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# WATER, SANITATION AND HYGIENE ENTERPRISE DEVELOPMENT (WATERSHED) MID-TERM EVALUATION REPORT



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SEPTEMBER 2011

This publication was produced for review by the United States Agency for International Development. It was prepared collaboratively by USAID staff and Tetra Tech ARD.

This report was prepared for the United States Agency for International Development, under Contract No. EPP-I-00-04-00019 01/ AID-OAA-T of the Integrated Water and Coastal Resources Management IQC II (Water II IQC) as a work order under the Quick Response Technical Assistance Task Order.

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## **DISCLAIMER**

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



# ACKNOWLEDGEMENTS

The Evaluation Team wishes to thank the many individuals who generously provided their time to meet with us and share their valuable insights, observations, and recommendations. WaterSHED is a complex, multi-country and multi-sectoral project that requires constant attention and focused management. In particular, we appreciate the project staff, both past and present, and implementing partners who took valuable time away from their project responsibilities to answer our many questions, clarify our misunderstandings, and provide fresh perspectives in a frank and open manner. These individuals and organizations recognize the challenges and limitations of implementing WaterSHED activities and transparently and candidly communicated them to us and the Regional Development Mission for Asia.

We would like to recognize and thank the WaterSHED staff writ large and their implementing partners and associated businesses for helping us to more fully understand and appreciate the range of market-based modalities for the provision of water, sanitation and hygiene products and services that make up this complex project.

We thank representatives from the donor community; the many nongovernmental organizations dedicated to the provision of suitable water and sanitation facilities to populations in need; USAID and Department of State officials in Vietnam, Cambodia and Laos; and private sector companies in these countries for their interest and support of WaterSHED, and for sharing their thoughts with us.

Extra special thanks are due to Kaida Liang, WaterSHED Acting Chief of Party, for her briefings, guidance and support in coordinating and scheduling the many meetings and interview in the three focal countries. She, along with Geoff Revelle and his team at WaterSHED-Cambodia, made extensive logistical arrangements for the Evaluation Team in Laos, Vietnam, and Cambodia that allowed us to maximize information collection during the time allotted for site visits.

Last but not least, thanks to Saengroaj Srisawaskraisorn, the USAID Agreement Officer's Technical Representative (AOTR) for WaterSHED, who guided the process from start to finish.

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# ACRONYMS

ADB	Asian Development Bank
AMRET	Credit in Rural Areas
AOTR	Agreement Officer's Technical Representative (USAID)
CSR	Corporate Social Responsibility
DAI	Development Alternatives, Inc.
EMWF	East Meets West Foundation
FY	Fiscal Year
GDA	Global Development Alliance (USAID)
GIFT	Global Institute for Tomorrow
GIS	Geographic Information Systems
IDE	International Development Enterprises
IDEO	Innovation, Design Engineering Organization
IFC	International Finance Corporation
IR	Intermediate Result
IVA	Independent Verification Agent
MDG	Millennium Development Goal
MFI	Microfinance Institution
MSME	Micro, Small and Medium Enterprise
NGO	Nongovernmental Organization
OBA	Output-Based Aid
PATH	Program for Appropriate Technology in Health
PSI	Public Services International
RDMA	Regional Development Mission for Asia (USAID)
REO	Regional Environment Office (USAID/RDMA)
RWSS	Rural Water Supply and Sanitation
SNV	Netherlands Development Organization
SME	Small and Medium Enterprise
SO	Strategic Objective
SOW	Statement of Work
UNC	University of North Carolina at Chapel Hill
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development

USG	United States Government
VWU	Vietnam Women's Union
WASH	Water, Sanitation and Hygiene
WaterSHED	Water, Sanitation and Hygiene Enterprise Development Project (USAID)
WHO	World Health Organization
WSP	Water and Sanitation Program (World Bank)
WTO	World Trade Organization

# EXECUTIVE SUMMARY

In the early 2000s, leading global stakeholders in the water, sanitation and hygiene (WASH) sector, including the U.S. Agency for International Development (USAID), began looking for innovative ways to engage the private sector in the provision of WASH products and services required to support key hygiene behaviors with proven health benefits. The private sector has the potential to become leaders in the promotion of the correct, consistent and sustained use of commercial products and services to generate sustainable markets for them and to maximize their public health impact. The private sector can apply their commercial marketing expertise to make products and services available, affordable, and attractive to consumers so that they will (1) more frequently safely store and treat drinking water at the point-of-use, (2) practice optimal handwashing methods and frequency, and (3) dispose of human feces in a sanitary manner.

In 2008, when USAID's Regional Environment Office (REO) in the Regional Development Mission for Asia (RDMA) was allocated water funds under the Water for the Poor Act, the REO became interested in complementing its regional work in water supply and with municipal utilities by including a component addressing households and supporting health impact from WASH investments. RDMA and the University of North Carolina at Chapel Hill (UNC) jointly designed a Global Development Alliance (GDA) to test the hypothesis that the private sector can play a pivotal and positive role in bringing WASH products and services to scale in lower-income markets in the Mekong region, with initial country-based activities in Cambodia, Vietnam and Laos. A Cooperative Agreement was signed in September 2008 with US\$8.5 million in USAID funding and a requirement of at least a 1:1 match from UNC and its partners. The resulting Water, Sanitation and Hygiene Enterprise Development (WaterSHED) Project was designed to:

- Develop, test and implement financially sustainable business models for delivering effective and affordable WASH products and services;
- Strengthen and leverage the capacity of local entrepreneurs to deliver WASH products and services sustainably and profitably;
- Assess and document the ability of commercial enterprises to increase the sustained and proper use of WASH products and services; and
- Collaborate with WASH partners through multiple platforms to develop marketing and other strategies and tools for scale-up and replication of public-private mechanisms focused on commercialization of products and services.

This document details the findings of a mid-term evaluation conducted in May 2011. The objectives of the evaluation were to review the performance of UNC by:

1. Assessing program performance and effectiveness against stated goals, objectives and performance targets, in particular the regional aspect of the program;
2. Describing what program components work well, need improvement, should be discontinued, or should be replicated and/or scaled up; and
3. Recommending measures to improve overall program performance and management.

The Evaluation Team found that:

1. WaterSHED generally is meeting or exceeding targets, but the sustainability of its achievements is at risk;
2. A latent demand exists for WASH products and services across the southeast Asian region;
3. The demand is not being met in part due to business models that do not address market needs for low-cost, desirable products, delivered in an attractive and convenient method;
4. UNC has been challenged in the implementation of the WaterSHED project on both technical and administrative matters;
5. Nongovernmental organizations (NGOs) may struggle to adopt commercial, market-based approaches that depend on selling products or services at full cost recovery for financial sustainability;
6. At this point in the project cycle, WaterSHED is not yet focused on achieving scale across the Mekong region for the range of WASH products and services they have been incubating. At project mid-point, only the sanitation marketing approach seems to have the potential to reach this scale; and
7. The WaterSHED model supports the objectives of USAID Forward, a comprehensive package of reforms with an emphasis on innovation and focus on results (<http://forward.usaid.gov/>).

The Evaluation Team also made several recommendations for the remainder of the WaterSHED project, including:

1. UNC should document WaterSHED's most successful business model to date, Sanitation Marketing, and develop a strategy for replicating it in Vietnam, Laos and other countries in the regions, as appropriate;
2. UNC should focus program implementation more clearly on "enterprise development" and reduce support for interventions that are not fully in line with this focus, documenting lessons learned from other approaches that include some type of subsidy;
3. UNC should clearly demonstrate in advance how each proposed leveraged opportunity is aligned with achievement of the program objectives;
4. UNC should make maximal use of its institutional research capacity in business and economics to address the financial aspects of private sector engagement in WASH products and services to support WaterSHED's objectives; and
5. UNC should work with RDMA to adjust targets for selected indicators based on current knowledge, experience, and performance to-date.

WaterSHED is a complex project requiring management scrutiny and frequent adjustments. WaterSHED management has responded to the many implementation challenges and established a strong basket of WASH products and services, has vetted each in detail from the consumer side, and is poised to support scale-up of those with the most commercial potential, in particular sanitation marketing. With increased focus on those high potential products and services, and a view on building capacity for financial sustainability through increased sales and improved management for the WaterSHED partners after the completion of the program, UNC is well positioned to deliver the targets for the WaterSHED program.

# 1.0 BACKGROUND

The World Health Organization (WHO) estimates that 88 percent of the burden of diarrheal disease is a result of unsafe water, lack of sanitation, and poor hygiene behaviors, and is thus preventable with the utilization of established and well-tested interventions. There are three hygiene behaviors that have been demonstrated to be effective in reducing diarrheal disease prevalence by at least 30 percent and have proven to be programmatically cost-effective. These are:

1. Safe storage and treatment of drinking water at the point of use,
2. Optimal handwashing (method and timing) with soap, and
3. Sanitary disposal of human feces at the household level. The main lesson learned from the International Decade of Drinking Water and Sanitation (1980–1990) was that publicly subsidized provision of water, sanitation and hygiene (WASH) hardware is not enough to ensure *correct, consistent* and *sustained use* of the hardware to achieve improved health outcomes. Sustainable improvements in WASH require

intervention in three areas as described in the Hygiene Improvement Framework jointly developed by USAID, the United Nations Children’s Fund (UNICEF), the World Bank’s Water and Sanitation Program (WSP), and the Water Supply and Sanitation Collaborative Council.<sup>1</sup>

1. Improved access to hardware (water supply, water storage, sanitation facilities, soap, water treatment products);
2. Hygiene and sanitation promotion for behavior change (social marketing, community participation, school programs); and
3. An effective enabling environment (supportive policies, capacity building, partnerships, financing, community mobilization).

These three interconnected components are all necessary to implement effective programs that achieve sustained public health impact, and each of these components involves engagement of multiple stakeholders at different levels.



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<sup>1</sup> [http://www.ehproject.org/PDF/Joint\\_Publications/JPO08-HIF.pdf](http://www.ehproject.org/PDF/Joint_Publications/JPO08-HIF.pdf)

In the early 2000s, leading global stakeholders in the WASH sector, including WSP, UNICEF, bilateral development agencies from Denmark, Finland, the United Kingdom, and Australia, along with USAID (and more recently the Asian Development Bank [ADB]) began looking for ways to engage the small- and medium-scale private sector to provide products and services needed to support the key hygiene behaviors, and to promote their correct, consistent, and sustained use to maximize public health impact.

The Water, Sanitation and Hygiene Enterprise Development (WaterSHED) project was jointly conceptualized by USAID's Regional Development Mission for Asia (RDMA)'s Regional Environment Office and the University of North Carolina at Chapel Hill (UNC) as a Global Development Alliance (GDA). WaterSHED supports the private sector, community-based implementers and government agencies to apply commercial marketing expertise to make products available, affordable, and attractive to consumers. A key objective of the project is to test the hypothesis that the private sector can play a pivotal and positive role in bringing WASH products and services to scale in lower-income markets in the Mekong region. Use of these products and services is expected to support correct, consistent, and sustained adoption of the three key hygiene behaviors proven to reduce diarrhea, particularly in children.

