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# ASSESSMENT OF THE WATER AND SANITATION PROGRAM/PERU ALTERNATIVE PRO-POOR SANITATION SOLUTIONS INITIATIVE

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# **ASSESSMENT OF THE WATER AND SANITATION PROGRAM/PERU ALTERNATIVE PRO-POOR SANITATION SOLUTIONS INITIATIVE**

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## ACRONYMS AND ABBREVIATIONS

ADRA	Adventist Development and Relief Agency
APSS	Alternative Pro-poor Sanitation Solutions in Peru Initiative
CARE	Name of a large International Development NGO
CLAS	<i>Los Comité Local de Administración de Salud</i>
CLTS	Community-led Total Sanitation
DIGESA	Directorate for Environmental Health
FONDAM	<i>Fondo de las Americas</i> (the America's Fund)
GoP	Government of Peru
HIP	Hygiene Improvement Project
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MOU	Memorandum of Understanding
NGO	Non-governmental Organization
OMSABAR	<i>Oficina Municipal de Saneamiento Ambiental Básico Rural</i> (Municipal office of rural environmental sanitation)
QSM	Quality Sanitation Market
SDC	Swiss Agency for Development and Cooperation
SEDAPAL	Lima's public water utility ( <i>Servicio de Agua Potable y Alcantarillado</i> )
SENCICO	<i>Servicio Nacional de Capacitación para la Industria de la Construcción</i>
SOW	Statement of Work
TOR	Terms of Reference
USAID	United States Agency for International Development
VMCS	Vice Ministry of Construction and Sanitation of Peru
WSP	Water and Sanitation Program

## I.0 EXECUTIVE SUMMARY

Scott Tobias, sanitation specialist with the USAID-funded Hygiene Improvement Project (HIP), arrived in Lima, Peru on 3 May 2009 and worked through 19 May implementing a formative assessment of Water and Sanitation Program (WSP)/Peru's Alternative Pro-poor Sanitation Solutions (APSS) in Peru Initiative. Joined by APSS Monitoring and Evaluation (M&E) Specialist, Patricia Fuertes, the two worked closely with the WSP/Peru APSS management team of Malva Baskovich and Mercedes Zevallos to plan and coordinate all activities of the assessment. This Initiative, the first sanitation marketing activity in Peru, has been in the implementation stage in five pilot districts representing distinct Peruvian demographics since September 2008. Both consultants are supported through United States Agency for International Development (USAID)/Peru funding that is directed through the USAID Hygiene Improvement Project. Scott Tobias, an environmental engineer with more than 20 years of experience in water and sanitation development, supported APSS in August 2007 in its early design phase. Patricia Fuertes has been a HIP consultant with APSS since January 2009, supporting the Initiative in monitoring and evaluation and documentation.

At the time of this formative assessment in May 2009, the final evaluation was slated for August 2009, and the APSS Initiative was scheduled to end implementation in September 2009. This formative assessment was conducted not only to help APSS prepare for the final evaluation, but to help identify key actions that could be taken to ensure that the incipient markets established through the Initiative's district pilots are self-sustaining, and that APSS properly prepares for an exit from these pilots and potential replication in new districts and regions.

The formative assessment consisted of a desk review of pertinent documents, meetings in Lima with key APSS Initiative implementers and collaborators, and brief field visits to each of the five pilot zones. The zones were chosen by the Initiative to represent a cross-section of Peru's diverse geographies and demographics. Each is characterized by populations defined as "poor" or "very poor," and each has low sanitation coverage relative to national Millennium Development Goals (MDG). The five zones are:

- **Chincheró, Cusco:** Highland, rural, Quechua, with an agricultural- and tourist-based economy;
- **Namora and La Encañada, Cajamarca:** Valley, rural with a mestizo population; its agricultural economy is supplemented by mining and small business and a national poverty alleviation program;
- **Independencia, Huaraz**—Highland, mestizo population; has urban neighborhoods and rural communities;
- **Pachacutec, Callao**—Peri-urban, coastal desert with immigrants from rural areas;
- **Belen/Peña Negra, Loreto:** Peri-urban and rural Amazon.

In these 1-2½ day visits, the Assessment Team met with APSS field sanitation sales promoters, sanitation product vendors, service providers, financial institutions, consumers, local government representatives, and representatives from other government programs. This trip report is written for an audience near to the implementation and management of the APSS Initiative. It contains

significant analytical detail and is based on directives from APSS managers. It also includes findings and conclusions in multiple analytical formats under 10 headings—in general and for each of the pilot zones. The major findings and conclusions of the formative assessment are:

### **Paradigm Change**

- Non-governmental organizations (NGOs) working in the pilot programs have spent significant effort in paradigm change—that is, succeeding in convincing local actors, as well as their NGO staff that this sanitation program was not providing subsidized sanitation solutions to the poor. All local actors, public institutions, private sector, and consumers have exhibited various degrees of skepticism in the market approach that APSS has worked to overcome.
- After diligently working on this paradigm change issue, four of the five pilot teams have created incipient sanitation markets, each using different models for providing key market functions—a significant achievement.
- The assessment confirmed that households that have obtained quality sanitation through the market are using and maintaining the household facilities properly.

### **Market Consolidation**

- Several markets are on the verge of handing on important market functions to local private sector actors, effectively bringing the sanitation market to the verge of self-sustainability.
- APSS faces a significant challenge in seeking to ensure that all consumers who are motivated by APSS marketing and promotion are purchasing quality products and services. The report examines several approaches to developing and sustaining a Quality Sanitation Market (QSM).
- Key market functions currently provided through APSS will be a challenge to sustain. Those include marketing, promotion, and organization activities; certification of suppliers of goods and services; and government support to the market in terms of quality control or monitoring.
- With a couple of exceptions, a cautious private sector has not proactively jumped into the sanitation market with innovative products or financial services. (It is important that APSS studies and works to replicate these positive exceptions.)

### **Environmental Issues**

The environmental impact of a successful regional or national sanitation market poses a significant threat to Peru's surface water. Virtually all toilets purchased are pour-flush and most are connected to sewers that deposit untreated wastewater into the environment.

### **Affordability Strategy as Part of a National Sales Plan**

- Articulate the supply side offer as “affordable sanitation solutions” that can be purchased by consumers at virtually all economic levels. Affordability is a function of the price of materials, the use of do-it-yourself labor, strategic use of contracted services, access to appropriate savings or credit products, and programming the household sanitation construction in stages as necessary to spread the costs out over time. The solutions must be



part of a strategy of affordable sanitation that will form the core of the APSS sales plan for the life of the Initiative.

- The affordable sanitation solutions and affordable sanitation strategy can form the core of a sales plan to increase sales of quality sanitation to consumers during the next five months. This sales plan should include revamped marketing messages and materials (reflecting the affordable sanitation solutions) and additional mass marketing activities—e.g., sanitation fairs.

### **Promotion and Marketing**

- APSS must re-engage in marketing activities and push hard to realize sales of quality toilets and bathrooms during the critical post-harvest period when agrarian families have more discretionary funds.
- APSS pilot teams must mentor local actors in key market functions—e.g., marketing and promotion, negotiating with government programs and with local governments (communities) in arranging bulk purchasing and community-level projects. Representatives from interested and proactive local private-sector partners should accompany APSS staff in activities that facilitate these market relationships. The objective is to pass on systems and skills to others who will continue the efforts post-APSS.

### **The Offer of Quality Technical Products and Services**

- APSS has discussed the importance of having a nationally recognized system for certification of the QSM, but has not been able yet to provide any formal certification for a provider of sanitation products or services. APSS should examine certification models that involve the Government of Peru (GoP) as well as models that do not. A formal certification system that is sanctioned by the government is the objective.

### **The Offer of Quality Financial Products and Services**

- APSS should devote significant effort to re-energizing the participation of financial institutions in the QSMs. There are institutions working in the pilot zones and making home improvement loans with little or no contact with APSS, and evaluators noted what might be renewed interest on the part of financial entities in supporting a sanitation market.

### **Addressing the Enabling Environment**

- At least one of the QSM models that APSS put into place should in the coming months seek to establish a significant role for district government in supporting the quality of products and services in the sanitation market.

