develop strategies for targeting more specific barriers to behavior change in different contexts around the country.

The development of the NBCCS involved extensive stakeholder consultation. Input was received from more than 100 stakeholders, including representatives from eight federal ministries and other agencies, government departments representing districts in all provinces and regions, nine civil society organizations, several international donors, the private sector, and national and local media. The PSDW-HPP team of BCC specialists initiated this consultation through a stakeholder consultative workshop in August 2009. The NBCCS was then developed and presented to the MOE in January 2010. The strategy was amended and presented as a final document in March 2010, which started the process of developing tailored strategies in the provinces.

UNICEF appointed the Rural Support Programmes Network (RSPN) to facilitate and develop consultative water, sanitation, and behavior change workshops across the provinces. Technical committees for BCC strategies were established in Punjab and KPK. In Sindh, Baluchistan, AJK, and the newly formed Gilgit-Baltistan, however, technical or sub-committees could not be established because of a lack of clarity in rules governing the devolution of powers to the provinces. With the help of RSPN, PSDW-HPP conducted provincial stakeholder workshops in KPK (on July 27, 2010) and Sindh (on July 30, 2010), and participated in UNICEF-organized initiatives in Punjab (on July 31, 2010). These meetings were supplemented by technical sub-committee sessions in KPK and Sindh, where outlines generated from templates prepared through stakeholder engagement were finalized. The development of provincial BCC strategies was slowed by the need to divert the UNICEF budget and re-assign personnel due to the flood and relief operations. For this reason, the strategies have not yet been finalized.

FLOOD RELIEF

Due to the unprecedented flooding in the summer of 2010, millions of people were exposed to contaminated drinking water, resulting in outbreaks of waterborne diseases. Since many of the affected areas were PSDW-HPP target districts, the project helped in the planned distribution of a total of 13 million PUR® water purification packets to help ensure that about 120,000 families affected by the floods would have access to safe drinking water. During the period of the contract, PSDW-HPP distributed around 4 million packets to 50,000 families. One packet of PUR, produced by Procter & Gamble (P&G), can purify 10 liters of contaminated water in less than 30 minutes. This response to the floods was funded by USAID and the U.S. State Department's Pakistan Relief Fund, with matching funds from P&G through its non-profit Children's Safe Drinking Water Program. PSDW-HPP used its network of NGOs, which were trained by Greenstar, to deliver PUR to communities and provide training on its use.

During September 2010, PSDW-HPP staff visited NGO partners in 12 of the 15 districts targeted for flood relief, to assess the on-the-ground situation. This enabled them to better design a training and implementation plan and to select flood-affected communities to target. After determining that some established camps were receiving treated water from other donors, project staff targeted informal groups camped on roadsides or remote camps that were receiving less donor assistance. By the time actual implementation took place, many of those affected by floods had returned to their villages and begun rebuilding or repairing their homes, but potable water was still an issue. For this reason, families who had returned to their villages were also targeted.

PSDW-HPP staff developed a training format and process for the NGO partners, based on realities present in the camps and knowledge that any behavior change, such as adoption of POU technologies, requires reinforcement. Project staff mentored NGO staff as they conducted a three-step process:

- *Step 1— Identifying the affected families.* NGO staff visited each family in their tent or house. Introductions were made, the activity was explained, and one woman from each household was chosen to attend the training. The woman selected was given a coupon to bring when NGO staff returned.

- *Step 2—Training.* NGO staff conducted a practical, interactive training session on how to properly use PUR sachets to purify water. Sessions were held with a maximum of 20 women in a tent or compound of one of the participants. During the 20 minute training, staff used flip charts developed in earlier phases of the project to teach key water and sanitation messages, including hand washing and use of other POU water technologies. After PUR was prepared, everyone was invited to drink the water. Upon presentation of their coupons, participants received commodities and hygiene educational materials.

- *Step 3—Making return visits.* NGO staff returned to the households two to three days after the training to assess whether or not the women trained were actually using PUR. If the women were using PUR, NGO staff asked questions and inspected the prepared water to assess whether they were preparing and storing it correctly. If the women were not using PUR, NGO staff determined why, answered questions, and often guided or observed the entire PUR preparation process.

NGO staff were met with great suspicion in certain locations. As one camp resident in Sindh stated, "First the waderas tried to drown us, and now you want to poison us with these sachets." The flood-affected families were open to learning about POU technologies and hygiene promotion messages, however, once they were provided with clear explanations of who the NGO and project staff were, that the assistance came from the American people, and that staff wanted to teach them how to make their water safe and prevent diarrhea.

PSDW-HPP and NGO staff heard many stories about the misuse of some POU technologies by flood-affected families. Some people thought that PUR powder was oral rehydration solution. In one camp, staff were told about a man who stirred it into a glass of water, drank it, became sick, and had to be hospitalized. Others thought PUR was powdered milk or drink since it was distributed with food packages. Others thought AquaTabs were aspirin. By following the three-step process (initial mapping, small group training followed by distribution of PUR and equipment, and follow-up reinforcement visits), NGO staff were able to avoid these misperceptions.

Most flood-affected families now know their water is unsafe. They are receptive to learning and using PUR, especially since PUR removes trace elements, including arsenic, which is a problem in many of the target districts. Although it needs to be formally evaluated, anecdotally the process appears to have been successful. As measured by visits to participating households two to three days after training, at least 90 percent had used PUR. For these efforts to be successful, the NGO partners had to focus on clarifying misperceptions and giving people the knowledge needed to use POU technologies correctly, not just on distributing PUR sachets and equipment. It took intensive technical mentoring and supportive supervision by PSDW-HPP project staff to communicate and reinforce this focus, but at the end of the project most NGO partners were following all steps of the process.

The "window of opportunity" provided to Greenstar and P&G by USAID during this flood relief activity needs to be sustained. Otherwise, all the foundational work described above will be lost. A sustainable model should be developed whereby USAID and P&G consider engaging the PSDW-HPP NGO partners and their trained staff to promote, distribute, and market PUR sachets through a mechanism that takes into account long-term growth and acceptable profit margins.

IV—IMPLEMENTING PARTNERS

PSDW-HPP implemented activities through NGO partners and through alliances with the private sector. In addition, the project contracted with private firms to conduct surveys and with media companies to develop materials to be used in the different hygiene promotion campaigns. This section describes how the project worked with the NGO partners and private sector companies that were key to the success of PSDW-HPP activities.

Local NGOs

PSDW-HPP provided grants to 51 local NGOs for implementation of project activities. A conscious decision was made to discourage large national NGOs so that the project could promote and strengthen district-level organizations. This approach was selected because the district-level NGOs remain in the districts and frequently interact with local communities, and because they have a better understanding of the needs, cultural values, and sensitivities of the local communities. Efforts were made to select local district organizations but, in cases where district organizations were not available or not capable enough to implement the project's activities, provincial organizations were engaged. In addition, the project found it important for project staff to visit the NGOs' offices, interview their staff, and review their records and accounting systems in order to verify and ascertain their managerial, technical, and financial capacity. Selected NGOs were given orientation on how to respond to the request for proposals.

PSDW-HPP provided guidance to the NGOs selected to receive grants, emphasizing the need to adhere to financial compliance rules and regulations. Other topics included the following: internal control assessments; identification, correction, and prevention of errors and mistakes; allowable vs. unallowable costs; avoidance of unallowable costs; proper documentation of allowable costs (to ensure that legitimate costs would not be disallowed due to lack of documentation); financial management; reporting formats and mechanisms; staff hiring; and workplan development.