RDMA and UNC signed a Cooperative Agreement in September 2008 for this five-year (Fiscal Year (FY) 2009-FY2013) US \$8.5 million program, \$7.5 million of which had been obligated at the time of the evaluation. The Agreement is structured as a GDA in which the implementing partners provide at least a 1:1 match to USAID funding. Initial country-based activities were programmed for Cambodia, Vietnam and Laos. WaterSHED partners contributed to the design of activities and participated actively in development of work plans. The start of the program was delayed, however, due to protests in Bangkok in late 2008 and early 2009. As such the official launch of WaterSHED did not take place until February 2009, and, activities in Cambodia were further delayed by almost a year to the early part of 2010. WaterSHED made exceptional efforts in responding to the concerns of both RDMA and the USAID Cambodia Mission to resolve the administrative issues related to the delays.

WaterSHED's overall implementation objectives are the following:

- Develop, test, and implement financially sustainable business models for delivering effective and affordable WASH products and services to the lower-income market segment.
- Strengthen and leverage the capacity of local entrepreneurs to deliver WASH good quality and reasonably priced products and services sustainably and profitably.
- Assess and document the ability of commercial enterprises to increase the sustained and proper use of WASH products and services.
- Collaborate with local WASH partners through multiple platforms to develop marketing and other strategies and tools for scale-up and replication of public-private mechanisms focused on commercialization, and consumer demand for better quality services at an affordable price.

In May 2011, RDMA requested assistance to conduct a mid-term evaluation of WaterSHED's performance to date and offer recommendations for the remaining period of implementation. The ensuing section details the scope, objectives and methods of the evaluation.

# 2.0 EVALUATION SCOPE, OBJECTIVES AND METHODS

## 2.1 SCOPE AND OBJECTIVES

The overall objective of this mid-term evaluation was to review the performance of UNC in fulfilling the goals and objectives of the WaterSHED project. The Evaluation Team was requested to assess the performance of the program from inception through May 2011. Specific objectives of the evaluation are as follows (see Annex A for the complete Statement of Work [SOW]):

- Assess program performance and effectiveness against stated goals, objectives, and performance targets, in particular the regional aspect of the program;
- Identify what program components work well, those needing improvement, those that should be discontinued, or those that should be replicated and/or scaled up; and
- Recommend measures to improve overall program performance, management and cost effectiveness.

The program evaluation addresses the five key areas of:

1. Validity of “Hypothesis” (Effectiveness of Programmatic Strategic Approach)
2. Confirmation of Results
3. Responsiveness to Stakeholder Needs
4. Program Sustainability
5. Lessons Learned

## 2.2 METHODS

The Evaluation Team members reviewed key project documents and a wide variety of supplemental information, conducted extensive field visits over an eleven-day period from May 23-June 3, 2011, and interviewed partners and key stakeholders in the three countries where WaterSHED is implementing field activities—Laos, Cambodia and Vietnam. The Evaluation Team also met with staff of USAID missions and/or embassy in the three countries, as well as local government agencies involved in providing water and sanitation services, and other related USAID-funded projects. Additionally, the Evaluation Team had several meetings with USAID/RDMA staff in Bangkok. Annex B contains a list of documents reviewed, and Annex C presents a list of people and organizations contacted and interviewed.

Additional interviews were conducted by email and telephone during the week of June 5–10, 2011, to gather perspectives of regional partners and other stakeholders where site visits were not possible. The Evaluation Team held an out-briefing with RDMA staff on June 10, 2011, to present preliminary findings and recommendations. RDMA comments on the presentation and draft reports have been captured in this final evaluation report. The report is organized as per the topics identified in the Statement of Work.

The Evaluation Team consisted of three people: (1) Rick McGowan (Team Leader, rural water and sanitation specialist), (2) Rochelle Rainey (USAID Global Health Bureau Water, Sanitation and Environmental Health Technical Advisor), and Michael Silberman (GDA Regional Alliance Builder, USAID/RDMA).

## 3.0 FINDINGS AND DISCUSSION

Although the broad issues related to sustainable access to water, sanitation, and hygiene facilities are similar across the lower Mekong region, the three WaterSHED countries differ considerably in their human resource capacities and business environments that substantially affect the potential viability of market-based solutions to improve WASH-related services. They also are markedly different in the percentage of population having access to basic water supply and sanitation infrastructure, as shown in Table 1.

**TABLE 1. COVERAGE OF WATER SUPPLY AND SANITATION IN WATERSHED COUNTRIES**

	Urban			Rural		
	Access to improved water supply (%)	Access to improved sanitation (%)	Open defecation (%)	Access to improved water supply (%)	Access to improved sanitation (%)	Open defecation (%)
Cambodia	81	67	22	56	18	75
Laos	72	86	6	51	38	52
Vietnam	99	94	0	92	67	8

Source and definitions: WHO/UNICEF Joint Monitoring Program, 2010

[http://www.wssinfo.org/documents-links/documents/?tx\\_displaycontroller\[type\]=country\\_files](http://www.wssinfo.org/documents-links/documents/?tx_displaycontroller[type]=country_files)

Within these disparate environments, WaterSHED works with and through a range of nongovernmental organizations (NGO) and various business partners in the three focus countries to identify and monitor development and implementation of a range of products, services, and business models for water supply, water storage, water purification, sanitation, and hygiene improvement. Table 2 provides a summary of the products and services supported in each of the program countries. It is important to note that all of these activities are supported by consumer research, demand creation, and hygiene behavior change activities that are not fully captured in the table, but which also advanced the project's overall goals. WaterSHED has undertaken formative research to identify and test new and improved WASH technologies and services, understand and gauge consumer preferences and choices, assess willingness-to-pay, measure and evaluate continued and effective use of WASH products and services and otherwise provide data to inform enterprise development and improve WASH products and services delivered by implementing partners. The tools developed by WaterSHED for these tasks have been shared with other implementers in the region and adopted by several including the Cambodian National Ministry of Rural Development.

**TABLE 2. SUMMARY OF WATERSHED'S PORTFOLIO OF PRODUCTS AND SERVICES**

<b>Country</b>	<b>Product/Service</b>	<b>Partner</b>	<b>Type of Business Model</b>	<b>Status</b>
<b>Cambodia</b>	Ceramic water filter (and carbon financing)	International Development Enterprises (IDE)/ Hydrologic (Nexus)	For-profit business 100% owned by the NGO IDE	Ongoing production underway
	Sanitation marketing	Lien Aid and working directly with private suppliers of materials for latrines/toilets.	Small for-profit businesses and their sales agents. Not subsidized. Well organized, skilled mobilization team	Ongoing and apparently very promising for scaling up.
	Sanitation pit emptying/transport/treatment/ byproducts/ disposal	IDE	No business models yet, but in the process of assessing opportunities	Initial assessment stage, collecting information from existing business in the sector
	Pooled funds for private water supply operators	in discussions with the International Finance Corporation (IFC) and WSP	Private drinking water suppliers	In design stage with potential partners
	Autodoser for drinking water chlorination of piped water at the point of entry into the home	Medentech	Exploring opportunities with private sector water suppliers	Preliminary stages of assessment
<b>Laos</b>	Ceramic water filter	TerraClear	For-profit business	Ongoing
	Water supply and sanitary latrines	East Meets West Foundation (EMWF) of Vietnam	Output-based Aid (OBA) model	New start/ expansion of Vietnam model to Laos
<b>Vietnam</b>	Sanitation marketing, water supply	EMWF designs piped water systems	OBA model for subsidies to households upon completion and certification of construction. Operation and maintenance paid for by beneficiaries	Ongoing
	Handwashing station manufacture and marketing	IDE (with the Innovation, Design Engineering Organization [IDEO])	Public / private partnership with NGO, looking for business partners	Ongoing – delays in finalizing design and construction
	Water supply and sanitary latrines	EMWF, Diageo Foundation	Output-based Aid (OBA)	Ongoing, Periodic Independent Verification Agents (IVA) confirm quality control
	Water production, treatment, distribution. Promotion of handwashing with soap	EMWF	NGO model— community/school based operations and management of the systems	Ongoing

This section presents the findings from the Evaluation Team’s visits and interview as they inform the key focus areas identified in the SOW, namely: Validity of the Hypothesis (Is the market-based, public-private approach valid for achieving the project’s goals?); Confirmation of Results (What have been the project’s results to date?); Responsiveness to Stakeholders Needs (Has the project worked with stakeholders and partners to reach mutually agreed-upon needs and targets?); and, Program Sustainability (Are strategies in place to ensure that project activities continue to provide benefits beyond the end of the project?). Lessons learned are provided in Section 4 and recommendations in Section 5.

### 3.1 VALIDITY OF HYPOTHESIS

The WaterSHED Program has taken an incubator approach to developing, testing, and implementing financially sustainable business models for delivering WASH products and/or services to the lower-income markets in the three target countries. This approach is aimed at developing several business models and products over a five-year period to test market viability at the local level and to demonstrate, as appropriate, the replicability and transferability of technologies and market approaches across countries in the region. An implicit assumption is that once the potential for profitable WASH products or services has been clearly demonstrated,

market forces will attract new entrepreneurs to enter the business, thereby increasing the availability of affordable WASH products and services to larger populations. A second assumption is that as a broader range of water and sanitation product and service providers become available in the WaterSHED-assisted countries, pricing will decrease due to economies of scale, and the products or services will become increasingly accessible to lower and medium income families.

In Vietnam and Cambodia, WaterSHED worked with NGO partners who are responsible for the implementation of WASH activities across a range of product and service categories, including ceramic water filters, community water systems, point-of-use water filtration with piped water systems, handwashing stations, and household latrines. In Laos, WaterSHED is working with a private sector entrepreneur to develop a financially viable ceramic filter company.

Throughout the Evaluation Team’s interviews with governments, donors, WASH working groups, microfinance institutions (MFIs), and large multinational companies, there was consistent support for the WaterSHED model of working with the local private sector to enter the WASH market and to develop a cadre of new social entrepreneurs who create and profit from WASH

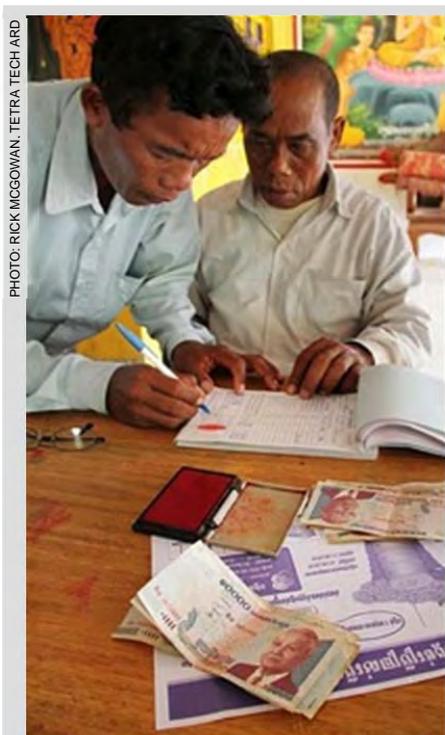


PHOTO: RICK MCGOWAN, TETRA TECH ARD

**There was consistent support for the WaterSHED model of working with the local private sector to enter the WASH market and develop a cadre of new social entrepreneurs to create and sell WASH products.**

products and services. These interviews substantiated a recent WHO report (*Informal Dialogue with the Private Sector on the Way Forward - to the High-level Meeting of the United Nations General Assembly on Non-communicable Diseases, WHO, November 2010*) in which the case was made that the WASH sector as a whole is moving to more private sector involvement, as it is the private sector that may be best positioned to fill the funding gap that exists between resources needed to meet WASH-related Millennium Development Goals (MDGs) and those available from governments and the international donor community.