### **Developing and Implementing an Exit Strategy**

- As each pilot zone moves toward a different QSM model, APSS should design and implement local and national lessons-learned workshops or staff exchanges as soon as practical to help spread best practices in establishing self-sustaining QSM models among the pilot markets.
- APSS needs to urge local private sector and government actors to put in place one or more functioning QSMs that can, in the final months of the Initiative, provide information on

designing a general QSM model and the most appropriate models for different district enabling environments and demographics.

- APSS understands the role that incentives play in driving a QSM. APSS has opportunities to help establish QSMs where certain actors perform multiple market functions to make a quality sanitation sale, and QSMs where market functions are performed by different actors who are linked by mutually recognized, transparent, reciprocal incentives whereby the sanitation sale spreads financial and political rewards to those involved in making that sale happen. APSS ideally should be able to take a look at both of these general market models.
  
- APSS advocacy work with the GoP could provide important contributions to the sanitation sector in Peru by helping to institutionalize the sanitation marketing approach (and conversely discouraging paternalistic programs with large household subsidies), in helping to formalize a rational set of sanitation technical norms, in particular those addressing on-site wastewater disposal; and in supporting central government entities that work in the sector to formalize their support to local governments that may be struggling with (or ignoring) sanitation coverage issues.

## 2.0 INTRODUCTION

This formative assessment of the WSP/Peru Alternative Pro-poor Sanitation Solutions Initiative was conducted 4 -19 May by Sanitation Specialist Scott Tobias and Monitoring and Evaluation Specialist Patricia Fuertes, both from USAID/HIP, who are supporting WSP/Peru through HIP. The APSS Initiative will use the results of this formative assessment to: 1) Make necessary adjustments in programming that will help strengthen and consolidate the markets in the pilot zones; 2) Create, strengthen, and mentor systems and organizations that will sustain the pilot markets after the project ends; and 3) Take steps to capture practices, and to create tools and approaches that permit efficient replication of project activities to create self-sustaining sanitation markets in other regions.

### 2.1 THE APSS INITIATIVE

In 2007, the WSP, administered by the World Bank, initiated the implementation of the APSS Initiative in Peru. The APSS Initiative was to reach 8,000 families with toilets promoted as part of an integrated package (sanitation options, installation, use, and maintenance sanitation services, financial products, and adequate health and hygiene practices) in five localities, targeting a wide range of climates and demographics with the objective of testing multiple approaches and tools.

The APSS Initiative is a public-private alliance headed by the GoP through the Vice Ministry of Construction and Sanitation of Peru (VMCS), Lima's public water utility (SEDAPAL), the Directorate for Environmental Health (DIGESA) of the Ministry of Health, the World Bank, the Swiss Agency for Development and Cooperation (SDC), USAID, the Americas Fund (FONDAM), the Ensemble Foundation, and the Water and Sanitation Program (WSP). The WSP acts on behalf of the Steering Committee of the APSS Initiative, which consists of all the institutions listed. The Initiative also is in charge of the general coordination of the project.

The APSS Initiative is inspired by former Community-led Total Sanitation (CLTS) and sanitation marketing schemes successfully applied by WSP in Africa and Asia. The APSS Initiative in Peru also incorporates lessons from prior Peruvian experiences in improving the access of the poor to basic services—e.g., micro-finance services, marketing quality contraceptive products. The objective of the APSS Initiative is to increase the access of the poor population to safe, sustainable, and affordable sanitation services in order to improve health conditions and decrease the environmental impact of inadequate sanitation practices. The working strategy of the APSS has four components: a) stimulate demand; b) strengthen the supply; c) develop access to micro-credit options; and d) support institutional capacities.

The APSS Initiative seeks to develop self-sustaining sanitation markets by creating and supporting: a) consumer demand for high-quality sanitation products and services; b) a competent, articulated, and profitable local-national supply side that is able to provide quality products and services; c) micro-credit systems that include financial products for household sanitation improvements; and d) organizations and systems committed to sustainable sanitation management, as well as to the promotion and regulation of this market. The Initiative depends on the active involvement of the private sector assuming an active role in sanitation supply, in promotion of sanitation products, and sanitation services as a business opportunity that will benefit local development as well.

The APSS Initiative works toward four program results:

- Public, private, and government institutions facilitate development and promotion of local sanitary market.
- Households give priority to and demand high-quality sanitation services.
- Local suppliers accredited for the manufacture and marketing of high-quality sanitation services increase their share in the local market.
- Financial institutions interested in the sanitation sector offer lines of micro-credit to households and local suppliers for sanitation initiatives.

## **2.2 PILOT ZONES AND TEAMS**

The APSS Initiative seeks to promote the development of quality sanitation markets for low-income populations in five diverse pilot localities in Peru: 1) Belen/Peña Negra, – Loreto; 2) Pachacutec, Callao; 3) Namora and La Encañada, Cajamarca; 4) Independencia – Huaraz; and 5) Chinchero, Cusco. These are small localities. In fact, Pachacutec, Callao is the only one that has more than 25,000 families, and over 70% of households in the five localities are poor. Pachacutec is completely urban, and Independencia and Belen (Peña Negra) have populations with urban characteristics. These localities are representative of the diverse cultural, geographical, and socio-economic conditions of the country: the urban marginal settlements, the poor in rural areas in small towns and communities, in the coast, in the highlands and in the jungle.

APSS began field assessment and activity design activities in May 2007 and has been actively implementing activities in the pilot zones since May 2008. The Initiative is supported from the WSP offices in Lima Peru, but is implemented by international NGO teams in each pilot region. The Adventist Development and Relief Agency (ADRA)/Peru leads programs in Pachacutec (Callao), and in Chinchero (Cusco). CARE/Peru is in Namora (Cajamarca) and Independencia (Huaraz); and CARITAS/Peru leads the activity in Belen (Loreto).

The Initiative director is a social marketing specialist who is assisted full-time by a communications specialist and part-time by an M&E specialist. Administrative support comes from the WSP/Peru office in Lima. The composition of the field teams varies slightly among regions but normally consists of three or four people: a team leader who typically brings management and water/sanitation program experience; a communications/promotion specialist; a marketing or small business development specialist; and an infrastructure specialist/engineer. Several of the pilot teams also fielded three to five “sanitation promoters” who, depending on the pilot location, received a small commission for each bathroom installation and/or a small stipend from the project.

The APSS Initiative is to conclude in the five pilot regions in September 2009.

## **2.3 OBJECTIVES OF THE FORMATIVE ASSESSMENT**

The following objectives are taken from the terms of reference (TOR) for the Consulting Team:

1. Review the strategies, tools, and processes that have developed the APSS Initiative within the framework of the different pilot zones, making recommendations on how APSS can consolidate each of the pilot sanitation markets in the five months remaining for implementation.

2. Evaluate the sustainability of the market network establishment, making recommendations on how APSS can institutionalize all market functions so that they are self-sustaining after the APSS close-out.
3. Evaluate the sustainability of the sanitation technologies, and present findings, conclusions, and recommendations with respect to the environmental impact of the sanitation markets.
4. Propose a scaling up process, strategy, and guidelines — focusing on the pillars, stages, levels, key actors and their roles, main mechanisms, and marketing strategy.

Specifically, the consultants have been instructed to provide detail in describing what and how to implement recommendations.

## **2.4 TARGET AUDIENCES**

The report for this formative assessment is written specifically for APSS Initiative program managers who shall consider the conclusions and recommendations and devise appropriate implementation plans for the final five months of implementation. In addition, the report is written for:

- The APSS Initiative Steering Committee—representatives from donor institutions, and GoP sector authorities;
- The APSS Initiative Advisory Committee—representatives from public, social, and private partners in implementation and coordination;
- Local NGO teams that are implementing the pilot projects.

## **2.5 HOW THIS REPORT IS ORGANIZED**

Findings, conclusions, and recommendations are organized to be convenient to the general reader and follow the structure of the terms of reference (TOR):

- Overall findings and conclusions organized in 10 categories that cover the demand, supply, and enabling environment components of the project.
- General findings and conclusions by pilot district with references to detailed findings that are presented in annexes.
- Conclusions and recommendations for the short-term—the final five months of the pilot project—that focus mainly on consolidating the pilot markets to make them self-sustaining after APSS ends its activities.
- Conclusions and recommendations for the medium-term—how these markets established in the pilot zones can expand and replicate without outside support (i.e., funding and technical assistance).
- Capturing lessons learned and best practices to support replication in new geographies and at larger scale.