PSDW-HPP grants and finance staff visited the NGO partners several times to audit their accounts. They taught the NGOs how to keep efficient accounting systems and improve compliance with project requirements. Further external audits were carried out for NGOs awarded grants of more than $25,000; during these audits, internal control weaknesses were discussed and recommendations for improvements presented. Throughout the project, NGO partners received periodic oversight and mentoring from PSDW-HPP's program, administrative, and M&E staff.

MONITORING AND EVALUATION OF NGO PARTNERS

PSDW-HPP monitored and evaluated the activities implemented by NGO partners. This was done through a monitoring and evaluation (M&E) unit that consisted of an M&E director and four M&E field coordinators. The M&E team developed templates for M&E and trained NGO partners to collect and report on field activities. All field data collected was processed in the project's main office in Islamabad. The M&E unit developed and maintained two types of systems: 1) an Internal Management Information System (IMIS) in which the project performance data was captured at the tehsil level (union council

level during the extension phase) and stored in Microsoft Excel spreadsheets, and 2) databases with the results of the baseline and endline surveys stored in Statistical Package for the Social Sciences (SPSS) format as received from the implementing contractor.

The following project activities were subject to M&E:

- community hygiene promotion
- school hygiene promotion
- capacity building
- PPP and sustainability
- NGO outreach (NGO names, addresses, contacts)
- district outreach (province, region, district, tehsil)
- filtration plant status
- Training-of-trainers (TOT) on capacity building
- TOT on water source protection plan
- TOT on school trainings
- TOT on community hygiene
- TOT on behavior change communication
- TOT on PUR packets

MONITORING AND EVALUATION DATA FLOW AND FORMS

Project progress data was collected through reports submitted by project implementers (both NGOs and private sector partners). The data collection process and forms were developed by the M&E team in collaboration with the technical teams. Implementing partners reported to the project on a monthly basis, providing data on regular and continuous project activities. The M&E team used a data entry process to monitor data consistency. If there were inconsistencies in the data reported in different forms, M&E coordinators called NGOs to verify the data reported in the forms. Field visits to the NGOs and trainings were also used for data verification.

The overall M&E framework was documented in the project's performance monitoring plan (PMP), which was updated annually. The project's PMP, which was the guiding document for the development of the M&E system, contained a description of the project, the project results framework, an explanation of how it fits within the framework of USAID/Pakistan, lists of indicators, and a description of the data collection mechanisms. The PMP had 12 outcome and impact indicators and 29 output indicators for the project. It was reviewed quarterly together with the project workplan submitted to USAID.

Figure 2 shows the M&E Data Flow Chart, which illustrates the main sources of data and the deadlines for submitting the data to the PSDW-HPP M&E unit. The data flow is described below:

1) NGOs completed and submitted reporting forms by the 5th of each month (except for forms that were submitted immediately after activity completion).
2) The hygiene promotion team reviewed the submitted forms and verified the data with the NGOs, if necessary. The hygiene promotion team provided verified completed data forms to the M&E unit on the 12th of each month.
3) The M&E unit entered the data from the forms and completed further verification of the data. The M&E unit produced a "red-flag table" that was distributed to the project directors along

with the NGO monthly report. When needed, the M&E unit used the data to produce quarterly and ad-hoc reports for USAID.

Figure 3 contains the M&E Responsibility Flow Chart, which documents how the red-flag table was used for project performance monitoring and decision making. Red flags were used as a way of identifying NGO-implemented activities that were not carried out according to project guidelines or targets. The procedures are described below:

1) The M&E unit produced a red-flag table that depicted NGOs' progress in meeting project implementation targets and guidelines. The NGOs that did not meet these targets and guidelines were denoted by a red flag.
2) The table was provided to the program directors, who verified if the red flag notations were related to the NGO's performance, could be explained based upon known circumstances, or were due to an exemption provided to a particular NGO. If there were legitimate reasons for an NGO to deviate from the targets and guidelines, the red flag was removed. The program director provided remarks in the red-flag table.
3) The completed and updated red-flag table was provided to the PSDW-HPP Chief of Party.
4) Payments to NGOs with no clear red flag were released.

MONITORING AND EVALUATION REPORTS

Regional M&E databases were updated monthly for each program component. The updated regional databases were linked into the project-level database, giving the M&E unit an opportunity to synthesize project performance in a comprehensive manner. Reports generated by the M&E unit varied in frequency and type. M&E output reports were generated each month for capacity building, community hygiene, and school hygiene programs for each of the 51 NGOs. These reports, provided to program units on a monthly basis, enabled managers to compare various activities within and across regions.

Monthly status reports. Separate monthly reports were generated for each project component, depicting the progress of each NGO at the tehsil or union council level. The monthly reports showed the performance of the NGOs during the reporting period, total progress to date, and progress with regard to total project targets. District and regional performance reports and project-level progress reports also were generated monthly for each project component. A separate report was generated each month to show progress against PMP output indicators. All these reports were disseminated to the hygiene promotion team, the capacity building team, the program director, the grants team, the Deputy COP, and the COP for effective program management and informed decision-making.

Quarterly progress reports. Quarterly progress reports were compiled separately for the districts and the FATA FRs. The quarterly progress reports documented project activities during the reporting quarter in the areas of capacity building, community hygiene, school hygiene, public-private partnerships, communication, information technology, security, finance/grants performance, and M&E. Quarterly progress reports for both the districts and the FATA FRs were submitted to USAID one month after the end of each quarter. In addition to the quarterly progress reports, the M&E unit updated fact sheets, slip sheets, portfolio reviews, activity worksheets, weekly reports on the FATA FRs, and monthly progress reports for USAID on demand.

Geographical information system. PSDW-HPP maintained a GIS. District, tehsil, and union council boundaries were drawn on digitized maps by the GIS specialist. Water filtration plants and water bodies

were also marked on digitized maps. Project data was uploaded for each tehsil in project districts, agencies, and FRs. Technical and social data were maintained separately on GIS-enabled water sources mapping for the FATA FRs. Data on the FATA FRs was shared regularly with the USAID FATA capacity building project through a web-enabled database.

Field visits. The M&E unit conducted regular monitoring missions to project field sites to validate and conduct spot checks on project activities. The team examined reported progress, photos, documentation of activities, and financial records, as well as relied on other means of verification. The M&E team participated in field-level activities to ascertain the qualitative aspects of the activity.