The WaterSHED program utilized a number of criteria to identify NGO partners for in-country implementation in Cambodia and Vietnam: (1) NGOs identified through WASH working groups that might spin off a viable business; (2) NGOs that are operational on-the-ground and in communities which have the capacity for quick project start-up leading to faster results; (3) NGOs that have experience working with and building the capacity of the local private sector; and (4) international NGOs with the capacity to generate cash and in-kind leverage to assist UNC in meeting the GDA leverage requirement. The advantages and disadvantages of working with NGOs to stimulate the private sector to produce and market affordable WASH products are outlined in the country descriptions below.

A significant difference between typical NGO activities and the commercial orientation of the WaterSHED program is the program's focus on consumers or customers paying for the products or services provided. In general, the economic conditions of many of the rural villagers that were visited during this evaluation demonstrated a willingness and ability to pay for good quality water and sanitation products or services. Although there remain many families for which this is not the case, the efforts of the WaterSHED program and many other related programs have demonstrated significant progress in steadily closing in on the WASH-related MDGs. Therefore, the program hypothesis appears to be validated.

### **3.1.1 Laos**

In Laos, WaterSHED provides direct support and technical assistance to a locally based entrepreneur, TerraClear (formerly Lao Water Resources), in designing and marketing a high quality, yet affordable ceramic water filter. As a company driven by a profit motive, they have made continuous improvement and investments in design (e.g., size of filter, height of filter stands, color of plastic casing). Now TerraClear is attempting to increase sales by exploring multiple avenues and variations of retail and direct sales channels. TerraClear will continue to monitor and evaluate which approach yields the most success and continue to scale up sales activities. To date, direct sales through a sales force has proven more successful than sales through retail stores.

TerraClear identified their initial target population as peri-urban families earning \$2-5/day who have a basic awareness of the health benefits attributed to clean water and, in all likelihood, are already routinely purchasing bottled water, and live along transportation corridors where the commercial bottled water vendors ply their trade. This situation facilitates access to larger target populations for their sales force and product ease of delivery. TerraClear strategically believes that the avenue to rural sales will be through the successful market development for filters in the peri-urban communities. This approach is premised on the belief that the peri-urban communities have higher incomes, which afford a broader range of opportunities for larger sales volume and

for solidifying their businesses as profitable commercial enterprises. In addition, families from these peri-urban communities often have relatives in the more rural areas which will increase the aspirational quality of the product.

TerraClear's market competition in the peri-urban communities is bottled water which, given its recurring monthly cost, makes the ceramic water filter extremely cost competitive and a strong selling point. More recently, TerraClear has been testing two new sales channels—a more targeted retail store sales outlet with a prominent product display on a major commercial roadway, and using government staff who have expressed interest in promoting the water filters in the communities where they work and have influence. Although price may become a barrier as TerraClear pushes down the socio-economic scale, for their current target population in the peri-urban communities, the availability of microfinancing has not been shown to be a determinant for households purchasing the filters.

The Evaluation Team was not able to clearly determine the primary source(s) of clean water in the more rural areas (the areas of future market expansion), whether it be bottled or boiled. The team noted that this determination will be required to assess the viability of carbon credits as a supplemental potential revenue stream.

### **3.1.2 Vietnam**

WaterSHED has two partners in Vietnam: the international NGO East Meets West Foundation (EMWF) for the provision of sanitation facilities, and the U.S.-based international NGO International Development Enterprises (IDE) in the design of a low-cost handwashing station.

For over 15 years, EMWF has conducted a long-standing water supply program in Vietnam with funding from other institutional and international donors. EMWF is successfully using the mechanism of output-based aid (OBA) which provides co-financing reimbursements for piped community water supply programs, on successful completion of the scheme. WaterSHED support has enabled EMWF to add a sanitation component to this water supply program, whereby reimbursement is provided to the household after verification that the latrine was installed according to pre-established specifications and standards.

EMWF workers conduct community meetings in their target areas to raise awareness and gain community commitment for the installation of household water and sanitation systems, including (in some cases) providing unskilled labor. Once the commitment has been received, private contractors are hired to provide the necessary skilled labor. While EMWF has been hiring experienced local construction contractors supervised by EMWF staff, the Evaluation Team noted that neither EMWF nor WaterSHED appear to be building the capacity of the contractors to develop a product value chain that does not rely on constant input of external resources as incentives to meet the demand for water and sanitation products, or engage in new market development or sales. It may be that the existing contractors and suppliers have enough business because of the level construction activity in Vietnam, and linking the sanitation with existing water supply programs by definition targets better-off communities. But if this is the case, EMWF and WaterSHED have not identified new players to enter the sector to specifically target those households without access to sanitation. The level of local private sector engagement has been predominantly a contracting arrangement with the external funder to build latrines or

complete installation of community water systems for households. This arrangement has given local subcontractors the opportunity to gain considerable expertise in the construction of piped water systems with overhead storage tanks, using either river water or groundwater sources, but has not increased the capacity of local suppliers and contractors to provide sanitation products and services to the lower income households, which is WaterSHED's target audience.

While EMWF's sanitation program is not a subsidy-free program, there are opportunities to learn from this experience on how to best deliver subsidies in a way that does not undermine or provide disincentives for private sector participation, while ensuring that the subsidies are reaching the intended audiences and not captured by the classes that need them least. In this regard, it appears that many of the beneficiaries of EMWF's sanitation program are predominately households that already had an improved latrine. It would be useful for the project to document if and how the subsidies provided by the OBA program increased the adoption of latrines by those who were previously without access and provide recommendations for how to best direct subsidies to these households.

EMWF's investments are contributing to an increase in coverage of improved water supply and sanitation and support Vietnam's progress towards meeting its MDGs. While its program is clearly filling a need and will continue to do so with non-USAID funding, EMWF is not directly building capacity of suppliers to grow their businesses through efficiencies in production, improved marketing and advertising, or other business development techniques. Identifying additional funding sources on a regular basis is currently an integral aspect of the OBA implementation model.

WaterSHED has been working with IDE to develop a prototype handwashing station that is convenient to access and use and also provide a visual cue for practicing proper handwashing. To date, a prototype has been developed, but the design has not been finalized due to delays in contracting between WaterSHED and IDE and availability of the design consultant from IDEO. There also has been little progress on the market analysis for the new product, causing additional delays. The lack of a coherent business plan resulted in a missed opportunity to receive additional funding support from the World Bank's WSP for activities required to bring the product to market.

The handwashing station concept has generated interest from outside funders. WSP has indicated a willingness to identify resources from their current year funding to develop a business plan, and Unilever has offered to provide access to a range of in-house competencies in branding, marketing, consumer analysis, etc. to advance the commercialization of the product. However, the project requires a strongly motivated organization (or entrepreneur) to actively direct product development, prepare a business/marketing plan, accept the initial commercial risk, and test the product's viability in the marketplace, using the targeted resources on offer by interested partners. IDE/Vietnam has not demonstrated a sense of urgency in leading this process, either in pushing for resolution in the contracting issue, or in beginning development of a business plan as a true market-based enterprise development approach complete with business risk. It will still require significant business and managerial expertise from an organization or individual to bring a financially viable product to the market.

### 3.1.3 Cambodia

Activities in Cambodia were delayed due to internal USAID issues between the regional office in Bangkok and the Cambodia mission, and started almost a year later than in the other countries. However, for several reasons, Cambodia has the most activity under WaterSHED. Cambodia has a dynamic WASH sector led by the Ministry of Rural Development, in close collaboration with the World Bank's Water and Sanitation Program and other partners. Cambodia also benefitted from the full-time presence of a WaterSHED Country Director, while Vietnam and Laos did not.

WaterSHED is partnering with two NGOs in Cambodia: IDE/Cambodia and their spin-off Hydrologic for ceramic water filters and Lien Aid for latrines. WaterSHED funded IDE to upgrade their manufacturing capacity for a high quality, aspirational ceramic water filter. IDE founded Hydrologic, a locally registered for-profit company under the auspices of an IDE-only Board of Directors. WaterSHED is implementing the sanitation activity through Lien Aid, a Singapore-based NGO, building capacity for local suppliers to expand marketing and sales of latrines at the community level. WaterSHED's sanitation marketing program builds on existing and on-going activities in Cambodia, by IDE, the World Bank's Water and Sanitation Program and others, and the evolution of sanitation marketing has been a dynamic learning process for all stakeholders. In particular, the early and fruitful collaboration between IDE, Lien Aid, and the World Toilet Organization (WTO) fostered many important lessons that contributed to WaterSHED's success. WaterSHED has advanced the sector through a totally "hands-off" role in the marketing and distribution chain, focusing on building capacity of suppliers in production, sales, and business management, and letting them pursue existing opportunities and grow their own businesses.

While the sales and marketing of water filters and latrines require very different distribution channels, the more essential difference in approaches in Cambodia appears to be the partner's role in the process. In the case of IDE/Hydrologic, WaterSHED's goal was to help IDE transform their subsidized, donor-supported filter production and distribution program into Hydrologic, a subsidy-free business enterprise. The business model, management capacity, production and marketing proficiency were all dependent on IDE's expertise, guidance, and leadership. IDE is, in effect, an active part of the product value chain. However, the management of Hydrologic was not (at least at the time of the evaluation) held to performance standards consistent with a private sector approach. That is, the remuneration of the management team was not dependent on sales performance.

In the case of Lien Aid, the NGO has strengthened a viable, local value chain for the sales and installation of latrines while remaining outside the distribution chain itself. This approach has resulted in 150 construction suppliers who have hired sales agents to market supplier-produced latrines in rural areas, building on the public sector's work generating awareness of the health benefits of latrines. The suppliers are meeting the demand for an affordable and desirable product, and engage directly with consumers through sales and promotion channels that did not exist before the project

In the past, the suppliers were waiting for customers to come to their store for sales. With the assistance of Lien Aid and WaterSHED, the suppliers were recruited, trained, and supported in building the promotional component of a comprehensive value chain, including hiring

commission-based sales agents who travel to targeted communities conducting sales presentations. In some cases the supplier also attends the events. In the case of one supplier, this has netted an increase in latrine sales from 10 percent of his business to 60 percent. The increase in volume also has decreased the price of these latrines to a very affordable level. WaterSHED and Lien Aid work with the suppliers to understand the tradeoffs between price and volume of sales and encourage the price to be as low as possible, but they are not involved in setting the price for suppliers. The current cost for a basic toilet, delivered to the household is between US\$35 and \$40. The suppliers also view the latrine customers as new business relationships for other construction products sold in their store.

While capital availability was not raised as a limiting factor by sales agents or consumers for latrine sales (at least not yet), interestingly microfinance was critical element in boosting sales of Hydrologic's ceramic filters. This may reflect a difference in the populations targeted for sales, a difference in perceived desirability of the respective products, or a difference in the sales methodology itself. This would be an interesting area of research for WaterSHED to pursue. The sanitation suppliers did identify lack of credit as a barrier to their ability to expand sales, because they did not have enough working capital to invest in raw materials. Research to articulate supplier financing needs would also be a valuable addition to the ability of the private sector to provide WASH products and services. IDE/Hydrologic has been in the ceramic water filter business for almost 10 years, primarily using an NGO model for distributing a subsidized product to targeted families. WaterSHED's role has been to support Hydrologic in its efforts to become more mass market-oriented and create a sustainable enterprise. To date, external investments by WaterSHED and Program for Appropriate Technology in Health (PATH) have supported infrastructure, product design and development, linkage with microfinance, other capital investments, market analysis, and sales agent training. Hydrologic is producing and marketing two filters—the *Tunasi* (Rabbit in Khmer), a product now targeted for NGO distribution and low-end sales, and the *Super Tunasi*, a new higher-end aspirational model for mass retail sales. The results to date are a company that anticipates sales of 40,000 units in 2011, against a projected business break-even point of 80,000 units. Their anticipated market is 100,000 units per year, yielding 20,000 unit margins per year.