Detailed analysis and content prepared specifically for APSS Initiative implementers has been placed in annexes. These annexes include detailed discussion of the institutional and operational options for establishing self-sustaining systems for marketing, promotion, and quality control and assurance. There also are annexes with detailed reports on the status of each sanitation market pilot zone.

## 3.0 RESEARCH AND ANALYSIS

### 3.1 METHODOLOGY

The team used a standard approach for conducting the formative assessment:

1. Desk Review of Documents: The Assessment Team conducted a desk review of pertinent documents prior to and during the implementation of the formative assessment. These documents included: donor reports, sales monitoring reports, workshop reports, technical options catalogues, and GoP Sanitation documents.
2. Meetings in Lima with key APSS Initiative implementers and collaborators: Throughout the 2-week assessment, the Assessment Team met with the WSP/Peru APSS Initiative Team, key national actors, and collaborators from the APSS consultative committee.
3. Field visits to each pilot zone: These were brief but comprehensive visits that included:
  - Visits to households with bathrooms (approximately 20 in the five pilot regions);
  - Meetings with each of the five local NGO Teams;
  - Focus group meetings with 17 sales promoters;
  - Focus group meetings with 14 sanitation service providers;
  - Meetings with five credit providers and one local savings group;
  - Meetings with four providers of capacity building/training;
  - Meetings with representatives from three local governments;
  - Individual meeting with 13 private sector providers of sanitation products (nine local hardware stores, two regional distributors, and two large fabrication plants); and
  - Focus group meetings with 42 heads of household/consumers who purchased bathrooms (22) and consumers who had yet to purchase bathrooms (20), local government, private sector, and other partners.

### 3.2 FORMATIVE ASSESSMENT TEAM

The **USAID Hygiene Improvement Project** has supported the APSS Initiative since its inception in 2007, providing technical assistance in planning and project design and in monitoring and evaluation. The formative Assessment Team has two members: **Scott Tobias** and Patricia Fuertes. Mr. Tobias is an environmental engineer who works with HIP consortia member, ARD in Burlington, Vermont, USA. He has worked in water supply and sanitation programming in developing countries in Latin America, Africa, and Asia, and in 2007, worked with WSP/Peru in designing the APSS Initiative, focusing on issues related to market sustainability and replication. **Ms. Fuertes** is an independent M&E specialist whose experience in M&E systems for economic development programs is particularly useful in this market-creation program. She has been working with HIP as the M&E specialist for APSS since November 2008.

### 3.3 FIELD WORK SCHEDULE

DATES	ACTIVITIES	COMMENTS
Sunday, 3 May	S. Tobias arrival in Lima, Peru	
Monday, 4 May	P. Fuertes and S. Tobias met with WSP/Peru APSS Management Team.	Detail review of Assessment Team Statement of Work (SOW)
Monday, 4 May – Wednesday 6 May	<b>P. Fuertes and S. Tobias to Cusco.</b> Met in Cusco with ADRA/Cusco, hardware stores, training groups. Met in Chinchero with hardware stores, households, municipal government representatives, service providers, a community leader, and promoters.	Longest field trip to zone with highest sales totals to date
Thursday 7 to Saturday 9 May	<b>P. Fuertes and S. Tobias to Cajamarca.</b> Met in Cajamarca with CARE/Cajamarca, training group, theater promoter. Met in Namora with hardware stores/promoters, households, municipal government representative, Juntos representative, service providers.	APSS working almost exclusively in Namora
Monday 11 to Tuesday 12 May	<b>P. Fuertes and S. Tobias to Huaraz.</b> Met in Huaraz with CARE/Huaraz, municipal government representatives (Independencia), hardware stores, service providers/promoters. P. Fuertes visited rural households in Independencia.	Independencia is a large municipality with urban neighborhoods adjacent Huaraz and rural communities.
Tuesday 12 May	<b>P. Fuertes and S. Tobias went to Lima.</b> Met with ScotiaBank representatives, and with APSS management team at WSP office in Lima.	APSS management Team prepped Assessment Team for trip to Iquitos.
Wednesday 13 May	<b>P. Fuertes and S. Tobias went to Callao (Pachacutec).</b> Met in Lima with ADRA/microfinance representative. Met in Pachacutec with hardware stores, households, service providers, promoters, ADRA implementation team, ACE/ScotiaBank.	
Thursday 14 May	<b>P. Fuertes and S. Tobias went to Iquitos.</b> Met with CARITAS/Peru Team, Construyendo Peru. In Peña Negra for met with households and made bathroom visits. <b>P. Fuertes went to Belen</b> to visit eco-sanitation micro-pilot project of Asociación PROYÑOS ( <i>“los chicos franceses”</i> ).	Program did not work to establish a sanitation market, rather a product and approach to receive funding. Thus, there were no meetings with private sector.
Friday, 15 May	<b>P. Fuertes and S. Tobias met in Lima with APSS partners.</b> Met with representatives from	Also met again with APSS Management Team at

<b>DATES</b>	<b>ACTIVITIES</b>	<b>COMMENTS</b>
	CELIMA, ROTOPLAS.	WSP to go over content of briefing PowerPoint presentation.
Monday 18 May	<b>P. Fuertes and S. Tobias in Lima had</b> follow-up meeting with ADRA/Pachacutec Team.	Preparation of PowerPoint debrief
Tuesday 19 May	<b>Malva Baskovich (APSS Initiative team leader) and S. Tobias met in Lima</b> with Jaime Chang of USAID/Peru.	S. Tobias Departs for USA at 10:00pm

### **3.4 KEY QUESTIONS EXPLORED IN THIS FORMATIVE ASSESSMENT**

Establishing a self-sustaining market for a product that typically has been provided to households via highly subsidized programs is a complicated endeavor. It is even more complicated when the objective is to ensure that the product is of the best possible quality and is affordable. The entirety of the market must be addressed in detail—demand, creation, promotion, supply of services and product, regulation and consumer support, access to credit, etc. This formative assessment examines the sanitation market activities with four key questions in mind:

1. What specific activities in pilot districts show high potential for supporting self-sustaining sanitation markets after the APSS Initiative ends?
2. What are the key lessons learned in creating sustainable incentive structures that motivate the various actors in a sanitation market to sustain its viability?
3. What organizational platforms can be tapped by sanitation markets to increase sales, further establishing the viability of the market?
4. What self-sustaining systems can be created in the free market to ensure the high quality of sanitation products and services?

It is important to note that the evaluators are not assessing the APSS against a preconceived Sanitation Market Model. Their objective is to help APSS identify potential models for self-sustaining sanitation markets and to identify those ongoing activities that appear to be successful in supporting self-sustaining and viable sanitation markets (as well as to identify those activities that are not). The evaluators investigated APSS activities using the analytical topics noted below to structure the data collected in exploring the four key questions.



## **4.0 OVERALL STATUS AND KEY FINDINGS**

### **4.1 CONCLUSIONS ORGANIZED BY TOPIC**

The report's findings and analysis are organized in 10 categories that encompass the demand side, supply side, and the enabling environment dimension of the sanitation market. The categories are:

1. Changing the Paradigm
2. Consolidating the Market
3. Demand-Side Activities: Promotion and Marketing
4. Demand-Side Activities: Coordination and Organization
5. Supply-Side Activities: The Offer of Product and Materials
6. Supply-Side Activities: The Offer of Technical Services
7. Supply-Side Activities: The Offer of Financial Services
8. Activities Addressing the Enabling Environment
9. Monitoring and Evaluation
10. Environmental Issues

#### **4.1.1 CHANGING THE PARADIGM**

**Related to APSS efforts to move from paternalistic, high-subsidy sanitation models to the market-based system.**

APSS is very close to articulating a general sales model for the sanitation market in Peru. This model will have at its core an affordability strategy targeting virtually all potential consumers. The affordability strategy will provide options to the consumer with respect to financing, product, construction, installation, and the timing of all of these components to ensure that all consumers, regardless of economic status, can install the toilet or bathroom they desire and not be obligated to accept products they do not want.

The objective of providing an affordable sanitation option does not mean that the quality of products and facilities must be of lower quality. By using a mix of cost-saving measures, addressing the financing needs, and spreading costs out over time, the evaluators contend that almost any household can have a high-quality sanitation facility in the home.