Figure 2 M&E Data Flow Chart

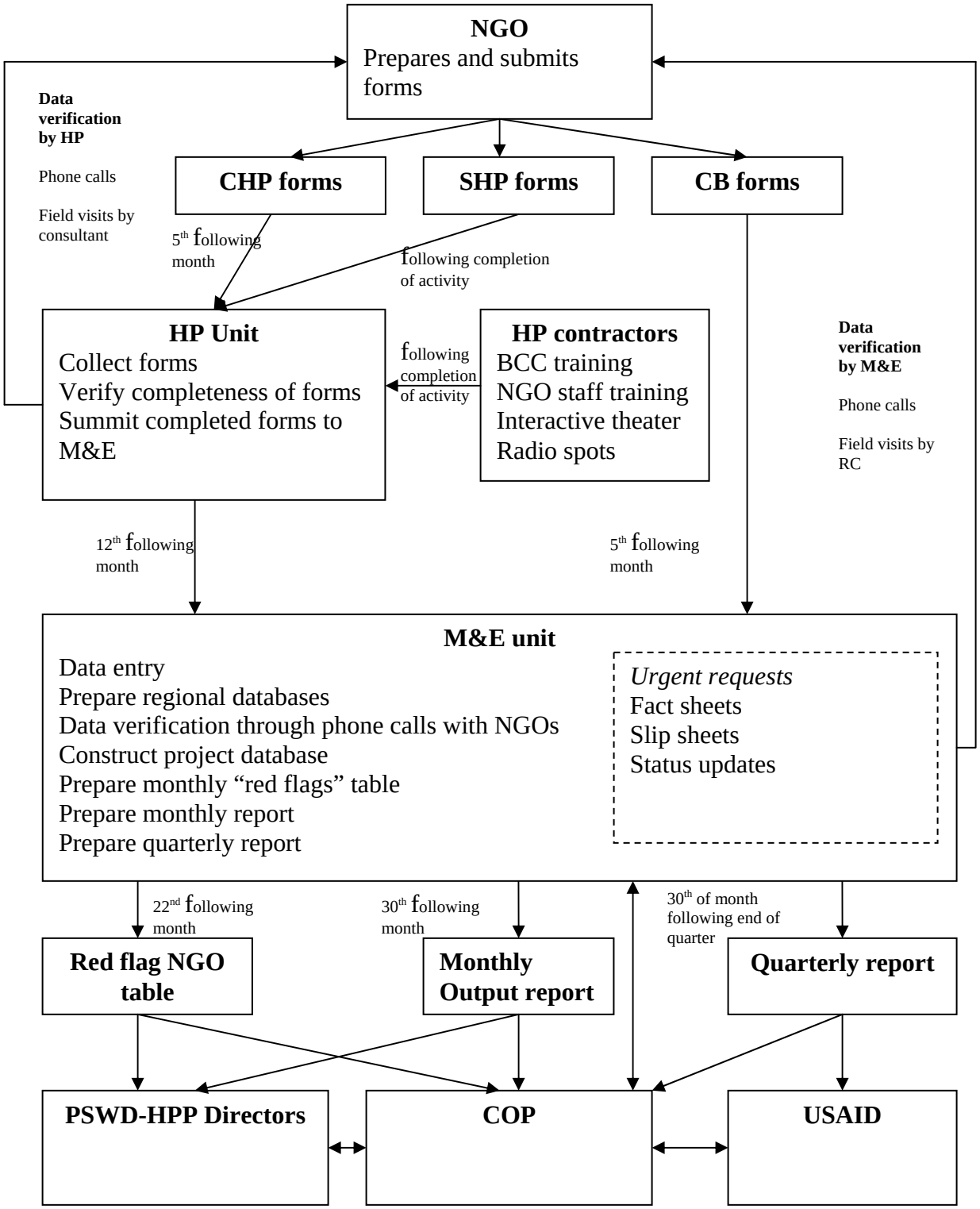
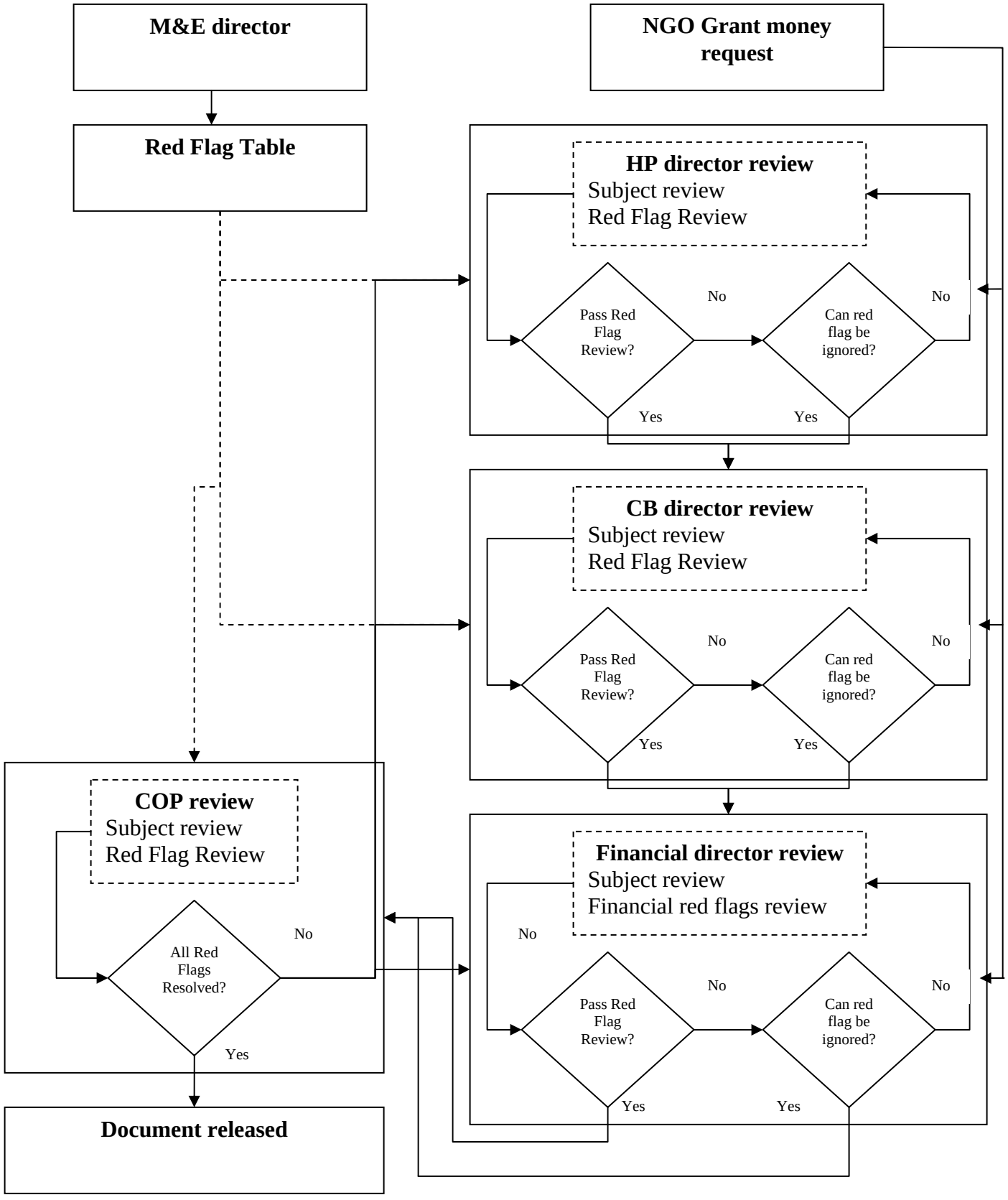


Figure 3. Responsibility Flow Chart



PUBLIC-PRIVATE PARTNERSHIPS

The project's overarching strategy for public-private partnerships (PPPs) was to bring private sector organizations under the umbrella of PSDW-HPP to leverage their strengths, expertise, and resources to actively contribute to the Millennium Development Goal of significantly reducing the incidence of diarrhea through safe drinking water and hygiene promotion. The project successfully conducted two roundtable conferences with the private sector; five MOUs were signed as a result of these activities. These PPPs had considerable success developing and disseminating communication materials, which have been extensively utilized by UNICEF, the MOE, their implementing partners, and local NGOs. Some of the partnerships pursued were with USAID Global Development Alliance partners, while others were with large local and foreign companies operating in Pakistan. Seventeen companies interested in a PPP participated in the first roundtable. Three MOUs were initially signed with three private corporations—Mobilink, Unilever, and Medentech. Mobilink expressed great interest in the project's goals and broadcasted hygiene messages designed by the project. Both Uniliver and Medentech expressed interest in partnering with the project to take advantage of the PSDW-HPP's NGO network and research on WASH knowledge, attitudes, and practices, which allowed these companies to expand future sales of their products. In turn, PSDW-HPP benefited from the soap and POU products provided by these companies, which complemented the hygiene messages delivered by the project. PSDW-HPP engagement with the private sector was instrumental in 1) expanding the private sector reach to rural areas, 2) directing corporate social responsibility (CSR) funding to project activities, and 3) bringing unprecedented partnerships with smaller NGOs and the public sector in Pakistan.