While IDE/Hydrologic has successfully addressed quality control issues and has created an attractive retail product, the company has yet to identify the best sales channel and is working to develop an aggressive marketing plan that will yield successful growth for their company. One area that has proven successful has been linking Hydrologic with Vision Fund, one of the four major MFIs that have a network of organized village loan groups. Hydrologic employs a direct sales force of five commissioned agents who, with Vision Fund staff, make sales presentations combining the sales pitch for the filter along with available financing.

While the length of time and complexity of the loan process has proved somewhat problematic, the partnership has yielded increased sales. But, given that Vision Fund has entered into this partnership through a \$25,000 cash grant by PATH, the question remains whether Vision Fund will continue as a partner without the external financial incentive, particularly given the small sizes of loans and the management burden of larger loan officer portfolios.

Hydrologic has used graduate students to provide industrial engineering expertise to their factory operations. In addition, Diageo, a multinational beverage firm, will provide Hydrologic the

opportunity to access some of the company's core competencies in sales, marketing and distribution to help Hydrologic improve their commercial operations and brand management. This is an excellent use of the key assets a multinational company can offer a growing local business.

WaterSHED has developed relationships with several microfinance institutions, including AMRET and PRASAC, two organizations with strong social missions and interest in reaching the rural poor with financial products. AMRET has established a Social Performance Management system that assists them to identify "value" metrics beyond financial performance. Currently they offer three financial products:

- Goal Accounts, which are individual savings account for a specific goal (the goal in this case being a new latrine);
- Finance to Value Chains, which provides loans to Small and Medium Enterprises (SMEs); and
- Solidarity Credit, which are group loans with a guarantee for repayment placed on the group.

Sixty percent of their rural loan portfolio is Solidarity Credit. AMRET's biggest challenge is reaching a larger client base with low financial demand, while containing their cost of doing business. They are investigating mobile banking as a potential option, and they are revamping their internal online banking systems.

Another WASH-related service WaterSHED began supporting in 2011 is an assessment of the private sector potential in sludge removal from latrine pits. IDE is mapping the business environment to identify the scope for enterprise development of this as a commercial operation. Given the success of the sanitation marketing program and increase of latrines in Cambodia, this is an opportune moment to address a significant issue that certainly will need to be addressed in the near future. IDE/Cambodia's comprehensive and high quality assessment has engaged existing operators in the sector, and examined different technologies and a range of business models for pit emptying, transport, treatment, and disposal of the waste. Not surprisingly, the preliminary results indicate that the issue is more complex than initially anticipated. It will require the engagement of both the private and public sectors going forward, as well as careful consideration of personal hygiene of operators given the health risk of exposure to raw excrement.

Given the success of the sanitation marketing program, one possible action is to provide information to consumers at the time and point of latrine purchase on how/why/where/when to empty the latrine pit, that is, integrate waste management and hygiene messages into the publicly and privately funded sanitation marketing messages that are already prevalent. This could be considered a supplemental service in the value chain of the latrine manufacturers, building on the relationship suppliers have formed with households that buy latrines. The assessment will likely identify a suite of viable business models to fit the stages in waste management. IDE is modifying existing methods and testing interesting models of treatment and extraction.

## 3.2 CONFIRMATION OF RESULTS

RDMA requested that the Evaluation Team summarize progress towards WaterSHED program goals and performance targets, with a specific focus on gender, and comment on the validity and consistency with the overall program strategic approach. In addition, RDMA requested a review of the timing of implementation and of project reporting, and for the Evaluation Team to identify particular strengths/weaknesses/opportunities for program improvement.

### 3.2.1 Progress Toward Goals and Targets

The targets and achievements for the program are summarized in Table 3.

**TABLE 3. WATERSHED TARGETS AND RESULTS FY09/FY10/FIRST HALF OF FY11**

Indicator		Target FY09	Actual FY09	Target FY 10	Actual FY10	Target FY11	Actual FY11 (through 2nd qtr.)
<b>SO: Improved Environmental Conditions in Asia</b>							
SO1	# of people in target areas with access to improved drinking water supply as a result of U.S. government (USG) assistance	100,000	112,422	250,000	141,155	400,000	9,216
SO2	# of people in target areas with access to improved sanitation facilities as a result of USG assistance	4,400	5,142	25,000	18,759	40,000	46,198
<b>IR 1: Consumer Demand Increased</b>							
1.1	# of consumer awareness and marketing campaigns launched	5	6	6	6	8	47
1.2	% of households in target markets aware of WaterSHED-introduced WASH products/services	n/a	n/a	15%	62.5%	20%	TBD
1.3	% of households in target markets aware of local sales points for WaterSHED-introduced WASH products and services	n/a	n/a	10%	25%	15%	TBD
1.4	% of households in target markets intending to purchase WASH products/services	n/a	n/a	8%	53%	15%	TBD
1.5	% of households in target markets having purchased WASH products/services	n/a	n/a	3%	30%	15%	TBD
<b>IR 2: Supply Chain Strengthened</b>							
2.1	% change in unit sales volume of WaterSHED-introduced WASH products/services	n/a	n/a	n/a	54%	10%	32%
2.2	% change in revenue from sales of WaterSHED-introduced products/services	n/a	n/a	n/a	24%	12%	Hydro-45% TC- 20%
2.3	# of supply chain actors identified and enlisted	n/a	21	40	546	60	1788
2.4	# of consumer-driven WASH product/service design improvements made	4	4	4	15	3	2
<b>IR 3: Enabling Environment Improved</b>							
3.1	# of coordinating meetings held and activities conducted amongst GDA partners	20	22	4	4	6	4

Indicator		Target FY09	Actual FY09	Target FY 10	Actual FY10	Target FY11	Actual FY11 (through 2nd qtr.)
3.2	# of coordination meetings and communications & outreach activities conducted with external WASH stakeholders	n/a	43	4	147	20	284
3.3	# of sustainable WASH financing mechanisms established, strengthened or facilitated	1	1	6	4	1	3
<b>IR 4: Consumers Correctly Using Purchased Products</b>							
4.1	# of product attribute or consumer preference assessments conducted	3	5	2	8	2	3
4.2	% of WaterSHED-introduced WASH products packaged to facilitate and instruct consumers on correct and proper usage	n/a	n/a	100%	100%	100%	100%
4.3	# of proper-use campaigns for WaterSHED-introduced products and services	5	n/a	4	23	6	35
4.4	% of customers demonstrating proper usage of WaterSHED-introduced WASH products	n/a	n/a	50	n/a	65	n/a

Based on the above, WaterSHED has largely met or exceeded its targets except for those in the Strategic Objective 1 and 2 in FY2010. This gap will be compensated for in FY2011 for sanitation, since the project has already exceeded its target midway through the fiscal year. However, the program is not on track to meet the FY2011 goals for access to water. One potential problem the Evaluation Team identified is that the definition for SO1 was defined during the Foreign Assistance Framework (F-Framework) process to include only access to water, while the numbers of people having access to safe drinking water through use of water treatment devices is captured in a different F indicator. The USAID Agreement Officer's Technical Representative (AOTR) will need to clarify with WaterSHED and adjust targets and progress accordingly, if necessary, to separate out these important, but different, WASH indicators. In the future, programs like WaterSHED may benefit from having more flexibility to adapt indicators and milestones to respond to the dynamics of the market, as opportunities are created and competition responds. The program will also need to discuss with the AOTR regarding its performance on achieving Indicator 4.4.

### 3.2.2 Timeliness of Reporting and Implementation

According to the WaterSHED AOTR, timeliness of required technical reporting has improved over the course of implementation, and there are no issues of significant concern related to responsiveness of WaterSHED staff in the field or at UNC for regular communication and reporting. WaterSHED has been very responsive to the many (and usually urgent) unscheduled requests for information.

In terms of timeliness of implementation, the Evaluation Team heard from several sources that some aspects have not moved as quickly as anticipated. For instance, as noted above, there were delays with Hydrologic registration as a private company in Cambodia during the first year of operation. Similarly, preparation of a market analysis and business plan for launching the handwashing station in Vietnam was also delayed while this evaluation was undertaken. In part, that may have been due to IDE's strong grounding in the NGO model (where public health

impact is more important than achieving financial sustainability) and having more of a social mission than WaterSHED appreciated at the start of the project. The private sector has much more urgency to follow up on creating and exploiting market opportunities, as noted by representatives of Unilever, Global Institute for Tomorrow (GIFT), and WSP.

### 3.2.3 Gender

WaterSHED's work in gender research to better understand the role of women in the WASH sector was highlighted in UNICEF's *Gender Equality and Equity Situation Analysis for Rural Water, Sanitation and Hygiene in Cambodia* prepared for the Ministry of Rural Development. WaterSHED partners use gender-balanced teams of village facilitators and sales agents. Women are depicted in the advertising messages, and women are targeted as consumers since they often control the household budget. But in household door-to-door sales, often both men and women (whoever is home) receive the sales pitch.

In addition, several of the apparently most effective community motivators whom the Evaluation Team saw working during the field visits were women, particularly in Cambodia. For example, after motivational activities were undertaken in a community meeting in a village in Cambodia, women were seen actively motivating other women and men to sign up to participate in the family latrine program by having the interested party (male or female) provide a thumbprint on an official document guaranteeing that he or she has formally committed to purchase a family latrine. In other village meetings, both men and women participated in the motivational activities, often resulting in making public commitments to purchase hygienic improvements.

While not clearly presented in the indicators in Table 3 above, the WaterSHED program improves women's access to timesaving water and sanitation products while also ensuring that the preferences of female consumers factor heavily into WaterSHED's marketing, financing and product development work. Overall, it appears to the Evaluation Team that women benefit significantly from increased latrine ownership provided through WaterSHED activities. The sanitation marketing program design responds to the specific wants and needs of women. Marketing campaigns focused on women's needs and perspectives on latrine purchase and usage. Training activities at the community level targeted women to promote active participation in program activities and latrine construction to ensure quality installation. Additionally, WaterSHED worked with the Bank for the Social Poor in Vietnam to establish a latrine lending scheme which prioritizes loans to women to make latrine purchases to encourage their decision-making role in their family. Sales agents in Cambodia also target women garment factory workers as decision-makers in latrine purchase.

WaterSHED conducted an in-depth survey into consumer perceptions of sanitation preferences on latrines. The qualitative research tracked each step of household decision making on latrines. Equal numbers of men and women participated in the interviews which provide a better understanding of differences and similarities between men and women regarding their motivations and barriers to investing in a household latrine. Key motivating factors for women in purchasing latrines include privacy, security and safety. This study has the potential to be the most insightful gender analysis yet produced in Cambodia for latrine marketing and promotion.