After a concerted effort of up to one year, the NGOs involved in the APSS Initiative are succeeding in changing the perception that household sanitation is the responsibility of the government and that the NGO is to provide and subsidize household sanitation. These efforts toward change have taken place within the NGOs, within collaborating governments, in the private sector, and in consumers.

Four of the five pilot districts have succeeded in developing incipient sanitation markets which, with further concerted efforts to ensure that APSS activities are assumed by local actors, can be self-sustaining and perhaps self-replicating.

#### **4.1.2 CONSOLIDATING THE MARKET**

**Related to APSS efforts to strengthen the incipient sanitation markets in the pilot zones and build local capacity and systems to sustain market functions.**

The APSS will take into account the responses of consumers that the key elements to installing a toilet or bathroom through the sanitation market are: access to water, installation of sewerage, access to credit, and clear information on quality household sanitation facilities.

APSS will develop a general model for the sanitation market that clearly defines roles that must be assumed in the market to make it viable and self-sustaining. These roles, many of which are now assumed by APSS, can be taken on by a variety of private or public institutions.

A self-sustaining market network for high-quality sanitation that performs the promotion, certification, capacity-building, and coordination functions currently provided by APSS can be created through different models where different actors assume the key roles in promoting, sustaining, and expanding the market through different incentive structures. APSS has managed to create three potential models for sustaining the market. These models, in current form, are limited in reach and do not appear to be able to capture all of the sales that they are generating:

1. Hardware stores as nexus for marketing, promotion, referrals, sales;
2. Financial services provider as nexus for marketing, promotion, referrals; and
3. Independent marketing and promotion capacity linked through incentive system to the other supply-side, or government, or donor actors.

Each APSS pilot team will develop appropriate affordability solutions and an affordability strategy that will include tactics to ensure appropriate financial products, promote and organize en masse purchases, provide guidance for do-it-yourself construction and installation, recognize the temporal aspects of construction to spread costs out over time, and to take advantage of government programs that offer access to technical and financial resources.

Upon developing affordability solutions for the various sanitation products for which demand exists, APSS must develop general sanitation market models in each pilot region that address affordability and quality control. With the affordability strategies and market models, APSS can work with the private sector to outline a national sales plan for sanitation that addresses steps to replicate and scale up the regional sanitation markets.

To date, none of the pilot areas has established a market where the network of actors interact through a clear and mutually understood incentive structure that motivates all actors to promote the market.

To date, none of the five regions has a clear plan for close-out that transfers the key functions currently supported by the NGO to the market itself.

Attempts by hardware distributors and financial institutions to “close” the home improvement market (memorandums of understanding between the two that promise that each brings clients to the other) have not resulted in expected outcomes (ScotiaBank and Yura cement in Cusco). Note that these took place outside of APSS activities.

At least three of the five pilot zones are on the verge of establishing incipient, but self-sustaining, sanitation markets, each with different actors assuming key market leadership and coordination roles—for example, Cusco has found a leader in a financial institution; Cajamarca, in local hardware stores/promoters; and Huaraz in hardware stores.

### **4.1.3 DEMAND-SIDE ACTIVITIES: PROMOTION AND MARKETING**

**Related to APSS activities in promoting household sanitation solutions in the market-based system.**

In general, marketing and promotion must take into account seasonal and economic calendars of each of the pilot zones when undertaking marketing and promotion activities. Most households in the rural pilot areas have disposable income after the harvest—roughly May through August. Note that the markets likely will follow important local economic, employment, and construction calendars, so it makes sense to design financing packages, and marketing initiatives to address these realities.

Understanding that there likely is no better marketing than having a product installed in the field, it is important that APSS take full advantage of the post-harvest period to push hard on marketing to ramp up sales. This, in turn, is a significant opportunity to facilitate word-of-mouth, marketing, and household visits.

There is agreement that the role of the field promoter is critical and under-supported in the current APSS pilot zones. The attrition rate among field promoters is a concern because of the resources spent on training that is essentially lost when a promoter quits, and the fact that at APSS termination, there may be only two or three functioning promoters per pilot zone. APSS also loses the advantageous dynamics of a sales team that can share information, develop effective sales techniques, and practice those lessons in the field, now and once APSS ends. APSS should consider ways to retain field promoters during pilot or start-up phases (about five per district) that will help them to build confidence, hone their craft, and make it worthwhile for non-APSS actors in the market to hire them or otherwise compensate them for services post-project.

There is not yet a successful or effective model in place, or being contemplated, which can support an “independent” district cadre of sanitation promoters.

In addition, it is not clear whether radio promotion has been effective. This medium was not cited by local consumers or by promoters as having influenced their decision to purchase a bathroom.

It is not clear that all actors in a particular pilot market zone are speaking to consumers from the same page with respect to the affordability options and the marketing messages. There is a definite gap in the ability of actors in the market to “make the sale.”

Perhaps the strongest marketing activity undertaken by APSS is the actual sale and installation of quality bathrooms. These installations serve to demystify the product, create intra-household competition, and move communities toward behavioral tipping points. It is important to facilitate visits to these installed household facilities and get satisfied consumers to communicate with neighbors and at community meetings. The bottom line is that APSS must push hard in its final months to get as many quality bathrooms built as possible to strengthen this key marketing opportunity.

Again, promotion/marketing activities are critical. Those activities that appear most effective are: 1) One-on-one sales with multiple visits by a trained promoter to a single household; 2) Sanitation fairs with products available for sale and perhaps with interactive socio-theater; 3) Participatory promotional activities in schools; 4) Printed materials handed out at stores or fairs; 5) Neighborhood loud speakers (where use of these is an accepted practice).

Much of the current promotional material that APSS pilots use is obsolete—the variety of toilet designs promulgated at the beginning of the Initiative clearly has been reduced by consumer preference to one or two basic models (e.g., there is very low demand for dry sanitation solutions, people will wait until they can invest in flush models). Marketing materials and messages in each pilot zone can be improved to take into account clear consumer preferences as well as to communicate affordable solutions to sanitation to consumers.

Promoters, hardware salespeople, masons, and plumbers could all use a reorientation on sales and marketing of sanitation services and products—including financial products. This training could be informed by both a training needs assessment of the targets as well as a rapid consumer survey. They should receive training and content to enable them to sell the affordable solution to any consumer, having a clear and appreciative counter argument for every consumer doubt or concern about quality sanitation in their household. The objective is to have consumers leave these encounters feeling that their aspirations are affordable and attainable. Sanitation promoters must be able to address every consumer concern. Promoter training will be heavy on role-playing to this end.

Opportunities exist to use community-wide, participatory techniques developed in CLTS programs that motivate households to take action to address their own sanitation situation. Techniques that stimulate group dynamics and systems that promote community recognition and reward can be highly effective with proper implementation and follow-up. Several of these mobilization activities were used in Cajamarca but did not have follow-up action.

#### **4.1.4 DEMAND-SIDE ACTIVITIES: COORDINATION AND ORGANIZATION**

**Technically, a subset of the promotion and marketing activities noted above specifically relate to APSS activities in organizing group purchases, facilitating government buy-in, and support.**

Facilitation of organized community participation in the sanitation market was just taking place in the pilot zones. Community-wide purchasing can provoke across-the-board economies of scale from providers of product, services, and credit. APSS teams should identify the activities and models developed to date. (See the work in Huaraz on facilitating government support for technical assistance to households to hook up to sewers, the Cusco experience in coordinating with Community Assemblies as part of the participatory budgeting process, the Pachacutec work in marketing through neighborhood organizations, and the Cajamarca community mobilization done in coordination with Juntos.)

These cultures of community action encompass the financial sector as well, and APSS can develop ways to tap this culture to promote community-based savings and credit.

It is important to capture experiences and steps taken in collaborating with the government's ongoing development programs that can support and even help subsidize aspects of the purchase of quality sanitation. These experiences include Juntos in Cajamarca, facilitating community subsidy of household connection to newly constructed sewer in Pacllón in Huaraz, support from Construyendo Peru, in supporting household sanitation in Iquitos, and coordination with the Healthy Municipality Program.

#### **4.1.5 SUPPLY-SIDE ACTIVITIES: THE OFFER OF PRODUCTS AND MATERIALS**

**Related to APSS activities in developing and making available quality sanitation facility designs, accessories, and construction materials at competitive prices.**

The larger private sector suppliers of goods (i.e. product distributors, large hardware stores in regional centers) tend to be reluctant participants in this sanitation marketing initiative that is directed toward rural, low-income households. These suppliers understand there is a large potential market, but do not see the kind of short-term volumes that warrant their active involvement in promotion and marketing—especially in rural districts.