Mobilink, one of the main cell phone companies in Pakistan, broadcast three million free SMS messages during a six week period. Two specific messages were recurrently broadcasted during this period which were: "Wash hands with soap before eating and after using the toilet" and "Always drink safe water." This campaign stretched for six weeks across the 15 districts during the project's six-month extension period (October 1, 2009 – March 31, 2010), generating considerable feedback. It was estimated that the three million messages impacted an estimated 12 million Mobilink subscribers. The well-orchestrated, extremely successful campaign had an extensive reach and provided the project with excellent exposure in rural areas. Mobilink supported Global Handwashing Day in 2009 by sending a "Wash Hands with Soap Always!" message to 300,000 SMS subscribers across Rawalpindi district.

Medentech, the manufacturer of the POU product Aquatabs, and PSDW-HPP sponsored a pilot program to provide Aquatabs to 400,000 households in Okara and Khanewal Districts in Punjab and to Jamshoro and Sukkur Districts in Sindh. The project trained and subsidized sales staff and provided communication and marketing kits for Medentech staff to use with households. At the close of the pilot program, NGOs in all four pilot districts (Khanewal, Okara, Jamshoro, and Sukkur) successfully introduced Aquatabs in 14 tehsils and 28 union councils through the Community-Based Sales and Distribution (CBSD) pilot. Between April 15, 2009, and July 15, 2009, 184,979 treatment tablets were sold by the project's NGO partners through safe drinking water events and household education and sales activities. Print and mass media communications supported the interpersonal demand-generating activities. In the four pilot districts, 56 community-based organizations increased their outreach to hundreds of households.

At the end of the pilot program, the project worked with Saafwater, a distributor of Aquatabs, on a transition and scale-up plan. However, the results of the pilot were not uniform across the districts. Jamshoro was an outstanding success while off-take in Okara remained negligible. Households reported reservations about the cost, smell, and taste of the product. Although Aquatabs have worked well with internally displaced persons in Pakistan, PSDW-HPP evidence suggests that barriers exist to the product's acceptability at the household level in some districts. By the end of pilot program, NGO partners from three of the four districts were directly linked with the Medentech distributor in Pakistan, and the corporation assumed costs associated with marketing the tablets at the household level.

Unilever continues to be the most active and consistent public-private partnership formed under PSDW-HPP. The project's hygiene promotion component was supported by Unilever, and several collaborative interventions were undertaken. More than 30,000 schools and 150,000 children received Lifebuoy soap bars and ancillary materials such as stickers, copy-books, and stationery. At mother and father health promotion sessions in the community, participants—including religious leaders, influential community leaders, and the newly created voluntary water user committees—received educational posters and soap bars. During Global Handwashing Day, the project's partnership with Unilever generated an extensive media campaign. Simultaneously, the MOE sponsored P&G's Safeguard soap, which competed with Unilever's Lifebuoy soap. The big winner from this competition was the project's message, since both campaigns highlighted and disseminated messages on hand washing and drinking safe water.

Two additional partnerships were formed in 2009, one with Merck and one with Greenstar Social Marketing.

Merck provided water-testing kits to one NGO partner in each province. Water quality testing kits were instrumental in creating awareness about the importance of water quality treatment in preventing diarrheal diseases.

Greenstar Social Marketing, marketers of Procter & Gamble's PUR sachet, has been providing POU technologies in Pakistan since 2005. However, the company's focus remains on the six largest cities in the country. Greenstar's partnership with PSDW-HPP led to its first intervention in a rural community, promoting the PUR sachet for safe drinking water. With help from a local NGO, two communities were targeted in Rawalpindi district; this pilot program bore excellent results as users reported satisfaction with PUR. Subsequently, the NGO partner has engaged with Greenstar to expand outreach to communities in the entire district of Rawalpindi and to add two more districts.

LESSONS LEARNED AND RECOMMENDATIONS

- *The project found that successful relationships with the private sector required two things: 1) rapid achievement of the terms of the MOU that specified clear roles and responsibilities, and 2) continuous, ongoing communication between the project and designated people within the company.* PSDW-HPP had an excellent relationship with private sector partners when the corporate representative believed in the project's objectives and assigned sufficient human resources to implement the agreed-upon activities.
- *Engagement with the private sector should start early in the project.* Based on PSDW-HPP's experience, planning needs to be done a year in advance and confirmed at least one quarter prior to planned activities because of the advance timing needed for corporate budget planning cycles and approvals.
- *The project also found that it was important to be very clear and direct with the private sector in Pakistan, given corporate partners' skepticism about the project's ability to deliver on schedule and within budget.* Overall, the project found that when private sector firms were approached with clear proposals and objectives, they were interested in working with the development sector. In addition, it was important for the project to move quickly with the initial implementation of activities to overcome that skepticism.

ANNEX I Financial Report

Table 1 shows the budget for the task order contract with a total ceiling of $23,458,961 and Table 2 shows estimated expenditures at contract termination.

Table A-1- Task Order Contract Budget

	Technical Assistance	Grants	Total
Original Component	$11,006,999	$5,789,242	$16,796,241
FATA Component	$900,000	$300,000	$1,200,000
Cost Extension	$4,462,720	$1,000,000	$5,462,720
Total	$16,369,719	$7,089,242.00	$23,458,961

Table A-2- Estimated Contract Expenditures

Home Office[10]	$2,447,293	11%
Site Office[11]	$8,289,514	38%
Direct Costs[12]	$4,390,307	20%
Grants to Local NGOs	$6,822,239	31%
Total	$21,949,353	

[10] Home office costs include all labor at the home office, indirect costs and task order contract fee
[11] Site office costs include all labor at the site office in Pakistan, subcontractors, and indirect costs
[12] Direct costs include all site office costs, travel and per diem, media costs, and equipment

Annex II-Project Reports

Reports

1-A Qualitative Study on Hygiene and Safe Water Practices in Pakistan

2-Behavior Change Strategy (BCS) and Behavior Change Communication Plan (BCCP)

3-Capacity Building Strategy (CBS)

4-Baseline Report

5-CDWI Assessment by PSDW-HPP

6-Technical Review of Point of use and Community Water Treatment Technology

7- Aquatabs Product Acceptability and Willingness to Pay Study

8- Water Quality Mapping & Inventory of Communal Drinking Water Supply Sources in FATA

9- National Behavior Change Communication Strategy and Action Plan for Safe Drinking Water, Sanitation and Hygiene (NBCCS)

10-Endline Report

11- Literature Review – Knowledge, Attitudes, and Practices- Peshawar Town 1

12- Knowledge, Attitudes, and Practices- Peshawar Town 1

13- WASH Market Assessment Study

Manuals

Capacity Building
1-TMA Manual for PHE-WASA Staff
2-Training Manual for Community Members
3-Training Module for the Operators

Hygiene Promotion
1-BCC Hand Book
2- Community Hygiene Promotional Manual urdu CHP Urdu manual
3- HP material CHP manual English CHP manual English Annexes
4- HP material Generic BCC manual UDRU 3 Table of Content
5- HP material School HP training Teacher Activity Book Urdu