WaterSHED partner Lien Aid conducted a baseline supply chain analysis in Kampong Speu aimed at identifying product gaps, possible cost reductions, and training needs for the private sector. One of the key target market segments of the WTO and Lien Aid's market-based approach to latrine scale-up are the 8,000 female workers in the garment sector. These women have the opportunity to use modern toilets in the garment factories, earn a reliable steady income, are assumed to have power in family decision making because of their jobs, and are clustered in one place. As such, working with them can both increase their status in the community and increase the diffusion of modern latrine technologies into rural areas.

Another related issue of particular importance to women and children raised several community meetings was the difficulty in having to boil water to make it drinkable. This was often due to scarcity of local firewood and the difficulty of cutting it down and hauling it to the village - tasks typically carried out by women and children.

Overall, the Evaluation Team found that women are well-integrated into the staff of the program and partners, and women have significant leadership positions.

### **3.3 RESPONSIVENESS TO STAKEHOLDER NEEDS**

Under this key area, RDMA is interested in understanding if (and how) WaterSHED activities have worked closely with local stakeholders, and if (and how) the project meets needs of partners and stakeholders in the region. As a regional program, WaterSHED has a wide variety of governmental, nongovernmental, private sector, foundation and U.S. government (USG) contacts—in Thailand, in the three countries where field activities take place, and in the broader region. In this complex environment, partners have different expectations for the level of coordination and communication.

In addition to financial assistance, the WaterSHED project has met the technical assistance needs of its partners in a range of topics, including developing business plans; facilitating access to microfinance and carbon credit financing; using GIS as a marketing tool; providing laboratory/analytical services; and conducting research on new products, consumer behaviors and marketing. WaterSHED activities addressed partners' needs which enabled them to continue doing more of their existing work or contributed to the knowledge in the WASH sector, but the direct contribution to enterprise development in some cases was weak.

During the course of implementation, USAID launched an internal process called USAID Forward, a comprehensive package of reforms with an emphasis on innovation and focus on results (<http://forward.usaid.gov/>). The WaterSHED model supports the objectives of USAID Forward, particularly in contracting with and providing grants to more and varied local partners, and creating true partnerships to create the conditions where aid is no longer necessary.

#### **3.3.1 Laos**

##### **WATERSHED PROGRAM PARTNER RELATIONSHIPS**

The WaterSHED partner in Laos had the least contact with the program because of the logistical challenges of traveling to Laos, and the limited scale of project activities (working with a single business enterprise) did not merit the recruitment of full-time project staff based in Laos. Despite

the infrequent face-to-face contact, TerraClear, the ceramic water filter manufacturer, stated that they received excellent support from WaterSHED through the range of technical assistance provided in person, by phone and via email with the leadership staff, and through their participation in the annual partners' meeting.

#### **WATERSHED PROGRAM RELATIONSHIPS WITH GOVERNMENTS**

There is no WaterSHED staff based in Laos. WaterSHED's partner, TerraClear, has its production facility in Pakse, and the target district for sales is in Thakaek, not in Vientiane. Consequently, the relationship with Nam Saat, the National Center for Environmental Health and Water Supply (WaterSHED's main counterpart in the Government of Laos) is not close. However, Nam Saat's Director knew of WaterSHED and welcomed their support in the sector. The relationship could be strengthened by TerraClear making a presentation at one of the WASH coordination meetings held at Nam Saat. They agreed to arrange a presentation soon after the Evaluation Team's meeting with Nam Saat to build on the momentum generated by the visit.

TerraClear does not interact with the USG directly, but the embassy and USAID are interested and supportive of the program. They request and receive briefings from WaterSHED staff when they travel to Vientiane. The Ambassador commented on the linkage to the Lower Mekong Initiative and how WaterSHED complements other USG activities in Laos and the region.

#### **WATERSHED PROGRAM RELATIONSHIPS WITH OTHER STAKEHOLDERS**

Other stakeholders in Laos, including WHO and the Microfinance Working Group, are enthusiastic about the existence of high quality, relatively low-cost water filters being sold at cost recovery to provide safe drinking water in Laos. WHO recognizes that these filters can support their health goals through reduced water borne disease, and the Microfinance Working Group representative views WaterSHED's approach as specifically supporting the Laos National Growth and Poverty Eradication Strategy. The Strategy promotes a move towards a market-oriented economy and away from aid dependency. They have identified a strong need to increase basic skills in managing money at the household, micro, and small business levels.

Laos' draft national WASH Strategy supports the "no- or low-subsidy" model for increasing sanitation coverage, proving an opportunity for the WaterSHED project to further contribute lessons learned and experience for sanitation uptake. The Netherlands Development Organization (SNV) works in rural areas and believes some subsidies are necessary for WASH products and services, but SNV is interested in working with WaterSHED to establish how to complement the market-based approach with better targeting of subsidies to support the sustainability of the market and reach those who are outside the cash economy or have very limited income.

### **3.3.2 Vietnam**

#### **WATERSHED PROGRAM PARTNER RELATIONSHIPS**

In Vietnam, like Laos, contacts between WaterSHED staff and the two WaterSHED partners is primarily virtual, but both partners recognized the value added from WaterSHED's assistance in meeting technical and some financial needs to engage the private sector in commercialization of WASH products. With EMWF, WaterSHED's support allowed them to (1) add access to sanitation to their existing OBA water supply model and (2) expand the OBA water supply

model to a site in Laos. In IDE's case, the assistance received from the WaterSHED project is in business model development and design of a low-cost, attractive handwashing station.

#### **WATERSHED PROGRAM RELATIONSHIPS WITH GOVERNMENTS**

The government contact from Vietnam's Rural Water Supply and Sanitation (RWSS) unit is aware of WaterSHED's work and noted how it was assisting him to meet his MDG coverage goals for water and sanitation. RWSS Partnership Office coordinates significant external financing and institutional support from several bilateral donors, multilaterals, and NGO members, but the Office does not work with any private sector partners.

USAID/Vietnam does not have a WASH program and appreciates WaterSHED briefings and attempts to link to their bilateral program portfolio. They are particularly interested in following the progress of the development of the market for handwashing stations because of the potential to integrate these into their health programs. The USAID staff also has opportunities to point social venture capitalists towards promising opportunities which could contribute to the sustainability of WaterSHED's activities.

#### **WATERSHED PROGRAM RELATIONSHIPS WITH OTHER STAKEHOLDERS**

The Ministry of Health, Unilever, UNICEF, the Vietnam Women's Union (VWU) and WSP promote handwashing in Vietnam, but they do not conduct their activities under one coordinated campaign. The government was reluctant to commit to a public-private partnership for handwashing with private sector partners. Even without the resources from a private sector partner, however, WSP secured funding from the Bill and Melinda Gates Foundation to support a multi-year campaign promoting handwashing with soap. WaterSHED interacted with all of the other stakeholders during the initial design the handwashing station, and WSP appreciated WaterSHED's persistence in trying to keep the process moving. Because of the short timeframe for the evaluation, WSP was the only external partner the Evaluation Team met with in Vietnam.

### **3.3.3 Cambodia**

#### **WATERSHED PROGRAM PARTNER RELATIONSHIPS**

WaterSHED's staff in Cambodia had the highest level of coordination and communication with partners and stakeholders in the region because of the presence of a full-time country manager who maintained regular interaction with all partners. The relationship with IDE/Cambodia and Hydrologic is cordial but somewhat problematic from WaterSHED's perspective given that (1) Hydrologic's business performance and progress were unsatisfactory, and (2) WaterSHED has no leverage to hold the management or board accountable for performance despite the program's significant investment in the manufacturing facility. The relationship with Lien Aid is solid, with both partners bringing expertise, enthusiasm, and a shared understanding of the importance of private sector engagement to create a successful business model for sanitation marketing.



PHOTO: RICK MCGOWAN, TETRA TECH ARD

**In Cambodia, this laboratory will be spun off as a commercial enterprise, adding technical capacity for much needed high-quality laboratory services.**

## **WATERSHED PROGRAM RELATIONSHIPS WITH GOVERNMENTS**

WaterSHED has been an active participant in the WASH Sector Coordination Group led by the Ministry of Rural Development, which has facilitated information sharing of interim results, particularly in sanitation, a priority of the Government of Cambodia.

Regular communication between program staff and USAID/Cambodia personnel has been affected by turnover in Mission staff and the reassignment of the project from the health sector to the economic growth sector. During the implementation period, USAID/Cambodia also received Senator Paul Simon Water for Poor Act funding that was programmed through the Mission's bilateral agreements and included activities and approaches similar to those that WaterSHED is promoting. WaterSHED project staff have been responsive to USAID/Cambodia's request for close coordination with its main implementing partner, Development Alternatives, Inc. (DAI).

USAID/Cambodia staff also questioned the replicability and scalability of one of the business models being tested, where WaterSHED was providing financial and technical assistance for the construction of a new manufacturing facility for ceramic water filters. While a legitimate concern, it should be noted that in this instance WaterSHED was testing and documenting whether a high quality, locally produced water filter is commercially viable in Cambodia, not yet specifically looking at replicating the construction of additional manufacturing facilities in Cambodia. Rather, WaterSHED's focus has been on assisting Hydrologic to quickly expand their sales and move closer to breaking even as a commercial business.

## **WATERSHED PROGRAM RELATIONSHIPS WITH OTHER STAKEHOLDERS**

As noted, USAID/Cambodia's lead implementing partner in the economic growth sector, DAI, is also implementing WASH activities. DAI employs an OBA model to expand piped water supply to underserved neighborhoods. DAI also works with IDE on sanitation marketing with these USAID/Cambodia funds, and over the course of implementation, IDE has moved closer to the WaterSHED model of "hands-off" marketing with no subsidy for either suppliers or consumers due to the information sharing and active communications between stakeholders in the sector in Cambodia.

DAI is not providing direct capacity building to the implementers, so there is still a gap in need for technical assistance and access to financing for the water suppliers who do not meet DAI's criteria for OBA funding. DAI staff noted that coordination and communication with WaterSHED staff was good and that WaterSHED is filling gaps that the Micro, Small and Medium Enterprise (MSME) program is not addressing. The two programs complement each other on water supply improvement in several ways:

- DAI vets and works with OBA-qualified operators that have slightly more financial and technical capacity to expand their networks to unserved neighborhoods.
- WaterSHED is working on a plan for pooled financing to help smaller operators extend distribution networks and increase revenue, and is engaged in discussions with IFC as a potential guarantor. IFC would need a minimum loan size of \$1 million so WaterSHED is working with about 25 operators to compile basic information on benchmarks to consolidate for a potential pooled loan. WaterSHED invited DAI to introduce this idea to its private sector partners and they were very interested in doing so.

- For the lowest level of community water supply operators with very low capacity, small systems, and limited access to financing, WaterSHED has developed and shared an entrepreneur toolkit that DAI and other government and nongovernmental partners can use to improve the quality of service in these communities.

Additionally, WaterSHED plans to test Medentech’s new chlorine autodoser, which can treat water as it comes into the household through a pipe addressing the issue of compromised distribution systems that may be a source of contamination in water. DAI staff agrees that this technology has the potential to improve water quality at lower cost than centralized treatment. It transfers the burden of treatment from operator to household, which has pros and cons. However, there are regulatory issues that need to be addressed prior to promoting this at scale.

