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CAMBODIA MSME PROJECT

INTERIM ASSESSMENT REPORT OF WATER SUPPLY ACTIVITY

PUBLIC DISSEMINATION REPORT

TASK ORDER NO. 04

MARCH, 2010

This publication was produced by Del McCluskey, Technical Area Manager- Water, DAI, for review by the United States Agency for International Development.

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CAMBODIA MSME 2/BEE PROJECT

INTERIM ASSESSMENT REPORT OF WATER SUPPLY ACTIVITY

TASK ORDER NO. 04

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Introduction

From March 15 – 19 Mr. Del McCluskey, DAI's team leader for water supply and sanitation activities worldwide, with support from the MSME II water team, visited five water service providers located in Prey Veng, Svey Rieng, Kampong Cham and Kratie provinces. The purpose of these visits was to:

1. Assess progress on water investment program implementation, and ensure that the existing monitoring and quality assurance methods meet USAID and DAI standards.
2. Advise the water team on mitigation measures for subcontracts that fall behind schedule.
3. Advise the team on ideas for creating household demand for safe water and sanitation products through media and communication tools, including the project sponsored weekly Business Radio Program.

Summary Findings

The MSME II project has put in place a very innovative approach that encompasses elements of the value-chain methodology employed by the project, combined with targeted subsidies following an output-based-aid approach. The aim is to expand access to safe, clean, piped water in 8 provinces; to more than 10,000 mostly poor households. This unique approach clearly demonstrates the ability to achieve wide-scale impact with limited donor resources.

Findings: Overall, the project is on track to achieve, and even exceed, its objective of connecting more than 10,000 households to safe water. With the exception of two or three contracts, the rest appear on track to meet their targets by the end of August 2010. The main question will be how the rainy season (which begins in May/June) will affect the installation of distribution pipe and household connections. Once completed, we expect the project will have helped more than 13,000 households connect to safe, clean water and will have directly impacted the welfare of more than 65,000 people. The project will also have significant secondary impacts – as these expanded or new water systems also provide safe water to schools, health clinics, public markets and eating establishments that serve a much wider population.

1. The unique approach developed by MSME has:
   - Leveraged significant private sector investment: We currently estimate that for every US Dollar invested by USAID, the water service providers are investing $2.18 in extending piped networks, upgrading and expanding water treatment, and connecting more households.
   - Provided sufficient resources to help water service providers expand their markets and improve profitability, thus enabling their continued expansion beyond MSME II. Several operators mentioned how the MSME resources achieved two important objectives: providing capital they needed to expand their systems, and enabling them to lower the connection fees, that encouraged more households to become connected.
   - Strengthened the water value chain: The MSME approach has placed the burden on the water service providers to use local engineering and construction and local supplier firms; for the design, construction and supply of materials that they have used to expand their systems. This approach has strengthened the capacity of several local engineering and construction firms, and expanded the market for materials suppliers.
   - Planted the seed for the formation of a Cambodian association of water service providers, that can facilitate the exchange of information, and potentially serve as a voice for sector policy reforms with the RGC.
   - Forged a strong partnership with MIME officials in water quality testing and water quality monitoring.

2. MSME's use of contracts and an output-based-aid payment mechanism keeps the MSME team, and private water service providers, focused on achieving specific performance targets and contract deliverables. Further, USAID's environmental regulations are an integral part of each contract, facilitating compliance.

3. Table 1 *[confidential]* provides a summary of selected indicators for the 17 water service providers participating in the MSME II program. These indicators are extracted from the initial surveys conducted by the MSME team and through field interviews with selected WSP staff and owners. Principal observations include:

   - MSME is almost doubling the number of households with access to piped, safe water in the areas served by the 17 WSPs participating in the program.
   - Overall tariff rates provide the basis for very strong water businesses. Current rates vary between R 1,500 and R 3,000 ($0.37 and $0.75) per cubic meter. Given the level of systems technology, source of water and required treatments, these rates allow all companies to make sufficient profits provided they have enough customers to generate cash flow in excess of their operating costs.
   - Many of the companies lack the operational, financial and administrative systems to judge how well their business is performing. For example,

- Non revenue water. This is a key indicator of water utility health. It measures the difference in total water produced and total water sold. As shown in Table 1*[confidential]*, NRW can seriously undermine the financial viability of a water service provider. Many of the companies do not have production meters, thus their estimates of non-revenue water losses are highly speculative. For those that do have production meters, it appears through discussions that, with some exceptions, many do not track actual production and sales each month--to accurately gauge non-revenue water.

- Billings and Collections: Billings and collections is another key indicator of a water operator's financial and operational health. While all operators indicated that they bill and collect monthly, only the most progressive operators track this information closely and have devised innovative collection systems to ensure the timely collection of bills. Several of the operators visited are only now putting in place customer registries and some still lack even basic accounting systems that would facilitate the tracking of customer billings, collections, and time between billings and payments. Several stated that this was not important when they had few customers. With their expected current growth, tracking this information will become increasingly critical to the operators' financial health.