GIS-ATLAS

1- Water Resources Assessment of FATA

Annex III-List of NGO Partners

AJK									
No.	**Employee Name - Point of Contact**	**Position Title**	**Technical Areas of Implementation**	**Districts Covered**	**Organization**	**Office Address**	**Contact Numbers**		**Email**
1	M. Irfan Bashir	Manager	CB, SH, CH	Rawalakot	Help In Need	House, 285, Street # 3 G-8/2 Islamabad Ph: 051-2250139	051-2250139	Cell:0334-5152135	hin-org@cyber.net.pk
2	Syed Aftab Hussain Bukhari	Secretary General	CB, SH, CH	Bagh	Himalayan Rural Support Program (HRSP)	Gaghar Plaza Main Bazar Foreward Kahuta Tehsil Haveli Dist Bagh Ph: 0355-7209901 /058720-33507	058720-33507	Cell:0355-8126369	hrsp_org@yahoo.com
3	Dr Anis ur Rehman	CEO	SH	Neelum	Himalayan Wildlife Foundation (HWF)	1-Park Road F-8/1 Islamabad Ph:051-2610200-7, 2856981 Cell No.0300-5128938 Mumtaz Cell: 0301-507 7658 Dr. Zulfiqar Qazi	051-2610200-7	Cell:0300-8540471	mail@hwf.org.pk
4	Jamil Asghar Bhatti	CEO	CB, CH	Bagh	Lok Parya	House,139, Street,7 Margalla Town IJP Road Islamabad Ph: 051-2522297	051-2522297	Cell:0300-8562524	jamilasghar@yahoo.com
5	Jahanzeb Salik	President	CB, CH	Neelum	Salik Development Foundation (SDF)	Near DC Office Main Bazar Authmaqam Dist Neelum Muzaffarabad Ph: 058810-34238	058810-34238	Cell:0300-5940497	salik4@gmail.com

BALUCHISTAN									
No.	**Employee Name - Point of Contact**	**Position Title**	**Technical Areas of Implementation**	**Districts Covered**	**Organization**	**Office Address**	**Contact Numbers**		**Email**
6	Dr M Saleem Baloch	Executive Director	CB, CH	Tubat	Anjuman Falah-O-Bahbood AIDS Council (AFAC)	Opp NBP Main Road Turbat Kech Baluchistan Ph:0852-411218 / 0852-2856203	0852-411218	Cell: 0321-8123814	drsaleembaloch@yahoo.com
7	Syed Qurban Gharshin	Executive Director	CB, CH, SH	Jaffarabad	Balochistan Environmental & Educational Journey (BEEJ)	House: 32-D Samungali Housing Scheme Quetta Ph:081-2827740	081-2827740	Cell:03215900091	info@beej.org.pk
8	Attaullah Khan Kakar	Director	SH, PUR Distribution	Tubat, Jaffarabad	Gender & Reproductive Health Organization (GRHO)	Address: House No. 186/82-C Street 39, Jinnah Town, Quetta. Telephone: +92-81-, 2872129, Fax: +92-81-2842982 E-mail: genderbltn@gmail.com , gender_qta@yahoo.com	0812872129	Cell# 0300 / 0322-9386424	gender_qta@yahoo.com
9	Nasir Ali Sajid	Executive Director	CB, CH	Tubat	Makran Resource Center (MRC)	House No.5 Street No.3 Commissionery Road Turbat Baluchistan Ph:0852-413031 / 412057	0852-413031	Cell:0321-6094175	mrctubat@gmail.com
10	Babar Shah Khan	Chief Executive	CB, CH, PUR Distribution	Lasbela, Nasirabad	Participatory Integrated Development Society (PIDS)	414-D Smugli Housing Scheme Quetta Ph: 081- 2863587-8	081-2863587-8	Cell:0300-3841566 / 0300-3840676	ceo@pidsnpo.org

BALUCHISTAN									
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11	Abdul Haq Zoak	Program Manager	CB, SH, CH	Lasbela	Sangat Development Society Bela Lasbella	Main Rest House Road Bela District Lasbella Baluchistan Ph:0853-204879 / 0853-620748	0853-204879	Cell :0301-2021707 / 0333-2948415	sangat_lasbela2000@yahoo.com
12	Syed Ahmad Ali Shah	Executive Director	CB, CH	Jaffarabad	Social AID	House:324-M/B-2 Satellitetown Quetta Ph:081-2471273 / 2014434	081-2471273	Cell:0301-8383558 / 0300-9383558	ahmad@socialaid.org
13	Qazi Tahir Naeem	President	SH	Zhob	Society for Human Assistance and Development (SHAD)	NO.2 First Floor , Service Shoe Store M.A Jinnah Road Quetta Ph: 081-2835892	081-2835892	Cell:0300-3825562	shadinfo@msn.com
14	Sha Nawaz Yousafzai	President	CB, CH	Zhob	Sustainable Community Development Organization	5-4/100 Moti Ram Road Quetta Ph: 081-2025271	081-2025271	Cell:0300-9389487	scdo_qta@yahoo.com

KPK									
No.	**Employee Name - Point of Contact**	**Position Title**	**Technical Areas of Implementation**	**Districts Covered**	**Organization**	**Office Address**	**Contact Numbers**		**Email**
15	Tahir Maqsood	Manager Programme	SH	Battagram	Allai Development Foundation	Allai Dev Org Dist Battagram Ph:0997-310437 / 238638	0997-310437	Cell : 0333-5374849,0346-5708295	allaidevprog@gmail.com
16	Shad Begum	Executive Director	SH, Integrated Program, PUR Distribution	Upper Dir, Lower Dir	Anjuman Behbood-e-Khawateen (ABKT)	House No. 2783, Afzal Street, Afzal Abad University Town Peshawar. Phone No.091-5700240.	091-5700240	Cell:0346-9842156 - 0346-6339610	abkt07@gmail.com
17	Faiz Ur Rehman Mashal	Executive Director	CB, SH, Integrated Program, PUR Distribution	FR Bannu / Lakki, Bannu , D.I.Khan	Community Development Program (CDP)	House No.365/C Muhallah Bhatai Inside Kachehary Gate Bannu City NWFP Ph: 0928-620193 /505798/ 621138	0928-620193	Cell:0333-9723099	cdp_org@hotmail.com
18	Faiz Mohammad Fayyaz	Chief Executive	CB, SH, CH, Interaged Program.	Orakzai / Mohmand, FR Peshawar	Community Motivation & Development Organization,(CMDO)	40-C Sahabzada Abdul Qayyum Road University Town Peshawar Ph:091-5851341 / 5703614-6	091-5851341	Cell:0300-8580798	cmdopak@yahoo.com
19	Akbar Zeb	Executive Director	CB, SH, CH, Integrated Program	Swat	Environmental Protection Society (EPS)	Darbar Saidu Sharif Swat Ph:0946-9240254 / 721062 Environmental Protection Society (EPS) Plaza 2000, I-8 Markaz, Islamabad Phone: (+92) 51 4861172 Fax: (+92) 51 4861173 Mobile: (+92) 333 8878657	051 4861172	Cell:0333-8878657	info@eps-swat.org