### 3.3.4 Thailand

WaterSHED project staff in Bangkok have frequent contact with the USAID AOTR. They provide regular success stories and respond to information requests as needed. In the first year, the project had issues with spending its obligated funds and delayed submission of its progress reports. However, the issues were resolved in the second year after the communications manager was hired, and several discussions were held between UNC and the AOTR.

### 3.3.5 Regional Relevance

At the time of the evaluation, the regional aspects of the project—replication, scalability, and shared learning—have not been realized or emphasized as much as anticipated in the original agreement. The focus of the program has been on identifying promising products and opportunities for enterprise development at the country level. These have typically been small-scale or, at most, national efforts. The Evaluation Team believes that regionalization of the



concepts and approaches would require the engagement of a large multinational corporation. There is a sense that WaterSHED has explored this potential but has not identified any active opportunities – even the Handwashing Station, which Unilever is willing to support with technical expertise, does not appear to be a good investment for their product line. The WaterSHED model itself is promising to harness the private sector to create and meet demand for WASH products and services, but perhaps it does not lend itself to regional programming—there are significant transaction costs to support the regional elements when the vast

majority of assistance is currently needed at a very local level to build capacity in all aspects of marketing, and facilitating access to financing.

## 3.4 PROGRAM SUSTAINABILITY

The underlying premise of the entrepreneur-based model is that because there is profit to be gained from the provision of WASH products and services that satisfy consumer demand, the market will ensure sustainability. Markets are not perfect, however, and much needs to be in

place for the benefits of WaterSHED’s interventions to extend beyond the end of the program. These are captured in the four central pillars of a marketing approach: Product, Price, Place, and Promotion. An understanding of these central concepts allows the development of appropriate products, at the right prices, easily available through strategic sales placement, and known about to potential consumers through promotion which enhances both product awareness and demand. For sanitation marketing, however, a fifth and sixth “P” typically need to be considered—Policy and Partners. Attention to these factors in design and implementation can help ensure sustainability of program activities and increase the potential for replicability and scale-up. The added value that WaterSHED brings to the market-based approach include financial resources or facilitating access to finance, technical assistance, and research and documentation to support entrepreneurs.

The Evaluation Team was asked to answer the following questions regarding the sustainability of program interventions:

- Are effective strategies in place that will enhance program sustainability?
- At the deliverable level, do we have services that continue to be provided? If not, what actions by UNC, its partners, and RDMA are recommended to ensure effective sustainability and transition?
- What strategy does the program have to replicate its successes within and across the program countries?
- How are RDMA resources leveraged in WaterSHED—in the past as well as planned for the remainder of the program?

The gaps in the region differed for the two main products supported by WaterSHED. For ceramic water filters, demand creation was still critical, while for sanitation, there seemed to be unmet demand and the gap was in making an affordable and attractive option known to consumers.

The opportunities for large multi-nationals to make a satisfactory return on investment have not been identified, so at this time they can be considered only as a source of technical assistance and perhaps also finance through their corporate social responsibility (CSR) units. As the Unilever CSR Director told the Evaluation Team, the sustainability gap is in finding social entrepreneurs and in their limited capacity—not in securing funding. Potential venture capitalists are looking for social enterprises in which to invest where contributing to a social good is given more weight than return on investment.

Most of the Evaluation Team’s contacts with eventual WaterSHED partners came from within the NGO community. This was in part because of the GDA requirement for leveraging of USAID’s funding. Unfortunately, when taking a market-based approach and becoming part of the value chain, NGOs become a competitor and undermine the development of a sustainable market for WASH products and services because they use internal resources to subsidize their cost. According to Unilever, GIFT, and even WaterSHED’s staff, there is venture capital looking for projects to invest in across the region. The gap is that NGOs lack a private sector orientation and/or skills. All of the private sector and business consulting partners the Evaluation Team

spoke with mentioned the critical need to identify and mobilize potential or current entrepreneurs who have a business mindset and are prepared to take market risks, and these are not often found within the pool of NGO staff. Spinning off a private sector business from an NGO requires special attention, and lessons learned include the need to diversify the ownership and Board of Directors of the new business rather than keeping it internal to the NGO.

The sustainability of the enterprises supported by WaterSHED in the three countries is discussed below. Various sustainability strategies are in place for the businesses themselves in response to the different business environments in the three countries.

### **3.4.1 Laos**

There are examples of entrepreneurs who are interested in engaging in the water sector but only in water supply. There is a need for entrepreneurs with a social mission to get engaged as there is a financially lucrative environment in Laos right now—for example, bulk water supply to existing systems is attracting foreign investment.

TerraClear is marketing a new product category and a new design of filter, but it does not appear to the Evaluation Team that they would be able to access commercial financing sources for perhaps another year. Taxes add approximately \$3 to the cost of each filter, and there is an opportunity for USAID to leverage their relationships with government to advocate for the filter to be considered a health/development product that could be exempt from taxes. WHO asked TerraClear to do a market study and would like to see a non-subsidized quality product like this available nationwide.

TerraClear has a well thought out sales strategy to target peri-urban populations and people living along transport corridors, to create an aspirational product, and to eventually move into rural markets that are more expensive to reach but where demand is expected to be high. They also have sold the product to restaurants where the filter is visible and where it establishes product awareness. Targeting poor rural households initially may stigmatize the product which could hinder TerraClear's potential to establish the volume of sales required to be financially sustainable. In addition, households segment their water use, and some use both a filter and bottled water. The economic argument for household investment in filters in Laos is cost savings compared to buying bottled water. This is used in current marketing activities along with convenience and aspiration rather than health benefits.

### **3.4.2 Vietnam**

#### **EAST MEETS WEST FOUNDATION**

The OBA model implemented very effectively by EMWF provides results in terms of improved or new sanitation facilities, but it is not a true “enterprise development” model where suppliers engage directly with consumers to expand their revenues. The reimbursement seems to be captured by those who do not really need it in order to trigger their investments in upgraded sanitation facilities, and in many cases the previous facility already meet the WHO/UNICEF definition of “improved”, so the investments are not resulting in increased access. The research WaterSHED conducted on sanitation and consumer behavior can be leveraged for more resources for EMWF to expand their OBA sanitation program, but there is a need to better target

this subsidy to increase access among those currently without access, rather than for upgrading existing sanitary toilet/latrine facilities.

#### **INTERNATIONAL DEVELOPMENT ENTERPRISES**

Two of the WaterSHED activities implemented by IDE (Hydrologic in Cambodia and the development of the Handwashing Station in Vietnam) benefited from intensive technical assistance in developing a business plan through the Global Institute for Tomorrow (GIFT), an independent for-profit organization. In both cases, the GIFT final reports noted that management capacity and orientation, and evaluation of management using real-world business performance criteria were the most obvious places to make improvements in the operation of the businesses.

Although IDE appreciated WaterSHED's technical support in developing business opportunities, they did not seem to internalize the lessons and seriously engage in the marketplace, either in Vietnam with the handwashing station or Cambodia with Hydrologic. This indicates that WaterSHED either misread the needs or desires of IDE to engage in a market-based approach, or, it is not a good fit for NGOs to try to make the change in mindset to a profit-seeking organization that brings in revenue from the sale of a product or service, rather than from their ability to write successful grants. Given the amount of WaterSHED resources invested so far and the progress to date in business development, neither of these products have potential to reach financial sustainability as per WaterSHED's objectives.

#### **3.4.3 Cambodia**

During the finalization of this report, WaterSHED became registered as a local NGO, which will allow it to seek funding directly from donors to continue to operate after the end of USAID's support.

Under the management structure at the time of the evaluation, the Evaluation Team doubts that Hydrologic will be sustainable without large amounts of additional investment, although since the evaluation the management has been changed and new strategies for sales and company financing are under development. Technical assistance to be provided by Diageo has potential to identify the gaps in the Hydrologic sales and marketing strategy, but it will be up to Hydrologic (and IDE) to act on these recommendations and turn around their business model. At the time of this evaluation, IDE had not moved to hold the management of Hydrologic accountable to business performance targets, so it is not a true private sector entity.

#### **SANITATION MARKETING**

Sanitation marketing activities are already sustainable and spreading on their own. This aspect of the program should be expanded to other countries in the region, including the other WaterSHED countries. WaterSHED had already requested a ceiling increase for this purpose in early 2011, but ceiling increases require an external evaluation of the project (this document), which was not scheduled until late spring of 2011. The Evaluation Team visited several community meetings focused on improving hygiene and sanitation, which support correct, consistent and sustained use of latrines, and complement the main messages for latrine promotion in a market-based approach.

# 4.0 LESSONS LEARNED AND CONCLUSIONS

The WaterSHED project is utilizing an innovative private sector-led model that is consistent with the Agency’s new directives. Over the two and a half years of the project, much experience has been gained and many important lessons have been learned by all stakeholders, from the entrepreneurs and NGOs that have been recipients of technical assistance, to the implementing partners and USAID itself. The key lessons learned and overall conclusions from the evaluation are provided below. Recommendations for the remaining period of project implementation follow in Section 5.

## 4.1 LESSONS LEARNED

- It is challenging within the lifespan of a project to both design and implement local initiatives and then to replicate these under the umbrella of a regional project. Each implementation arena, the local and the regional, requires significant levels of effort, focus and, to a certain extent, different skill sets that may not be readily available in one project team at one time. It also requires somewhat of a sequential approach in that the local interventions must demonstrate progress and success before they are deemed “replicable” or “scalable” on a regional level, but work also needs to happen at the regional level to establish the foundation for the replication.
- Success in achieving development results through enterprise development requires careful selection of implementing partners and beneficiaries. It may be difficult for NGOs with social missions to assume a private-sector orientation on an activity because the skill sets and mindsets are very different. Business-oriented entities recognize that NGOs have good assets, community trust, and integrity of operations, and businesses can gain access to markets by taking advantage of the strong and long-lasting relationships that NGOs have on the ground in communities, with local government, and as part of local markets. It is possible for USAID to continue to work with NGOs on these types of projects, but the Agency needs to have a clear understanding of the strengths and challenges that NGOs bring, as well as articulated guidance and selection criteria regarding NGO utilization and roles.
- There is latent demand for WASH products and services at the level just above bottom of pyramid where professional marketing efforts can increase uptake of quality WASH goods and services. With public sector investment in consumer education/health messaging, awareness of health risks is already high, but health messages alone are not sufficiently effective to trigger behavior change. Non-health messages about convenience, cost savings, and desirable/aspirational qualities have been shown to be more compelling in expanding uptake of WASH products and services. These messages need to accompany implementation of the entrepreneurial model.

- There continues to be a need and a demand for the business development services for MSMEs that WaterSHED has been providing. Financing to support household purchasing of WASH products and services, however, does not seem to be as significant an issue as financing for manufacturers and distributors in the supply chain.
- Working with a research university as a major implementing partner offers strengths, but also presents significant challenges. The nature of the relationship and the expectations of both parties with respect to technical and administrative matters need to be clearly articulated. The near-term requirement to deliver results in a USAID-funded project may not coincide well with a university's longer-term research agenda or mandate.
- USAID should clearly define a process for reviewing and approving activities proposed as leverage in advance, to ensure that they directly support the goals of the project.