- Operating ratios. This is another key indicator for measuring a water operation's financial health. As a general rule, water service utilities should achieve an operating ratio of at least 1.3 to 1.4 (income/operating costs). At this ratio, the operator will be generating sufficient income to cover operating costs and depreciation of capital investments. As seen in Table 1*[confidential]*, estimates of these ratios based on the information supplied during the initial survey vary widely - between 0.49 and 8.84. A ratio less than one means they are losing money. Based on conversations with several operators, it looks like many are operating closer to a 1.0 – 1.1 ratio. They will need to achieve a much higher ratio to recover capital investments within a ten year period (several indicated that this was their objective).

- All operators interviewed discussed the wide difference between water sales in the dry season versus wet season –as much as a 50 percent decrease in sales during the rainy season. This poses a significant challenge to water service operators that face monthly loan payments, and need to retain critical technical staff throughout the year. These differences reflect the historic reliance by households on rainwater for household needs. Virtually every household visited showed considerable investment in rainwater storage and collection systems. Based on the experience of other countries, we expect that these wide differences will diminish as households increase water consumption in the rainy season once they realize the convenience of piped water and gain confidence in the reliability of the supplier.

Recommendations

The MSME Water Team currently plans a second round of contracts that will lead to another five to ten contracts for expanding water supplies. This second round will provide the team an opportunity to: (1) work with additional private sector suppliers; (2) potentially test the use of the MSME approach in a much more difficult water supply environment (i.e. an area of the country where water resources are in short supply); (3) refine its methodology for selecting and contracting with water service providers; and (4) potentially testing approaches for more focused targeting of subsidies, and to increase the leveraging of private sector investments. This second phase also provides MSME the opportunity to work with its participating WSPs to strengthen business productivity (Component 1) and to increase their voice in policy making (Component 2). For example:

1. The water service providers that participated in the Philippines Study Tour now see the benefits of having an association that can facilitate the sharing of information, promote benchmarking, organize training and promote policy reforms with the RGC. It is Recommend that MSME build on this interest and help those interested water service providers examine what it will take to create an association. This could involve providing limited support to help the interested members develop a business/feasibility plan for the association and convene a meeting to discuss it among potential members.

2. All water service providers visited rely primarily on word of mouth, their reputation and flyers to promote their services. These approaches have limited impact, especially in those areas where electricity is relatively inexpensive and ground water is abundant and close to the surface. Recommend that MSME help link the water service providers with organizations that can provide training and propose alternative approaches for marketing their services. Ideas might include: Fostering links with the Provincial Health and MIME Departments to publish the differences between ground and piped water supplies in terms of pathogens, toxic chemicals and taste; Participating in provincial and district fares to showcase their businesses; and Participating in radio shows that discuss the differences between ground water and piped water.

3. Many water service providers have weak accounting and business administration systems. Recommend that MSME explore: (a) linking with the Water and Sanitation

Program's activity that provides training for water service providers in business accounting, and work with local training institutions to develop short term training programs on water service business planning, business administration, and financial and operational performance monitoring; and/or (b) promoting exchanges and twinning arrangements between water service providers where staff from one could learn from the other.

4. Most of the water service providers we met had borrowed some money to undertake the network expansions. The collateral requirements and short loan periods can pose specific challenges for water service businesses. Additionally, while MSME is able to provide some subsidy to help connect poor households, this approach is not sustainable once the project ends. This represents an opportunity for a micro-finance institution to partner with water service providers and create a special loan product for household connection fees. Recommend that MSME consider organizing workshops to introduce local banks and micro-finance institutions to approaches tested in Indonesia and the Philippines that have expanded access to credit to both water service providers and households for water connection fees.

Table 1 Summary of Selected Indicators for MSME II Supported Water Service Providers

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ANNEX 1 - SITE VISIT REPORTS WITH SELECT WSPs

Neak Leoung Water Company, Prey Veng

The Neak Leoung Water Company is owned by Mr. Touch Kim. It was established four years ago, and is located in Neak Leoung commune on the banks of the Mekong River. The company has a water treatment plant that it built with World Bank assistance and consists of aeration, sedimentation and chemical mixing (chlorine and lime). Although the water company is located on the Mekong River, it uses groundwater as its source to lower treatment costs.

Many of the households being connected are very poor. Many we visited are located in the Mekong flood plain, requiring the placement of meters and household connections more than a meter above ground. Between August and November, many areas are flooded requiring the water company to read meters using boats.

The company is on track to meet its target of adding an additional *[confidential]* household connections with support from the MSME II team by the end of June. All connections are metered and most end in a standpipe outside the home. The company's construction crews are installing between 5 - 10 household connections per day. The main issue facing the company, is that it doesn't really know how much water they lose as they have no production meter. They also may have to expand the treatment plant capacity if average household consumption increases.