The low-income consumers targeted by this initiative appear to act in accordance to their pocketbooks, and will avail themselves of all of the good information and marketing that the APSS can provide, only to make purchases elsewhere when products are available at a lower perceived price. This is akin to U.S. consumers who avail themselves of the helpful staff and the physical product at a store in an effort to inform their purchase decision, but end up making the purchase on the Internet from a faceless distributor. The lesson is that any market system developed will be unsuccessful unless it is able to offer products and services at the lowest prices. Quality considerations tend to be secondary.

The quality of materials available for general construction and accessories for toilets and bathrooms is of acceptable quality—there are, of course, very inexpensive and low quality PVC pipes, PVC accessories, valves, etc., generally of Chinese manufacture, that should be avoided. APSS must include guidance on acceptable products, materials, and accessories in promotional materials.

There are interesting (perhaps not yet successful) examples of hardware stores partnering with credit providers to offer an integrated financial technical package to consumers. These experiences should be studied in each pilot zone and model approaches should be developed that have “checks” to ensure that loans are spent appropriately, and that both stores and financial entities are actively promoting the partnership.

Overall, it appears that rural consumers are bypassing district hardware stores to make their purchases at regional capitals (Cusco, Cajamarca) to take advantage of larger product selection and lower prices. Local hardware suppliers note that they are able to order the same products and come close in price to the regional stores. They also note that with their district locations, they save the consumer costs of product transport, cost of going into the city to visit multiple stores, and the opportunity cost of those consumer visits. The shelf price and being able to see the product itself as opposed to its catalogue representation apparently are the main discriminators for the consumer. District-level hardware stores may not be able to compete with those stores and distributors found in larger cities with respect to price and selection of toilet and bathroom accessories. A more appropriate role for the district hardware stores might be to focus on providing general construction supplies and products. Each pilot team should analyze this situation and decide to what extent time and resources should be spent to continue supporting the district hardware stores as key providers of specialized sanitation products and accessories.

#### **4.1.6 SUPPLY-SIDE ACTIVITIES: THE OFFER OF TECHNICAL SERVICES**

**Related to APSS activities in developing and making available to consumers high-quality construction and installation services.**

There is not yet a coherent plan for certification of masons and plumbers who will provide services to consumers in the sanitation market. This reflects the fact that the government currently lacks clear certification criteria and guidelines and that the current government SENCICO system, by virtue of its onerous course load, effectively excludes currently employed masons and plumbers with field experience.

To reduce costs, consumers invariably want to do for themselves as much of the toilet or bathroom construction and installation as possible. However, it is a challenge to help these consumers maintain quality in their installation and construction. APSS can develop guidance to the do-it-yourself consumer as part of the affordable sanitation solutions. The Huaraz experience in obtaining publically funded technical assistance for sewer hook-up and proper toilet and bathroom construction guidance also is important to capture.

The certification of masons and plumbers is a process that requires study. It is important though to realize that certification is not necessarily synonymous with training. APSS has learned that it is better to orient and certify technicians with a body of experience and a good local reputation, than to attempt to train a cadre of new sanitation service providers through lengthy and detailed courses. Increasing the pool of certified masons and plumbers is of greatest benefit to the market when the training is kept short (no more than two days), is focused (on the technical designs and critical installation skills), and is inclusive, including masons or plumbers who already are supporting themselves professionally in the project area.

As noted in 4.1.3, masons and plumbers, even those who had received training as promoters, did not show the best skills in selling and marketing their services. However, one mason in Namora (Celso) stood out for his persistence in marketing his services when consumers offered various reasons for not making household sanitation improvements—be they financial or technical. Such tenacity and ability to address the concerns of a potential client with viable solutions is at the heart of the “affordability strategy” recommended in this report.

Some masons/plumbers have raised their rates for sanitation work after having become “certified,” that is having received training from APSS.

#### **4.1.7 SUPPLY-SIDE ACTIVITIES: THE OFFER OF FINANCIAL SERVICES**

**Related to APSS activities in developing and making available to consumers a wide variety of options to obtain capital for purchasing quality household sanitation.**

Each pilot district is challenged by what is still a very limited range of financial options for households who wish to purchase improved sanitation. There have been some reduced interest rates on loans for sanitation, while at the same time the financial institutions affiliated with APSS have shown reluctance to enter into certain demographic areas, have not reduced interest rates, and have not proactively engaged in creating financial products that are more appropriate for low-income households. Targeted financial products for home improvement (if not specifically targeted at sanitation) are required of financial entities that would be partners in a QSM. These include products for savings, credit, and village banking support.

In most of the pilot zones, the pilot team had made contact with one or more locally present financial institutions, sometimes with limited success in leveraging improved rates for sanitation or increased attention for the sanitation market. It is recommended that APSS follow up again with

these institutions and with other financial institutions (that APSS teams have not yet contacted) that people turn to locally for home improvement loans.

With the exception of ScotiaBank/Micasa, all of the financial institutions the team met with indicated an interest in the sanitation/home improvement market and a willingness to adapt their products in terms of interest rates, minimum principal, payback period, etc., to serve more consumers of lower incomes and to capture the business of the poorer demographic. There also might be opportunities in making small business loans to consumers who will leverage improved household sanitation into income—hotels, boarding room rental, community-based tourism.

Financial institutions do not appear to be closed to developing targeted financial products for the sanitation market that could offer more flexible payment terms, incorporate bundling of loans, or reduced interest rates for this public good. A key issue is to ensure that loans for sanitation—especially those with a special lower interest rate—are indeed used by the consumer for sanitation improvements, and not to buy livestock or for some other purpose.

Cajamarca, specifically, is an area where tardiness and loan defaults are problems and that a sizable percentage of the population is not eligible for credit due to non-payment of previous loans. Areas where this is a problem will be more of a challenge to incorporate into the sanitation market.

The ScotiaBank/Micasa approach to creating a certified sanitation network as a subset to a general home improvement network includes many of the elements that APSS is looking for in establishing a certified sanitation network including: certified sources of products linked to a network of financial services, a skilled service provider, and a source of reliable technical information. However, it is not clear how committed Micasa is to reaching lower-income households, how Micasa can support key promotion and marketing functions (fairs, multiple household visits, school-based promotion), and how inclusive Micasa can be with respect to other providers of products and services (including financial).

In 2007, there was hope that the APSS Initiative could help to develop an integrated product from a single vendor (the way the automobile industry has) to offer a consumer product, services, and financing simultaneously. Integrating the product under one roof has not proven to be a practical approach in Peru's sanitation market, however, as hardware stores are not in a position to take on loan management. There are some cases where financial entities work with hardware stores to effectively present an integrated offer to the consumer. Credit goes directly to the hardware store, which supplies products and sometimes services. The consumer then repays the loan to the lending institution.

#### **4.1.8 ACTIVITIES ADDRESSING THE ENABLING ENVIRONMENT**

**Related to APSS activities in developing policy, norms, regulations that support the Quality Sanitation Market Network.**

All pilot areas are working to establish *alianzas* or *plataformas* or expanded *Comités de Gestión* that are composed of representatives from local entities and programs that are expected to participate in and support the sanitation market. These entities vary among pilot zones, but include local private and public sector organizations. Where dynamic individuals have been part of the member organizations, support to APSS and sanitation marketing has been helpful (e.g., Cajamarca *Comité Local Administración Salud*, CLAS).

In other cases, the value added by these organizations to the market has been more difficult to quantify, although the intangible benefits of inclusion may well have been important.

- APSS has coordinated with a number of government programs or activities through different mechanisms. These include participation in local sanitation management committee, alliances, local platforms, or as potential funding sources: Healthy Municipality Program – targets for public health
- Construyendo Peru: Infrastructure as economic stimulus;
- Juntos (part of CRECER): Pro-poor investment monitors households and rewards monetarily improvements
- CLAS: Is supported by ministry, dependent on personalities of local staff
- OMSABAR (Municipal office for basic rural sanitation): Usually not strongly supported by municipality
- Local Water System Management Groups

These alliances/platforms must be assessed for their utility in supporting and in sustaining the markets.