## 4.2 CONCLUSIONS

The WaterSHED project is on track to meet its prescribed targets and objectives, but the sustainability of its achievements is at risk. After two and a half years of the five-year program, WaterSHED has only one demonstrable success story in enterprise development—sanitation marketing – that can and should be replicated in other countries in the region. More than 150 sanitation enterprises have benefited from the technical assistance provided by Lien Aid with WaterSHED support and are now reaching more customers, with a cheaper, high quality product, than they were before the project. The other activities have provided valuable learning for developing market-based approaches to scaling up access to WASH products and services, and have been successful at varying degrees in moving towards financial sustainability. However they have not shown strong potential for scale-up to reach the bottom of the pyramid consumers during the remaining duration of the project.

The WaterSHED model itself is promising, but the Evaluation Team believes that the potential for regionalization of products and services across borders is limited. Transaction costs appear to be too high to support regional operations when most gaps in products and services are local and have small profit margins. The limited capacity of small-scale entrepreneurs can be strengthened to improve the quality and diversity of WASH products and services locally, but the transaction costs appear to be too high to support regional operations.

WaterSHED appears understaffed to achieve its objectives. The presence of Country Directors in Laos and Vietnam to provide daily contact may have prevented the delays experienced in these countries.



WaterSHED was highlighted in the February 2011 *Economist*: “Market-based prevention is the idea behind WaterSHED, an alliance of social enterprises and NGOs that strives to raise standards of water, sanitation, and hygiene in Cambodia, Laos, and Vietnam... WaterSHED approaches the problem by developing innovative products that can be made and sold by local entrepreneurs for a profit—all supported by marketing and education programmes to raise understanding of why clean water and sanitation are important.”

The regional nature of the WaterSHED project is to come through replication, scalability, and shared learning. To date, and as per the work plan of the Cooperative Agreement for the initial program years, little of this has come to fruition. There has been some coordination within and between countries, but at present and with the current partners there is little that is regional about the provision of WASH products and services. WaterSHED will increasingly focus attention on the regional aspects of the project in the remaining project period.

There are elements that support the commercial success of the two water filter enterprises (Hydrologic and TerraClear), and by the end of the project they may also be fully financially sustainable through revenue generated by the sales of their products. The technical assistance in branding, marketing, and sales from Diageo, in particular, if internalized by Hydrologic, will help move them more quickly away from the “NGO with a social mission” model and toward a commercial sales-supported model. There is, however, a need to clarify and solidify how the investments and support provided by WaterSHED to date are expected to achieve the “at-scale” regionalization aspect of the program.

There are still large gaps in access to improved water supply and sanitation, particularly in rural areas of program countries. But, the Evaluation Team remains convinced that with the right product and circumstances, the local private sector can play a determining role in the marketing and uptake of WASH products and services using commercial marketing expertise to promote the non-health benefits (convenience, status, cost, etc.) of product or service uptake.

More rigor is required in the appropriate identification and documented application of leverage to support program activities, satisfy the objectives of GDA alliances, and demonstrate the additive value in the use of the leverage to increase scale, effectiveness, efficiency and sustainability of the project outcomes. Because WaterSHED needed time to identify products and services and develop new market-based approaches, there were few products ready for the market, and there is a corresponding lack of data demonstrating correct, consistent, and sustained use of WaterSHED-introduced WASH products, one of WaterSHED’s intermediate results (IR4.4).

## 5.0 RECOMMENDATIONS

Based on the above findings and conclusions, the Evaluation Team presents several recommendations to improve WaterSHED program effectiveness in the second half of the implementation period. These recommendations focus on increasing the projects regional reach, the sustainability of interventions and, related to this, the commercial viability of the products and services WaterSHED supports.

As noted in earlier sections, regionalization of WaterSHED interventions and models will be challenging. However, there are actions that the project could take to move in this direction:

- It is important for the WaterSHED project to document well the successful model of sanitation marketing in Cambodia and disseminate this experience widely in the region. The project also needs to carefully assess the potential for replicating this model in other WaterSHED countries, as well as other countries in the region. Lessons should be shared with Missions to support RDMA's ability to facilitate and encourage scale-up and extension of successes to Missions. More broadly, the WaterSHED project should capture and disseminate the value-added of its inputs to enterprise development and refinement of a market-based approach for WASH products and services.
- WaterSHED with the assistance of bilateral Missions and perhaps their current implementing partners, need to identify capable and responsive partners to replicate successful models in sanitation marketing. Consideration should be given to prioritizing replication in Laos and Vietnam where the project already has a foothold and an understanding of local dynamics in the WASH sector. RDMA support through partner identification, communication with Missions, dissemination of findings, and identification of possible funding sources will be integral to replication in the region.
- Subject to budget resources and in support of furthering replication in the region as well as ensuring the sustainability of project interventions, the WaterSHED project ought to consider locating permanent staff in Laos and Vietnam.

The WaterSHED project must pay close attention to ensuring the sustainability of its interventions to date, including carefully assessing the commercial viability of the products and services the project supports. To wit:

- The WaterSHED project ought to intensify its technical focus and financial resources on the project's overarching mandate of enterprise development and reduce and ultimately phase out support of interventions that are not fully in-line with this, e.g., do not support NGOs and local partners that do not fully buy-in to the no-subsidy approach. In this light, program orientation should shift towards a more "venture capital" mindset and identify those activities most worthy of investment on which to focus resources, particularly in new countries.

- The WaterSHED project could consider providing seed money and technical assistance directly to entrepreneurs to help create or expand their activity in the marketplace while simultaneously providing support to targeted NGOs to support the entrepreneurs in areas that are more in line with the NGOs social mandate. NGOs bring to the table access, information, and community relations but often very modest financing. Organizations exist (e.g., Ashoka, Skoll Foundation, and Acumen Fund) that invest directly in and nurture entrepreneurs. USAID could identify those entrepreneurs that obtain seed funding and assistance and provide needed additional technical assistance.
- For all current interventions, WaterSHED should develop clearly articulated exit strategies for external program support. For future interventions, if commercial viability is the expected outcome, then the exit strategy needs to be clear from the outset. Recipients/beneficiaries need to know specifically what support they will receive from the project and for how long.
- To ensure sustainability and commercial viability of products, the WaterSHED project needs to understand fully the value chain for a specific WASH product or service and ensure that its support is provided to local organizations/individuals to fill gaps and strengthen key components of the chain. The WaterSHED project should not have a direct role or function in the value chain from which it would have to extricate itself at some point, for example, project staff providing quality control on latrine ring manufacturing.
- The WaterSHED project should work with UNC to focus its research efforts on issues of correct, consistent, and sustained use of WaterSHED-supported WASH products and services. UNC has brought rigor to investigating interesting issues in the WASH sector, but WaterSHED has not used the full potential of its core competency to undertake research that directly supports the goal of the project—enterprise development.
- USAID/RDMA should enforce the GDA nature of the cooperative agreement and the need for UNC to provide matching resources for program implementation. UNC needs to prioritize the identification of opportunities to leverage funding from other donors, the private sector, etc. and consider applying its home office capacity to find and mobilize new funding to meet their expected leverage commitments under the GDA program.
  - Include leveraged resources in program budgets (similar to cost-share) to demonstrate how the project has benefited from the leverage.
  - Demonstrate how WaterSHED’s contributions of funding and/or technical assistance moved partners closer to a market-based approach—developing or supporting financially sustainable business enterprises in the WASH sector.
- Implement corrective actions to improve performance based on what is in the cooperative agreement and on implementation reality to date:
  - Prepare a new work plan that accounts for the successes and shortcomings of the current program and reflects the anticipated availability of funding for the remaining years of the agreement; Adjust targets based on performance, while setting ambitious targets for the private sector performance.

# ANNEX A. EVALUATION STATEMENT OF WORK

## STATEMENT OF WORK

### Water, Sanitation, and Hygiene Enterprise Development (WaterSHED)

#### Mid-term Evaluation

#### I. Background

The United States Agency for International Development (USAID) Regional Development Mission for Asia (RDMA)'s Regional Environment Office intends to conduct an evaluation of the Market-based Approaches to Scaling Sustainable Water, Sanitation and Hygiene program (referred to as Water, Sanitation and Hygiene Enterprise Development (WaterSHED)) during May-June 2011, including field consultations May 23-June 3. The evaluation will assess program performance and effectiveness against program goals and indicators, provide recommendations to enhance program sustainability, provide recommendations that assist the Mission in deciding future directions of the program.

WaterSHED (\$8.5 million over 5 years: FY09-FY13) is a Global Development Alliance and is expected to achieve 1:1 leverage. WaterSHED is a mechanism to develop and test innovative business and marketing models for scaling up access to vital water, sanitation and hygiene products and services among lower income consumers in the Mekong region, with initial country-based activities in Cambodia, Vietnam and Laos.

WaterSHED's overall implementation strategy is as follows:

1. Develop, test and implement financially-sustainable business models for delivering effective and affordable WASH products and services to lower-income market segment;
2. Strengthen and leverage the capacity of local entrepreneurs to deliver WSH products and services sustainably and profitably;
3. Assess and document the ability of commercial enterprises to increase the sustained and proper use of WSH products and services; and,
4. Collaborate with WSH partners through multiple platforms to develop marketing and other strategies and tools for scale-up and replication of public-private mechanisms focused on commercialization.

RDMA awarded a 5-year cooperative agreement (486-A-08-00043-00) to the University of North Carolina on September 30, 2008 to implement the program.

## **II. Evaluation Objectives**

The overall objective of the evaluation is to review performance of the University of North Carolina at Chapel Hill (UNC) (as the prime implementer of WaterSHED) in relation with the program's goal and objectives. Specific objectives of the evaluation include:

1. To assess program performance and effectiveness against stated goals, objectives, and performance targets, in particular the regional aspect of the program;
2. To describe what program components work well, need improvement, should be discontinued, or should be replicated and/or scaled up;
3. To recommend measures to improve overall program performance and management.

## **III. Scope of Evaluation and Key Questions**

The evaluation team, led by an independent external consultant, must assess the performance of WaterSHED from inception of the program through the present. While the evaluation should evaluate past performance, the RDMA Regional Environment Office is particularly interested in forward-looking recommendations on performance, in particular with respect to regional products and services.

The final program evaluation will address six key areas and answer targeted questions in each area:

1. **Validity of "Hypothesis" (Effectiveness of Programmatic Strategic Approach):** Has the market-based, public-private approach used by WaterSHED remained valid for achieving stated goals and objectives? Are the regional aspects of the program compelling, or could these results be achieved through bilateral programs?
2. **Confirmation of Results:** What progresses have been made toward achieving the program goals? What progresses have been made toward achieving overall program performance targets? Are the results valid and consistent with the overall program strategic approach?
3. **Responsiveness to Stakeholder Needs:** How responsive have WaterSHED activities been in meeting needs of partners and stakeholders in the region (including national governments and other country counterparts, USAID Missions, and others)? How has WaterSHED activities catalyzed investments that complement and leverage program resources, bilaterally and in the region?
4. **Program Sustainability:** Are effective strategies in place that will enhance program sustainability? If not, what actions by UNC, its partners, and RDMA are recommended to ensure effective sustainability and transition?
5. **Lessons Learned:** What are the lessons learned from program implementation, including both technical and implementation/management considerations? What are RDMA's and UNC's key strengths in undertaking this regional program?

A draft list of illustrative interview questions is provided in Attachment A.

#### **IV. Scope of Work and Roles of the External Consultant**

The evaluation will involve review of key documentation, consultations, and preparation of draft and final evaluation reports and presentations. The report must be in the form of findings and recommendations to the USAID/RDMA Regional Environment Office Director. The evaluation team is expected to provide a summary of results to RDMA in the form of an out-briefing (at the end of field consultations) and evaluation report addressing points 1-5 listed above under Scope of Evaluation and Key Questions.