KPK								
No.	**Employee Name - Point of Contact**	**Position Title**	**Technical Areas of Implementation**	**Districts Covered**	**Organization**	**Office Address**	**Contact Numbers**	**Email**
20	Nawaz Khan Afridi	Executive Director	CB, SH, CH, Integrated Program	Khyber / FR Peshawer	Kher Khegara Tanzeem (KKT)	H# 193 , St# 8 Sector N-2,Phase-4 Hayatabad Peshawar Ph: 091-5811983	091-5811983 Cell:0346-5353535	kktnwfp@brain.net.pk
21	Zia Ullah Khan Bangash	President	CB, SH, CH, Integrated Program	FR Kohat	Kohat Area Development Organization	H.No.158, Sec#1, Opp: Hockey Ground KDA Kohat Ph:0922-522621/9260007	0922-522621 Cell:0333-9618895	kadokohat@gmail.com
22	Zia Ur Rehman Farooqi	Program Manager	CB, CH	Kohistan	Kohistan Development & Environmental Council (KDEC)	Hotel Prince Main Bazar Besham Ph:0996-400318 / 400147/ 400327	0996-400318 Cell:0345-9482973 / 0345-9003076	kdecorg@yahoo.com
23	Azam Khan	Executive Director	CB, SH, CH	Shangla	LASOONA: Society for Human &Natural Resource Development	Royal Campus Murghzar Road Saidu Sharif Swat Ph:0946-9240071/2 / 721421 / 723901 House 455, St.No.68 G-11/2, Islamabad Phone. 51-2291281	0946-9240071 Cell:0345-94544999	lasoona@gmail.com
24	Sirmir Khan	Chairman	CB, SH, CH, PUR Distribution	Buner	Research & Awareness for Human Development Benefits and Rights (RAHBAR)	Sanigram Road Near Govt Degree College Dagagr Sawari Dist Buner Ph:0939-404251 / 555677	0939-404251 Cell:0333-9842808	rahbarbuner1@gmail.com

KPK									
No.	**Employee Name - Point of Contact**	**Position Title**	**Technical Areas of Implementation**	**Districts Covered**	**Organization**	**Office Address**	**Contact Numbers**		**Email**
26	Muhammad Tariq	Chief Executive	CB, SH	Battagram / Kohistan	Social Action Bureau for Assistance in Welfare and Organizational Networking (SABAWON)	House No.230 Street No.4 Sector H-I Hayatabad Peshawar Ph:091-5810424 / 5815793	091-5810424	Cell:0300-8583519	info@sabawon.org
27	Abdul Wakeel	Executive Director	CB, SH, CH	Mansehra / Muzaffarabad	Society for Sustainable Development (SSD)	House:207,St:9 Sector H-1 Phase,2 Hayatabad Peshawar Ph: 091-5813613	091-5813613	Cell: 0300-9003181	ssdpesh@yahoo.com
28	Abid Hussain	Chief Executive	CB, SH	Kurram Agency	Spinghar Rural Development Organization (SRDO)	Nasir plaza Flat No.1 Zeran Road Parachinar Khurram Agency Ph:0926-310763	0926-310763	Cell:0300-5658855	srdopcr@yahoo.com
29	Asad Ali Qureshi	Chief Executive	CB, SH, CH, Integrated Program.	Mohmand / Bajour / N Waziristan, Peshawar	Support agency for Rural and Human Associations Development (SARHAD)	Gilani House, Gilani Street, Arbab Avnue, Tehkal Payan, Jamrud Road, Peshawar, NWFP Contact: 091-5843426, 7107211	091-5843426	Cell:0333-9155098	sarhad_pak@yahoo.com
30	Fahim Iqbal	Executive Director	CB, SH	FR Tank / FR D.I Khan	Veer Development Organization (VDO)	House No.2 Opposite Frontier Reserve Police Office Nisar road, Dera Ismaile Khan. Ph # 0966-731507 / 718378	0966-718378	Cell:0300-5792959 / 0321-9603759	veer@brain.net.pk

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31	Roqia Begam	President	CB, CH, Integrated Program, PUR Distribution	D.G Khan	Al-Qaim Women Development Organization (AQWDO)	House: 355,Block -V, DG Khan Ph:064-2470072 / 2468951	064-2470072	Cell:0301-7586707	aiqaimorg@yahoo.com
32	Mubarak Ali Sarwar	President	CB, CH, Integrated Program, PUR Distribution	Gujrat / Okara / Lahore, Rajanpur, Multan	Association for General Awareness and Human Empowerment (AGAHE)	House No 3, Block A Lalazar Colony Phase II Raiwand Road Lahore Ph:042-5291211	042-5291211	Cell:0333-4354011	agahepk@yahoo.com
33	Lubna Hashmat	Chief Executive Officer	SH	Rawalpindi	Civil Society Human and Institutional Development Programme (CHIP) Islamabad	Plot No 5 , Street No 9, Fayyaz Market G-8/2 Islamabad Ph :111-111-920	111-111-920	Cell : 0301-8547307	lubna@chip-pk.org
34	Shaista Khalid	Executive Director	CB, SH, CH, Integrated Program,	Lahore / D.G Khan, Bahawalpur	Community Support Concern	319-4-D / 1 Green Town Lahore Ph:042-5123623 / 5120410	042-5123623	Cell: 0333-4257920	cscpk@brain.net.pk
35	Abbas Gondal	President	CB, CH	Gujrat / Rawalpindi	Friends Foundation	House:974 Street: 27, I-10/4 Islamabad Ph: 4444394 / 5871980 Fax: 4444395	051-4444394	Cell # 0321-5011333	friendfoundation@hotmail.com

PUNJAB									
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36	Rana Shafiq Ur Rehman	President	SH	Okara	Green Circle Organization (GCO)	House No 202 Sector 1c1 Township Lajna Chowk College Road Lahore Ph:042-5146042	042-5146042	Cell # 0333-4232010	gco.islamabad@gmail.com
37	Aftab Ahmad	Executive Director	CB, CH	Rawalpindi	Human Resource Development Society (HRDS)	House,117, St, 46, I-8/2 Islamabad Ph:4433752 / 4433754	051-4433752	Cell : 0333-5295258	hrdsociety@yahoo.com
38	Dr Qasier Javaid	Chairman	CB, SH, CH, Integrated Program	Khanewal, Multan	Pakistan Lions Youth Council (PLYC)	11 Civil Lines Khanewal Ph: 065-2553494 /2008786	065-2553494	Cell:0333-6212786	plycngo@hotmail.com
39	Farzana Ali Shah	Manager	CB, CH	Khanewal	Social Development Foundation	Block 12 House, 52, Street,3 Khanewal Ph:065-2556789 / 2013515	065-2556789	Cell:0301-7595157	sdfngo@hotmail.com
40	Col R. Muhammad Sadiq	President	CB, SH, CH	Khushab	Society for Human Empowerment & Rural Development (SHER)	Mitha Tiwana Tehsil & District Khushab Ph:0454-730203-4 Islamabad off :2206023-6	0454-730203-4	Cell:0344-8525252 / 0334-5252525	sher_khushab@hotmail.com