It is clear that the dimensions of the local economies in the pilot zones make it difficult for APSS to monitor sales and consumer decision-making. Consumers who are reached by APSS marketing information are obtaining credit, making material and product purchases, and contracting services outside of the network of quality sanitation that APSS has created. APSS is challenged to help consumers ensure that their household sanitation purchases result in high-quality service.

Ensuring that the sanitation market provides quality goods and services is a role that government can take on. APSS should look into simple voluntary systems through which the district government can 1) monitor sanitation coverage; and 2) make appropriate information available to consumers on high-quality household sanitation facilities.

Some local governments have been open to working with APSS teams on incorporating sanitation into annual community and district participatory budgeting. This activity is critical for APSS to open the door with local governments to establish real support to sanitation activities. In most district governments, the sanitation infrastructure is covered by a water/sanitation specialist and the sanitation part of the portfolio is not addressed.

#### **4.1.9 MONITORING AND EVALUATION**

**Related to ability of APSS to monitor activities in the market and to build the M&E capacity of key actors who will assume M&E responsibilities when the Initiative ends.**

At the time of this formative assessment, a system for monitoring sales at hardware stores as a proxy for sanitation facilities had been in place for less than three months. The Namora district in the province Cajamarca currently is the most successful, while Pachacutec and Independencia show improvements in data collection and reporting from hardware stores.

All pilot teams are dealing with the fact that sanitation promotion results in sales take place outside of the product and service provider network that is supported by the APSS Initiative. It is as difficult to monitor sales and the actual impact of the Initiative on sanitation coverage as it is to capture overall sales of sanitation products and services.



Difficulties in establishing and maintaining the QSM network of actors also impact the success of any monitoring and evaluation system. APSS has been challenged in helping the different market actors set up tight MOUs and relationships between one another that ensure benefits from a sale of a financial or physical product or service. Without a QSM where all actors can benefit by making a sale, there is limited incentive to collect or share data.

APSS has realized limited success at obtaining basic monitoring data from those vendors who are involved in the program, let alone those who are not. This makes it difficult to understand consumer preferences and decision-making processes in order to better tailor marketing and delivery of the product and service to the consumer.

Institutionalizing an M&E function inside the market that depends on the active participation of private sector actors is a challenge as there is no clear incentive for those actors to make data available to a third party. There may be ways that local governments can become involved in monitoring sanitation coverage and basic quality of service, perhaps at the household as opposed to monitoring private sector sales.

Information gathered on consumer preferences and decision-making must be reincorporated into any new marketing and communication materials and messages.

#### **4.1.10 ENVIRONMENTAL ISSUES**

##### **Related to the environmental benefits and impacts related to APSS activities in establishing self-sustaining sanitation markets.**

The potential adverse environmental impacts of the APSS Initiative are very serious. Policies and technical norms in Peru still are unclear with respect to wastewater and bio-solid (sewage sludge) disposal. There are no properly functioning wastewater treatment systems in the pilot area and no services for the collection and disposal of bio-solids. Every APSS-facilitated sewer connection effectively increases direct contamination of the local receiving water. Every on-site sanitation system using a septic tank risks the failure of the disposal system when the tank fills or when improper collection methods are used. The APSS norm that unilaterally prohibits the on-site disposal of wastewater directly into infiltration pits, and mandates the use of septic tanks undermines APSS coverage goals while creating significant potential for adverse environmental impacts (See Annex 2):

- Households that cannot afford a septic tank and are not provided a cost-effective alternative (an infiltration pit is a viable and environmentally sound solution in most of the pilot zones) are disposing wastewater directly into local receiving waters.
- Households that install a septic tank currently have no option for emptying the septic tank. Upon filling, it is common for these tanks to leak wastewater on-site, creating a significant environmental health hazard.
- Households may end up emptying full septic tanks through clandestine, unregulated methods of disposing contaminated bio-solids improperly in receiving waters or vacant lots.
- Water-based disposal systems are the only type that have sold in the APSS pilot zones although there is interest in dry composting latrines in a Cajamarca community that has a high water table. It is not clear that APSS has a training program in place for household operation of composting latrines, and it is worrisome that the latrines programmed for Cajamarca do not include urine separation—which complicates composting activity.

## 4.2 GENERAL FINDINGS AND CONCLUSIONS BY PILOT DISTRICT

Sanitation markets in each of the five pilot districts are being formed by multi-disciplinary teams provided by international NGOs through subcontract with WSP/Peru. Each team consists of three or four Peruvian technical specialists who, with support of the central WSP/Peru APSS management team, address all demand, supply, and enabling environmental issues associated with establishing and sustaining the particular market. These teams also support, through different mechanisms, a cadre of sanitation product marketers/promoters who essentially form a sales force. Typical activities of these teams include building capacity of local masons and plumbers to supply high-quality sanitation services and products to households; coordinating the active participation of local, regional, and sometimes national distributors of sanitation products in the markets and working with them to reduce prices; involving local governments and government programs in using the market to address sanitation objectives; helping create credit products for households; training promoters; and creating systems to support and sustain their work, etc. Below are summaries of the assessment findings and conclusions by pilot zone. (Annex 1 provides further details of each visit.)

### 4.2.1 CHINCHERO, CUSCO

#### Facts:

- Implementation: ADRA/Peru.
- Demographics: Rural Sierra, largely indigenous, rural communities with household water service; installing sewer systems.
- Team Composition: Consists of two marketers and a promoter/micro-finance specialist. There is no sanitation engineer or technician.
- Team Promoters: Has promoters who are paid on a commission-only basis.
- Assessment Visit: 4, 5, and 6, May.
- Key Observation: Potential for a champion financial institution to provide marketing leadership and to help create incentive-driven links with product and service providers.

#### Top Take-Aways – Findings and Conclusions:

- Chinchero has favorable demographics for creating a sanitation market. Households tend to have two incomes with men working mainly in agriculture and women in *artesania*, or crafts). Years of heavy tourist traffic has perhaps helped to introduce and reinforce improved sanitation and hygiene technologies and behaviors. There are opportunities for households to turn improved sanitation facilities into income via community-based tourism. Local institutions, hardware stores and financial institutions, have embraced the APSS Initiative. There is relatively strong support for APSS from Cusco-based distributors of sanitation products who have provided training support, promotional support, and price cuts for district hardware stores.
- High level of interest from local financial institution. The Caja Municipal de Cusco is close to providing commissions to one of the ADRA-sponsored promoters and most importantly is showing keen interest in assuming the promotional activities of APSS post-project.

- Masons in Chinchero are skilled and appear to be business-savvy. They also are “ignoring” the APSS Technical norms for on-site septic systems. This seems to be because: 1) The ADRA team does not have a sanitation engineer or technician to enforce the APSS norms; and 2) The APSS norms for on-site septic systems often mandate installation of expensive and unnecessary hardware that these masons are omitting (the septic tank). This is the only pilot zone with a relatively large number of bathrooms constructed with on-site disposal systems.
- Not unexpectedly, there has been significant attrition in the ranks of promoters who are paid on a commission-only basis. Of the 15 who were trained and provided with vests, hats, and materials, only two to four are active. The ADRA team is working to facilitate the payment of commissions to promoters from other market actors—namely the financial institution Caja Municipal de Cusco, which will pay commission for loan referrals.
- The period for post-harvest sales (May-August), when consumers tend to have more spending money, presents an opportunity to ramp up sales with marketing strategies such as word-of-mouth, and household visits.

#### **4.2.2 NAMORA, CAJAMARCA**

##### Facts

- Implementation: CARE/Peru.
- Demographics: Rural Sierra, largely Spanish-speaking mestizo, rural communities with household water service with some installing sewer systems.
- Team Composition: Consists of a coordinator, two promoters, and a part-time technical specialist who was added to the team approximately three months before this assessment.
- Team Promoters: Active field promoters are affiliated with Namora-based hardware stores.
- Visit: 7, 8 May.
- Key Take-Away Observation: Potential for market leadership by champion district hardware stores that leverage coverage in partnership with government programs and local governments.

##### Top Take-Aways – Findings and Conclusions

- Coordination with the Government of Peru’s Juntos program can serve as a model for sanitation marketing initiatives that take advantage of government social programs to increase raw sales. Replication in areas with Juntos presence should look at the Cajamarca experience for guidance.
- Use of promoters within the local hardware stores seems to be a strong strategy with respect to providing incentives for promoter and hardware store to make sales. These local hardware stores/promoters are targeting communities with recently installed or soon-to-be installed sewer systems, which means household hookup rates are very low.