The independent external consultant, with support from a technical evaluation team comprised of representatives from USAID (RDMA and Washington), must provide overall coordination for this evaluation. A total contract length of up to 26 calendar days (including travel days) of full-time effort is anticipated for the consultant to carry out the evaluation responsibilities outlined here.

The consultant must work in conjunction with the evaluation team to plan and implement the proposed evaluation. While the evaluation team will be heavily involved with design, planning, and logistics, the consultant must demonstrate significant leadership and initiative. However, in no case will the external consultant supervise or direct any US Government personnel in his or her performance of the activities described herein.

Specific responsibilities of the Team Coordinator will include:

- Overall coordination, planning, preparation, and completion of the evaluation;
- Preparation of a questionnaire, with input from the evaluation team, to be distributed to stakeholders in advance of consultations;
- Preparation of an interview guide that includes questions to be asked during consultations;
- Synthesizing and finalizing, with input from the evaluation team, draft evaluation reports and the final report addressing the evaluation objectives and scope described above and including specific findings and recommendations;
- Preparing, with input from the entire team, a PowerPoint presentation summarizing initial evaluation findings and conclusions to be delivered to RDMA at the conclusion of the field consultations.
- Participation in the field consultations in the three WaterSHED countries of Cambodia, Vietnam, and Laos, in addition to Bangkok.

Responsibilities of the entire evaluation team, including the external consultant team coordinator, include:

- Determining the organizations and people to be consulted and develop the evaluation questions.
- Reviewing the cooperative agreement, current and previous annual Work Plans, current and previous drafts of the Performance Management Plan (PMP), progress reports, Success Stories, deliverables, and other program documents;
- Developing the evaluation schedule and make appointments with respective parties.
- Performing the evaluation, which may include, but is not limited to, interviews with parties involved, site visits, conference calls, etc.

- Based on the evaluation results, making recommendation to RDMA that address the evaluation's objectives and scope.
- Based on the evaluation results, identifying lessons learned from the program as well as key strengths of RDMA in supporting regional market-based approaches
- Prepare initial presentation of preliminary evaluation results to the RDMA Regional Environment Office Director, Contracting Officer's Technical Representative (COTR), and other RDMA staff, and preparing a final evaluation for the COTR to present final results;
- Preparing the draft and final evaluation reports addressing evaluation objectives and scope provided above.

Key stakeholders/organizations to consult during the evaluation will include, at a minimum, the USAID/RDMA Regional Environment Office, Mission Director and/or Deputy Mission Director, and Program Development Office.

Additional selected program partners and GDA partners should also be consulted. Due to resource and time limitations, not all organizations listed are expected to be included in consultations.

Regional

WHO  
GIFT  
Diageo

WTO  
WSP  
SNV  
IDE/Hydrologic  
Technical Working Group on WatSan

Laos

US Embassy  
TerraClear (LWR)  
SNV

Vietnam

US Embassy and USAID mission  
East Meets West  
IDE/Vietnam  
WSP  
National government/WASH working group

Cambodia

US Embassy and USAID mission  
Lien Aid

Telephone interviews will be arranged where appropriate to minimize unnecessary travel. Clustered interviews will also be arranged, where appropriate, for resource efficiency.

**V. Deliverables**

Results of the evaluation will be in the form of findings and recommendations to the USAID/RDMA Regional Environment Office Director and the AOTR of WaterSHED. The consultant is expected to ensure timely completion of all deliverables, including a summary of results to the RDMA in the form of out-briefing and an evaluation report responsive to the scope of work stated above. The consultant will need to sign a non-disclosure form prior to initiating any activities involved in this evaluation.

The deliverables for this request for proposal are as follows (and further explained below):

1. Attend the evaluation planning meeting in Bangkok o/a May 23, 2011
2. Out-briefing to RDMA on initial findings in Bangkok o/a June 10, 2011
3. 1<sup>st</sup> draft written report submitted to RDMA for comments o/a June 10, 2011
4. 2<sup>nd</sup> draft written report o/a June 15, 2011

5. Final report o/a July 1, 2011.

The consultant must provide a summary of results to RDMA in the form of an out-briefing (at the end of field consultations) and evaluation report. The consultant must provide the draft reports to RDMA for review in an electronic version in Microsoft Word format.

Following this review, and within 14 days of receipt of the draft report, USAID will provide to the consultant its comments and suggestions for additions or modifications. These will be discussed collegially with the consultant for incorporation, in the final version, as appropriate. As a guideline, the draft report should have a minimum of 25 pages and a maximum of 40 pages using standard one-inch margins, single-spaced text, paragraphs separated by 12 points of space, and 12-point Times New Roman font (or equivalent sized font).

Within 7 days of receipt of USAID's comments and suggestions on the draft report, the consultant must submit to the USAID/RDMA Regional Environment Office an electronic version in Microsoft Word format.

## **VI. Payment schedule**

Full payment of the fixed price—cost reimbursement hybrid type contract shall be made to the consultant upon submission and acceptance of the final report.

It is anticipated that the labor will be quoted as a fixed price. Travel, transportation, and per diem costs will be on a cost reimbursement basis.

## **VII. Period of Performance**

The evaluation will be performed during May-June 2011, and field consultations will take place during May 23-June 3. See Table 1. Team members must visit (together, in smaller groups, or individually) selected implementing partners and stakeholders in Cambodia, Vietnam, and Laos. Consultations involving all team members will also be conducted with US-based partners or stakeholders in person or via teleconference, at the conclusion of the field consultations.

Table 1. Illustrative Schedule

<b>Due Date</b>	<b>Task</b>
<b>Review and Preparation</b>	
May 2011	Evaluation Team review of program documentation, prepare questions and stakeholders
<b>Data collection</b>	
By May 23	Questions prepared and stakeholders to receive it are identified, team planning meeting
May 24-Jun 3	Field visits
June 3-10	Questionnaire results compiled and analyzed
<b>Field Visits</b>	
May 15	List of consultation stakeholders completed (initiated by RDMA)
May 23	Consultation schedule finalized; make appointments with stakeholders
May 23	Interview guide completed
May 24-26	Consultations in Cambodia
May 26-31	Consultations in Vietnam (Hanoi and Danang)
May 31- Jun 5	Consultations in Laos (Vientianne and Pakse)

June 5-10	Bangkok—Writing and presentation to RDMA of initial findings
Evaluation Report	
June 4-10	Prepare draft evaluation report
June 10	1 <sup>st</sup> Draft evaluation report due / Comments from RDMA
June 15	2 <sup>nd</sup> Draft evaluation report due
June 24	Comments from USAID missions and Embassy
July 1	Final report due

Approximate LOE for the Team Coordinator Consultant is 28 days, estimated as follows:

- Preparation, Review of Documents and In-briefing/team planning in Bangkok (up to May 23).....5 days
  - Field visits/consultations (May 24-June 5).....13 days
  - Out-briefing at RDMA and 1<sup>st</sup> Draft Report Preparation (June 6-11)..... 6 days
  - Final Report Preparation by July 1..... 4 days
- TOTAL 28 days

Following is a tentative travel schedule (including current flight bookings for USAID team members). The Contractor shall work with the COTR to finalize the travel plan.

- *Team Coordinator and Selected Team Members travel from USA to Bangkok, Thailand*
- *- May 21-22*
- *Team planning meeting - May 23*
- *Team travels to Phnom Penh, Cambodia morning - May 24*
- *Team travels to Hanoi, Vietnam evening - May 26*
- *Team travels to Danang, Vietnam morning - May 28*
- *Team travels to Hanoi, Vietnam evening - May 29*
- *Team travels to Vientiane, Laos evening - May 31*
- *Team travels to Pakse, Laos morning - June 3*
- *Team travels to Vientiane, Laos morning - June 4*
- *Team travels to Bangkok, Thailand - June 5*
- *Travel from Bangkok to USA - June 11*

#### **VIII. Contracting Officer’s Technical Representative**

The COTR for this purchase order is based at the RDMA in Bangkok, and also serves as the Agreement Officer’s Technical Representative (AOTR) of WaterSHED.

#### **IX. Government Furnished Information**

Background briefing shall be provided by the RDMA and USAID/W technical officers.

#### **X. Proposed Evaluation Team Members (Roles and Responsibilities)**

1. Team Coordinator TBD (Independent Consultant)—Evaluation team coordinator and lead author; focus on overall program and strategy issues.
2. Water Sanitation & Environmental Health Technical Advisor, USAID Global Health

### 3. Regional Alliance Builder, USAID/RDMA

#### **XI. Evaluation Criteria**

The proposal received in response to this RFP will be evaluated and scored in accordance with the technical evaluation criteria set forth below, totaling up to 100 points:

- Demonstrated ability to fulfill the responsibilities of the evaluation team coordinator and ensure the timely completion of the evaluation. (25 points)
- Demonstrated ability to plan, design, and implement results-based program evaluations, including coordinating an evaluation team to effectively facilitate technical meetings, discussions, and interviews. (25 points)
- Experience and knowledge in market-based efforts to improve access to safe drinking water, basic sanitation, and to improve hygiene behaviors in Asia. (20 points)
- Demonstrated understanding of development assistance programming challenges and opportunities, particularly with respect to regional programming. (15 points)
- Possess superior analytical and written and verbal communication skills to synthesize and present evaluation findings into a final report with recommendations. (15 points)

## **Attachment A. Illustrative Interview Questions**

### Implementation Approaches

1. Is the market-based approach used by WaterSHED an effective approach for the program to respond to the water/sanitation challenges in the program countries, and, if so, how is it effective compared to traditional approaches?
2. Is the public-private partnership an effective model for achieving the results in this program? How?

### Regional Requirements

1. How well does the program demonstrate its characteristics of a regional program?
2. Is the geographic coverage of the program appropriate for the level of funding provided?
3. How has the regional program enhanced or leveraged bilateral WSH activities (where appropriate)?

### Program Performance

1. Are the program activities, including reporting, implemented on time and as planned?
2. Is the program on course to meet expected results?
3. How well has the program coordinated with bi-lateral missions and embassies?
4. How has WaterSHED addressed gender in program implementation?
5. Are there particular strengths/weaknesses/opportunities for program improvement?

### Local Ownership and Sustainability

1. At the implementation level, is the program working closely with the local authorities, entrepreneurs, and communities?
2. What strategy does the program have to replicate its successes within and across the program countries?
3. How are RDMA resources leveraged in WaterSHED, in the past and planned for the remainder of the program?

# ANNEX B. DOCUMENTS REVIEWED

Marketing Pilot Project. September 2010. Kampung Speu Province Coverage Report (Q4 FY 10)

UNICEF/Cambodia. 2009. Gender Equality & Equity Situation Analysis: Rural Water, Sanitation and Hygiene in Cambodia.

WaterSHED-Asia. 2009. FY 2009 Annual Report.

WaterSHED-Asia. 2010. FY 2010 Annual Report.

WaterSHED-Asia. 2010. Performance Monitoring Plan FY2010.

WaterSHED-Asia. 2011. FY 2011 Oct-Dec 2010 Quarterly Report (UNC).

WaterSHED-Asia. 2011. FY 2011 Jan-Mar 2011 Quarterly Report (UNC).

WaterSHED-Asia. 2011. FY 2011 Work Plan.

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