Table 2 Neak Leoung Water Company Statistics

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Bavet Water Company, Svay Rieng

The Bavet Water Company is located in the town of Bavet, on the Vietnam- Cambodia border, and is owned by Khun Aphivath Company that operates several water companies in Cambodia. They use groundwater and electric pump, given the low cost of electricity in Bavet. According to the baseline survey, they do not have any arsenic problems with the groundwater.

At the initiation of its contract with MSME II, the company had 18.75 km of installed distribution system and 14 connections. While the town comprises more than 3,000 households, low cost electricity and abundant shallow groundwater have led to most households installing their own wells. This remains the case even if the coping costs (i.e. pump purchase, well drilling, storage tanks, etc.), in total, sum greater than the cost of connecting and making monthly payments to the water company. The company has not done any testing to compare the quality of untreated groundwater with the water it produces. Under their contract with MSME, Bavet Water Company is expected to add *[confidential]* new household connections. They have currently have added *[confidential]*, and have another *[confidential]* households registered for new connections. Some customers have complained about the blue tint and chlorine taste of the water supplied by the company.

Table 3 Bavet Water Company Statistics

(Table removed for public dissemination of this report)

Ly Heng Water Company, Kampong Cham

The Ly Heng water company is a small, family owned business that began about three years ago. The company uses well water for its supply, and has a small treatment plant capable of producing 100 to 150 cubic meters per day depending on the season. Their system currently meets all MIME standards.

Demand decreases significantly in the wet season when many households collect rainwater to meet many of their daily water requirements. The company sells and distributes about *[confidential]* cubic meters per day through its own and other company water trucks. It distributes about *[confidential]* cubic meters per day through its piped system. According to the initial survey, the company estimated its Non-Revenue Water at approximately 30%. Mr. Heng believes that leaks in an old pipe and the initial Class A meters he purchased cause most of the NRW.

Table 4 Ly Heng Water Company Statistics

(Table removed for public dissemination of this report)

Suong Water Supply Company, Kampong Cham

The Suong water company is located in Kampong Cham province and is operated by the Khun Aphivath Company. The World Bank provided the initial funding for the construction of the treatment plant and water storage. MSME is providing a subsidy to lower the connection costs. The company expects to reach its target of *[confidential]* new customers by the end of the contract. Several of the customers said that the reason they were connecting now was because the connection fee was lower and they could afford it. The total potential number of customers in this area is more than *[confidential]* households.

The company promotes its service through fliers, word of mouth and sometimes through the use of loudspeakers. They do not test the quality of household wells. Their biggest challenge to expanding customers is that ground water is relatively shallow and available year round. Raw water in the area is acidic, but so far no reports of arsenic.

Table 5 Suong Water Company Statistics

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The company draws its raw water from a 130 meter well. Treatment consists of adding some chlorine and lime. The manager said they provide no water for free, but did waive the connection fee for the head of the Commune Council. They now charge him for water. They have had no problems with fecal coliform in their raw water. They use a diesel generator to run electric pumps, because the local electric supply suffers periodic brownouts.

Touch Sarein Water Company, Kratie

The company began in 1988, pumping and selling river water. In 2003, the owner applied for a formal license from MIME. The cost of the license depends on the MIME staff.

The total number of households in his area is *[confidential]*. He has *[confidential]* % connection within his current service area. He is extending the system and expects to achieve 90% coverage once the mainline is extended. Before he installed his system, people purchased water from a tanker truck at about $5.00 per 1.5 cubic meter (approximately ten times what he charges) and the water wasn't clean. Customers are very happy with the service.

Table 6 Touch Sarein Company Statistics

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Access to capital poses a constraint to expanding the business. He recognizes the need to redesign his treatment system to expand capacity so he can provide water 24/7. He never received any technical help for the initial design, and now understands it is not up to standard. He also wants to replace the older meters in his system. He suspects he loses water through these meters, but he doesn't think the customers will be willing to pay for another meter, and he can't afford to swap them for better meters at this time.

Srey Sokhom Water Company, Takeo

Mr. Sokhom started his water company in 1996. Initially, he provided untreated water to approximately 100 customers. In 2002, he constructed his treatment plant. His plans include adding *[confidential]* new customers. He received assistance from GRET to construct a wastewater treatment plant, and now provides wastewater collection and treatment services to the town where is business is located. He charges $*[confidential]* for households to connect to the wastewater treatment system if they only discharge wastewater from the toilet, kitchen and washing. If it includes rainwater, then he charges $*[confidential]* per connection. In addition to the connection fee, he charges households Riels *[confidential]* per month for wastewater treatment.

In the past, he charged customers about $*[confidential]* to connect to the system. This included a Class A meter. Under the MSME program, he charges $*[confidential]* to connect. This fee includes a Class C meter. If people sign up early, he provides a further discount to $*[confidential]* to connect. He estimates non-revenue water at about 17%, but it is unclear how he measures this. During the dry season, he current produces about *[confidential]* cubic meters per day. This drops to *[confidential]* cubic meters per day in the wet season.

Table 7 Srey Sokhom Company Statistics

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