- Village bank model could be extremely useful for APSS, especially if it can be passed on to a financial institution that can provide future support to these banks. The team must ensure that village bank formation does not conflict with household eligibility for Juntos assistance.
- The strict application of APSS technical guidelines for on-site systems has resulted in very low sales of toilets with on-site disposal. Households will not pay for a septic system with leach fields and, lacking a cost-effective intermediate technology, opt to wait for the construction of a sewer system or choose to simply channel the household wastewater directly into nearby receiving water.
- The capacity-building strategy here provides a useful lesson for APSS: Do not offer detailed, long-term training to certify masons and plumbers. This approach keeps the most experienced and respected local masons out of the program and instead invested project resources in inexperienced masons who, by virtue of their lack of experience, are not being hired. The SENCICO experiment was useful but should not inform the APSS training model for masons and plumbers.

### **4.2.3 INDEPENDENCIA, HUARAZ**

#### Facts:

- Implementation: CARE/Peru.
- Demographics: Urban neighborhoods and more rural villages in the Sierra, largely Spanish-speaking mestizo, urban areas with sewers, other communities installing sewers.
- Team Composition: Three promotion specialists and a sanitation technical specialist.
- Field promoters: Trained providers of sanitation services – masons and plumbers.
- Visit: 11, 12 May.
- Key Take-Away Observation: Strong potential for a champion product provider (hardware store) to work in partnership with local governments to increase sewer hookups and install quality toilets and bathrooms.

#### Top Take-Aways – Findings and Conclusions:

- Important work by the local APSS team with local governments to facilitate their financial support for technical assistance to hook up to sewers. This is an extremely promising strategy that is motivating households to construct toilets and bathrooms and should be studied for replication. This assistance also ensures the proper location of the toilet/bathroom on the property and tips for construction so as not to damage the public infrastructure.
- The proactive participation of the Huaraz-based hardware store, Safiro, can be nurtured and studied as a potential model for creating a self-sustaining market nexus.
- The strategy of dual roles of the mason as promoter has limitations. The dual role leaves little time for marketing. Masons also are likely to focus more on their technical work and not be as enthusiastic about sales and marketing. It is important that masons are able to

market their services, but it appears that there is a role for dedicated marketing and promotion in these sanitation markets.

- Addressing the low participation of financial institutions in this pilot zone is important (only 3 of 45 toilets/bathrooms have been built with credit). There is a need for more creativity in developing credit products that meet the needs of an agrarian population with uncertain, seasonal income. Perhaps savings options are more viable than lending in this environment.

#### **4.2.4 PACHACUTEC, CALLAO (LIMA)**

##### Facts

- Implementation: ADRA/Peru.
- Demographics: Peri-urban neighborhoods in proximity of Lima, largely migrant, Spanish-speaking mestizo, water delivered by tanker or hose to rooftop water storage tanks.
- Team Composition: Consists of a coordinator, a marketer, and a part-time engineer.
- Field promoters: Paid a small salary plus a sales commission by the APSS team.
- Visit: 13 May.
- Key Take-Away Observation – The ADRA team stands out for its work to optimize the sanitation product for local conditions, remaining open to options for sustaining the promotion/marketing functions in the market.

##### Top Take-Aways – Findings and Conclusions:

- The team worked to modify the product offer, to reduce material costs to consumer, and make the product more applicable to this particular urban environment. This was a significant achievement, and includes production of new marketing materials for the new product.
- With new product and new marketing materials, it may be time to implement additional sanitation fairs and/or engage in other types of promotion.
- Given the large population and entrepreneurial tendencies in these communities, and multiple local options, it is difficult to monitor actual sales resulting from APSS activities. The team observed consumers in local hardware stores preparing to purchase toilets—and in one case, the consumer indicated that an APSS sanitation fair sparked his interest in purchasing a quality toilet.
- Abiding by APSS norms, septic tanks are being installed without a system for emptying them. As septic tanks fill in three to five years, this will become an important environmental issue for Peru. The dense populations of the urban centers, however, could drive demand for the creation of a tank-pumping service. (Note that there are no sewers in this pilot zone.)
- The team has maintained a strong group of masons which works within the APSS-supported sanitation market system.

## 4.2.5 BELEN (PEÑA NEGRA) LORETO

### Facts:

- Implementation: CARITAS/Peru;
- Demographics: Peri-urban neighborhoods in proximity of Iquitos, neighborhoods often inundated, some houses built above perennial water, Spanish-speaking mestizo. CARITAS changed from Belen to the community of Peña Negra, urban densities in community on main road 30 minutes out of Iquitos.
- Team Composition: Consists of a coordinator, a marketer, and an engineer.
- Field Promoters: There are none.
- Visit: 14 May.
- Key Take-Away Observation – The CARITAS team has developed a household sanitation solution for relatively small lots that is technically viable, albeit expensive, and coordinates with government programs to subsidize installation of this sanitation solution at the household level.

### Top Take-Aways – Findings and Conclusions:

- The technical product offer is of sound technical design for rainwater collection, on-site treatment and disposal (uses Rotoplas bio-digester).
- The team is close to entering a partnership with *Construyendo Peru* a government infrastructure /economic stimulus program to install bathrooms in one village. It is not clear whether *Construyendo Peru* can finance private, household infrastructure.
- The team has not worked to develop a sanitation market; rather it has focused on developing a household technical solution that can be subsidized by government or donor programs. Nevertheless, there may be the potential of packaging this technical solution as an affordable option for consumers and to move it into a limited market. (Affordability addresses financing, temporal nature of construction, and do-it-yourself issues.)
- The culture of paternalism inside CARITAS is strong as it is in the consumer (beneficiary) population. This makes it difficult to create a self-sustaining market.

## **5.0 CONCLUSIONS AND RECOMMENDATIONS — CONSOLIDATING THE PILOT PROJECTS IN THE NEXT FIVE MONTHS**

### **5.1 CONSOLIDATING THE PILOT MARKETS IN THE NEXT FIVE MONTHS**

These conclusions and recommendations for the short-term—the final five months of the pilot project—focus on consolidating the pilot markets to make them self-sustaining after APSS ends its activities.

In consolidating the markets, APSS will quickly decide on and establish the optimal QSM model for pilot districts and begin activities to strengthen the roles of the actors in each of the QSM pilot zones. APSS also will ensure that pilot zone NGO teams act to maximize sales during the critical May-August period when agrarian consumers have post-harvest profit.

It is important that APSS and the APSS pilot district teams do not act unilaterally in designing and implementing the QSMs for each pilot district. The use of workshops, staff exchanges and other participatory QSM design tools foster buy-in from the actors and are key activities in this process.

This section is organized by the following categories:

- Developing and Implementing Sales Plans;
- The Affordability Strategy;
- Promotion and Marketing—including Organization and Collaboration Roles;
- The Offer of Quality Product and Materials;
- The Offer of Quality Technical Services;
- The Offer of Quality Financial Products and Services;
- Addressing the Enabling Environment;
- Developing and Implementing the Exit Strategy.

These categories cover QSM issues on demand and supply sides as well as the enabling environment.

#### **5.1.1 DEVELOPING AND IMPLEMENTING SALES PLANS**

Independent of the QSM market model developed, the final five months of the APSS must result in significant sales and installation of quality household sanitation solutions. Installed facilities are perhaps the most effective marketing tool available to APSS and the future sanitation markets. The critical post-harvest season (May–August) is a time when agrarian consumers have capital on hand and can make initial investments in household sanitation improvements. The sales plan will have different components, but first and foremost, it must call for mobilizing all resources available to promote sales during this critical period.

Each pilot-zone-specific sales plan must include:

- A strategy of affordable sanitation and developing marketing materials for affordable sanitation solutions (with material, product, labor, finance as well as temporal variables addressed).
- Promotion of bulk purchases through community-wide action that allows a wide range of individual options for product purchase and construction timeline while ensuring quality control and financial management. There is much to explore in the last months of APSS in

facilitating community action/involvement in the sanitation market. There are cultural tendencies that can be tapped, community mobilization approaches that can be applied, and monetary and political incentives that can be brought to bear on motivating large groups of households to improve sanitation facilities through the market.