SINDH									
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41	Dr Sharaf Ali Shah	Executive Director	CB, CH, Integrated Program, PUR Distribution	Sukkar, Shikarpur, Larkana	Bridge Consultant Foundation	Nimera Terrace Ground Floor Behind UBL Plaza Milara Road Sukkar Sakkar Ph:071-5623677	071-5623677	Cell# 0300-9260887	bridgeresearch_k@yahoo.com
42	Manzoor Jamali	President	SH	Larkana	Community Development Council (CDC)	Jamali Colony Bhan Sayed Abad Tehsil Sewan District Jamshoro Ph:0254-660809	0254-660809	Cell#0333-7062270 /0300-3274221	cdc.sindh@gmail.com
43	Maqbool Ahmed Mashori	President	CB, CH	Larkana	Ghazi Social Welfare Association	House No.C-889/1 Opposite Honda Showroom Station Road Dari Mohalla Larkhana Ph: 074-4059371 / 4053337	074-4059371	Cell: 0333-7563355	gswa_lrk_sindh@yahoo.com
44	Nazir Ahmaed Ujjan	Chief Executive	CB, CH, Integrated Program, PUR Distribution	Khairpur, Sukkur	Goth Seengar Foundation (GSF)	Butro Muhallah Khairpur Sindh Ph:0243-553846 / 621049	0243-553846	Cell:0300-8316137	gsfkhp@yahoo.com
45	Muhammad Aslam Lakhiar	President	CB, CH, Integrated Program	Larkana / Dadu	Goth Sudar Sangat Aghmani (GSSA)	Buriro House Theba Road P.O & Town Mehar District Dadu Sindh Ph:025-4730530	025-4730530	Cell:0300-3255801 /0344-3888564	gssa67@yahoo.com

SINDH									
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46	Sadiqa salauddin	Executive Director	SH	Khairpur	Indus Resource Center (IRC)	2-B Plot No.13-C,37th Commercial Street Toheed Commercial Area D.H.A Phase-5 Karachi Ph:021-5822239 / 5838690	021-5822239	Cell:0300-2637305	irc@hyd.paknet.com
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Annex IV- Performance Management Plan Tables

Sr. No.	PMP Community Hygiene Output Indicators	Targets	Regular (Oct07-Sep09)	No Cost Ext (Oct09-Mar10)	Total (Oct07-Mar10)	% achieved
1	Number of people reached by HP activities in target districts	209,000	660,584	116,077	776,661	372
2	Number of partner NGOs trained by project (HP-Community Program)	31	35	9	44	142
3	Number of partner NGOs' staff trained by project (HP-Community Program)	230	290	150	440	191
4	Number of persons in channels (maulvis, physicians, and filtration plant personnel) trained by NGOs	2,760	3,819	1,626	5,445	197
5	Number of NGO/CBO/FBO organization staff trained by partner NGOs in hygiene promotion	400	3,951	-	3,951	988
6	Number of women volunteers trained for HP dissemination	1,500	2,097	1,380	3,477	232
7	Number of people trained from NGOs in Behavior Change Communications	100	138	-	138	138
8	Number of grant budgets awarded	67	67	-	67	100
9	Number of radio spots aired	66,000	130,580	12,011	142,591	216
10	Total air time of radio spots (minutes)	48,000	73,500	6,532	80,032	167
Community Material distributed by NGOs						
11	Number of materials by type printed and distributed by NGOs (HP Community Program)	**305,750**	**309,072**	**85,811**	**394,883**	**129**
11a.	ID card holders for Fathers	70,000	66,232	68,311	134,543	192

Sr. No.	PMP Community Hygiene Output Indicators	Targets	Regular (Oct07-Sep09)	No Cost Ext (Oct09-Mar10)	Total (Oct07-Mar10)	% achieved
11b.	Flip charts for men and women	1,250	1,502	255	1,757	141
11c.	Calendar	1,500	3,540	2,700	6,240	416
11d.	Filtration plant invitation cards	25,000	18,852	-	18,852	75
11e.	Recognition certificates	140,000	139,086	-	139,086	99
11f.	Desktop reminder for maulvis	4,000	3,273	3,187	6,460	162
11g.	Posters (soap, water, plant)	50,000	60,193	7,376	67,569	135
11h.	Danglers	14,000	16,394	3,982	20,376	146

Sr. No.	PMP Output Indicators School Hygiene	Targets	Regular (Oct07-Sep09)	No Cost Ext (Oct09-Mar10)	Total (Oct07-Mar10)	% achieved
1	Number of schools trained in hygiene promotion activity	21,000	28,779	1,796	28,779	137
2	Number of school teachers trained in hygiene promotion activity	24,000	28,851	1,797	28,851	120
3	Number of schools implementing hygiene promotion activities	27,000	28,779	1,796	28,779	107
4	Number of students completing the hygene promotion activities (at least 80% of the program)	393,000	354,012	27,252	381,264	97
5	Number of government officials trained in hygiene promotion for schools	750	714	48	714	95
6	Number of partner NGOs trained by project (school program)	28	24	9	33	118
7	Number of partner NGO staff trained by project (school program)	250	278	34	312	125
8	Number of grants		28	-	28	
9	**School material distributed by NGOs**	**830,000**	**788,218**	**72,046**	**860,264**	**104**
9a.	Calendars	400,000	409,113	36,903	446,016	112
9b.	Monitoring sheets	400,000	354,012	33,462	387,474	97
9c.	ID card holders for teachers	30,000	25,093	1,681	26,774	89

S. No.	PMP Output Indicators - Capacity Building	Target	Regular (Oct07-Sep09)	No Cost Ext (Oct09-Mar10)	Total (Oct07-Mar10)	% achieved
1	Number of government technical staff trained on operation and maintenance of filtration plants	150	313	0	313	209
2	Number of government staff trained on financial planning, mobilizing for sustainability, models for cost recovery, and partnership with private sector	150	346	0	346	231
3	Number of NGOs/COs members trained on community participation and operation and management of water filtration plants	300	736	0	736	245
4	Number of water quality tests conducted	600	767	44	811	135
5	Number of study tours conducted on community based management system, water treatment facilities, and associated laboratories for water quality testing.	1	1	1	2	200
6	Number of grant budgets awarded	41	41		41	100
7	Number of household technologies and materials analyzed for market feasibility	3	3		3	100
8	Number of water user committees formed/formalized		132	18	150	
9	Number of MOUs for cost recovery models signed with TMAs/PHEDs, WUCs, and NGOs			18	18	
10	Number of cost recovery models piloted	2		1	1	50
11	Number of water source protection plans developed	22		22	22	100
12	Number of TMA/PHE, WUCs, and NGOs staff trained in water source protection			25	25	

Sr. No.	PMP Output Indicators (FATA - School)	Target	Regular (Oct07-Sep09)	No Cost Ext (Oct09-Mar10)	Total (Oct07-Nov10)	% achieved
1	Number of schools trained in hygiene promotion activities		2,299	1,113	2,299	
2	Number of school teachers trained in hygiene promotion activities		2,301	1,115	2,301	
3	Number of schools implementing hygiene promotion activities. 3,000 school implemented the program twice (once in year 2008 and again in 2009)		2,299	-	2,299	
4	Number of students completing the hygiene promotion activities (at least 80% of the program)		34,871	15,268	50,139	
5	Number of government officials trained in hygiene promotion for schools		47	22	47	
6	Number of partner NGOs trained by project (school program)		7	3	10	
7	Number of partner NGO Staff trained by project (school program)		49	29	78	
8	Number of grants		12	-	12	
9	**School Material distributed by NGOs**		**71,288**	**33,169**	**104,457**	
9a.	Calendars		35,185	17,287	52,472	
9b.	Monitoring sheets		34,871	14,886	49,757	
9c.	ID card holders for teachers		1,232	996	2,228	
10	Number of radio spots aired		25,399	-	25,399	
11	Total air time of radio spots (minutes)		11,855	-	11,855	
Sr. No.	**PMP Output Indicators (FATA-Capacity Building)**	**Target**	**Regular**	**Extension**	**Total**	
1	Number of people in target areas with access to improved drinking water supply as a result of USG government	90,000		-	-	
2	Number of treatment plants meeting drinking water standards in Clean Drinking Water Initiative target districts	65		-	-	
3	Number of community organizations formed/ mobilized that oversee the functioning of water plants	65	37	-	37	57

No.	Community Hygiene Output Indicators-Extension Period (Apr-Nov 2010)	PMP Targets	Achieved	% achieved
1	Number traditional birth attendants who received orientation		7,494	
2	Number of maulvis who received orientation		7,318	
3	Number of volunteers trained on BCC material			
	Male		5,609	
	Female		7,155	
4	Number of community health workers trained in midwifery		100	
5	Number of NGOs trained in CLST		18	
6	Number of NGO staff trained in CLST		40	
7	Number of interactive theatre performances conducted in communities		36	
	Printing			
8	Key BCC material printed/reproduced	2,000,000	2,772,750	139

ANNEX V Success Stories

TURBUT, BALOCHISTAN

On a Tuesday morning, the blazing sun is rising high when Fahmida Qadir lifts her jerry can and sets out for the nearby filtration plant to fetch water. Fahmida, a volunteer for the project, used to spend most of her time at home caring for one of her five children because they so often used to be sick with diarrhea. Although she receives water directly to her home from the tube well, she transports her drinking water from the filtration plant in Singhanisar because it is clean. "Now my children rarely fall ill, allowing me enough time for my volunteer work and to sew clothes for my family and other women," she said. Fahmida said that although it takes time to reach the filtration plant in Singhanisar, the idea of getting clean drinking water for her family relieves the stress that occurs while fetching it back home. The assurance that she is getting clean drinking water for her family makes it worth the effort.

TEHSIL SHERANI, DISTRICT ZHOB, BALOCHISTAN

"My family used to drink water from a nearby pond where the animals also used to drink water, but with the passage of time my children certainly suffered from diarrhea and other diseases from water," said Naseem Jan, a 35-year-old village grocer and father of three under the age of five. "Due to this mess, I used to spend more than half of my income on the illnesses of my family, and I had to bear the loss of income due to times I couldn't open my shop. One fine morning, I attended a session on community hygiene organized by Sustainable Community Development Organization [an implementing partner of PSDW-HPP], and there I learnt the importance of hand washing with soap before taking food and different methods of water purification at home. Water purification through sunlight in transparent plastic bottles is a very cheap and convenient method. After adopting these preventive measures, I know that my family is safe from diarrhea and other diseases. Soap is not costly for the life and health of my family. I believe soap is a necessary element for a healthy life. Now I spread the message of using soap for hand washing to my customers as well. Now I and my family only use the purified water and do not forget to wash hands before taking food."

UNION COUNCIL SHAHKOT, TEHSIL ATHMAQAM AT DISTRICT NEELUM, AZAD JAMMU KASHMIR

Naseem Bibi, a 35-year-old mother living in Mohullah Plung, shares her experience. "I was born, raised, and married in the same village. I always saw people suffering from diarrhea and sometimes even dying, especially small children. All my children suffered [from diarrhea] two to three times a month. I had already accepted that children naturally suffer from diarrhea and slowly improve as they grow older. Currently, I have two children under the age of five years and three are school going. I was kept too busy with small children, cleaning and helping them since they were often sick one after the other. I could hardly sleep and felt sick and tired. We spent lots of money visiting doctors and buying treatment for diarrhea. Diarrhea among my children is now an old story. Although the number of soap pieces used in my house has increased, I have not visited a doctor in past six months. I feel my life has changed since I attended that [hygiene promotion] session. I am now telling this story to every mother of my village and praying for the long life of the project."

TEHSIL SUJAWAL, DISTRICT THATTA, SINDH

Forty-year-old Muhammad Ibrahim, a small shopkeeper in Belo Village in Sindh, was worried for his children's health when he often saw the neighbors' kids suffering from acute diarrhea and gastro infections. "Seeing them ill made me upset and one day my own daughter fell prey to this disease," he said. "I was arranging the newly arrived utilities in my shop when I was informed about 'Pari's' condition. She was suffering from diarrhea." Ibrahim's daughter recovered soon, but that didn't place his mind at ease. "The thought of Pari's illness made me fret sometimes even after she recovered until one day when I attended the community hygiene session organized by the Women Industrial Social and Educational Society Thatta [an implementing partner of PSDW-HPP]. The hygiene promoters from the partner NGO demonstrated proper hand washing with soap before the community members and emphasized the need to boil water before drinking to eliminate harmful bacteria. This practice helps people reduce their chance of falling prey to diarrhea and other waterborne illnesses. "Not only do we use boiled water for drinking now, but we make hand washing more regular for my family," he said. "I have built two hand washing places in my house."

Ibrahim's wife Zahra said, "I do not let my children or my husband take their meal without washing their hands properly and air drying them. I thank God Almighty, when I see my son and daughter healthy and rejoicing. Mothers have a role to play in the robust lifestyle of a family. Just like my mother was special to me, I am special to my kids because the health of my loved ones is in my hands."

TEHSIL JOHARABAD, DISTRICT KHUSHAB, PUNJAB

Gul Asghar, a farmer and father of two children under the age of five years, said, "Thanks be to God, I'm not all that poor, but I hold my ignorance responsible for the poor health of my two kids in the past. Our religion, Islam, teaches us that cleanliness is half faith, and we forget that. Isn't that worse kind of ignorance? I go to the nearby water filtration plant every other day, if not daily, to fetch our drinking water. I've made that my routine since I attended a group [hygiene promotion] session last winter [conducted by an NGO hygiene promoter]. As for hand washing, my wife is leading the battle against germs on that front." Gul Asghar believes that the project's staff is earning their way to heaven by contributing significantly towards a noble cause. "Both of my kids, in general, and my daughter Saira, in particular, were frequently sick from diarrhea before I attended that [hygiene promotion] session and learned what parents can to do to prevent diarrhea in their children," he added. "Honestly speaking, good hygienic practices have not only resulted in permanent disappearance of diarrhea from our home, but the better overall health of both the kids."

TEHSIL AUTHMAQAM, DISTRICT NEELUM, PUNJAB

Mr. Shahid Zaman, 26, is resident and shopkeeper of Authmaqam and has a two-year-old daughter. He is supporting project activities by hanging a dangler in his shop to remind his customers to buy soap. Shahid Zaman said, "I have run this shop for 12 years. I have very good business, and my shop is famous among the other shops and communities here. I sell a variety of household food and non-food items in my shop, including soap. Since I attended the fathers' session and I hung the dangler, the sale of soap has dramatically increased. Even people who have not attended the [hygiene promotion] session come and ask about the dangler. That gives me the opportunity to explain. If you use soap while washing your hands, especially at critical times, you can protect yourself and your children from diarrhea and many other diseases. Before PSDW-HPP came to this place, I sold two dozen [bars of] soap per month. Last month I sold 19 dozen [bars] of soap."

SINDH PROVINCE

Once a week Daad Muhammad packs up his donkey cart with jerry cans and plastic water bags and travels from Sheetam, his small village in Pakistan, to a water filtration plant five kilometers away to get clean water for his family. "We used to get water at home from a tube well," Muhammad said. "But slowly and gradually that water at home became salty and my children started falling sick." When Muhammad's children fall sick from diarrhea, he finds it difficult to pay for doctors on his low income. "As we found out (about the importance of clean drinking water), we stopped drinking that water. I have to travel miles to get my bags filled with water," said Muhammad. "But even with this blistering sun and sandy winds, it's worth the effort. I'm the only breadwinner for my family of seven. With my children now living a healthy life, life is so fulfilling."