- Promoting sanitation purchases through collaboration with and if possible leveraging of resources available through government programs (e.g., Juntos, Healthy Municipalities, etc.) and local government activities (e.g., installation of a sewer system, installation of a water system, etc.).

### **5.1.2 THE AFFORDABILITY STRATEGY**

The affordability strategy component of the sales plan addresses all aspects of the purchase—products, services, credit, economies of scale, timelines, and construction in stages. The marketing component of the affordability strategy will be informed by a rapid consumer knowledge/preference assessment and will create educational and marketing messages for vendors and promoters that counter typical consumer reasons for putting off a sanitation purchase. As a result, consumers may be more receptive to opportunities to improve their sanitation.

#### **Developing the affordability strategy entails:**

- Reviewing the offer in each zone to incorporate lessons learned to adjust bathroom designs so as to offer models that are of lower cost in terms of materials and/or labor.
- Developing “do-it-yourself” options that give the consumer a clear picture of how costs can be saved by undertaking certain aspects of construction themselves, while clearly highlighting those installation activities that require expert involvement.
- Developing options for construction and installation in logical and affordable steps that can be implemented over time.
- Increasing efforts with the financial sector to create more options for consumers with lower incomes to obtain credit or other financial services.
- Developing a stepwise bathroom installation protocol that lays out each optimal stage of installation with costs, financing, timelines, and functionality for each popular technical solution. This is referred to as the “affordable sanitation solution.” This affordable sanitation solution would be put into a simple tri-folder or double-sided handout that effectively communicates to the targeted consumer group that a bathroom is affordable.
- Addressing on a case-by-case basis (on the regional, district, or community level), opportunities for subsidy or price reductions through economies of scale, bulk purchases, or participation in donor or government development programs.

#### **Implementing the affordability strategy requires:**

- Articulation of each product offer in the form of an affordable sanitation solution.
- Appropriate marketing materials directed at consumers, service providers, product providers, financial service providers, government functionaries, etc., to ensure that all actors are on the same page with respect to communicating and implementing the affordability strategy.
- Training the APSS team and appropriate QSM actors in details of the affordability strategy and in how to implement and market/communicate it to consumers.



### **5.1.3 PROMOTION AND MARKETING (INCLUDES ACTIONS OF COLLABORATION, ORGANIZATION, LEVERAGING)**

The affordability strategy will be at the core of the marketing and promotional messages and activities. The theme of the marketing and promotion campaigns should be something along the lines of “an answer for every preoccupation” (*una respuesta para todas las inquietudes*). In other words, all persons who promote the sale of quality household sanitation must be well-versed in effective content and techniques to help consumers understand that household sanitation is affordable and attainable. The marketing materials developed can lay out the products within the context of the affordability strategy in such a way that the consumer will see that it is not a matter of “whether” to install a desired sanitation solution, but only a matter of “when.”

Marketing materials that present the affordable options to the consumer should also incorporate the lessons learned in each pilot zone with respect to the types of sanitation systems that consumers in those districts prefer. Options that are not in high demand should be eliminated from marketing materials, giving more space and energy to clearly articulating the affordable sanitation protocol for the most popular options—water-based solutions in particular.

To stimulate sales during the critical post-harvest period, all NGOs must step up their promotional efforts. APSS must consider ways to stimulate these efforts and reward success. Consider raising commissions for sales, supporting new and improved sanitation fairs (especially those that can promote the affordability strategy), new efforts in local schools, promotional pricing etc.

Much improvement is possible if all vendors of products and service get on the same page with respect to selling affordable sanitation options. All who are in contact with the consumer must be able to articulate the affordable options. They also must be able to counter every consumer reason for not being able to make the sanitation purchase. Once the affordability strategy is ready, products adapted, and marketing materials and information prepared, training of promoters, plumbers/masons, hardware stores, must take place. Role-plays must form a significant part of this training, with every participant involved in multiple role-play activities.

All NGOs must investigate opportunities for facilitating bulk purchases, and must be sure to capture lessons learned from other pilot zones in this experience. These lessons learned will become part of the legacy materials from APSS that are used in replicating and scaling up. To this end, APSS should identify the activities and models developed to date (see the Huaraz work on facilitating government support for technical assistance to households to hook up to sewers, Cusco’s experience in coordinating with Community Assemblies as part of the participatory budgeting process, the Pachacutec work with neighborhood organizations, the Cajamarca community mobilization work with Juntos, Iquitos’ coordination with Construyendo Peru, coordination activities with the Healthy Municipality Program) that are being implemented in municipalities.

Of particular interest are activities that generate raw demand for improved sanitation. These can focus on open defecation, poor household systems, or systems that create visible adverse environmental and public health conditions. Cajamarca implemented some of these activities out of the CLTS playbook, but did not follow up with the communities on promoting collective solutions, leaving individual households to act. Any activities that target community assemblies or other community-based programs should consider implementing a program that includes stimulating demand for sanitation using CLTS activities and organizing a cost-effective community-level

response for household sanitation improvement. Participatory mobilization activities as well as systems for government reward and recognition of high-performing communities can be considered.

A key aspect of the sales plan is to address opportunities to organize bulk purchases at community or neighborhood levels—particularly in those zones where there is a socio-cultural tradition of community organization and action. The objective is to make bulk discount purchases of products and services for 100% of the households in a community. This might be possible if a package of affordable options is presented to the community that allows households flexibility in products, installation, and/or construction services, and a timeline for construction and installation.

APSS should examine the important work done by the NGOs in organizing community-level purchases and look at putting together a general model for a *community-level* affordability strategy with the objective of attaining 100% coverage in the community. Look at scenarios where a community has a long timeline to complete construction, but still wants to avail itself of economies of scale for products and credit. Can the community negotiate a preferred credit arrangement that permits different household implementation modalities (in keeping with the affordability strategy for households)?

#### **5.1.4 THE OFFER OF QUALITY PRODUCT AND MATERIALS**

The APSS currently has an informal way of indicating that a product provider is part of the APSS sanitation market—posters, banners, brochures produced by the APSS are available at the point of sale (hardware store). Ideally, for a QSM, product providers as well as service providers would be certified as vendors who provide only high-quality materials, products, and accessories for household toilets and bathrooms. These certified vendors would have on hand printed materials that indicate which products are approved as having acceptable quality. The system to bestow this certification status and to help vendors maintain it remains a key challenge. As part of developing the affordability strategy, APSS must reassess products and materials used in construction with an aim to reduce costs to the consumer while maintaining quality. Using the experience of Pachacutec as an example, this begins with the design of the toilet/bathroom superstructure. APSS should convene its technical specialists, representatives from hardware stores, and especially its masons/plumbers to review designs and offer more alternatives that are cost-effective (in materials and labor).

APSS should develop a list of products, brands, etc., that have not met quality criteria. There are definitely low-cost brands of pipe that are not suitable for the quality bathroom, but there may be valves, connections, taps, paints, glues, etc., that also should not be used. APSS should compile a list of these approved and forbidden brands as part of setting up the quality assurance program (see next section).

To ensure that quality products are used, APSS must ensure that affordable sanitation designs and acceptable brand lists are completed and made available to consumers, certification entities, vendors, governments.

As part of the general QSM model, APSS should develop a general protocol and system for providing some kind of certification for product and materials providers. This may or may not be sanctioned by the government.

APSS must ensure that vendors provide information on proper storage and inventory of materials to communities that purchase material in bulk.

APSS is doing important and effective work in coordinating bulk purchase opportunities through community planning and through links to government programs. It is important that APSS ensure that the private sector participates in these discussions and coordination activities to be able to replicate them in new communities after the APSS closeout.

APSS needs to closely monitor the installation of any composting toilets (eco-san) options and provide significant training and follow-up to households that have purchased the option. It may be possible to hire a local specialist to support this.

In addition, APSS must consider the role of the district hardware store in the market and decide on the role these local stores will assume in the QSM. Consider pulling back from trying to make district stores distributors of specialized accessories (i.e. toilets, sinks, tiles) and instead focus their attention on supplying construction materials or in directing consumers to particular regional distributors.

As part of any APSS lessons learned workshop, a separate activity for review of hardware, technology, designs, and products is required. In particular, APSS should review the Pachacutec experience (its process and outcome) in developing an offer targeting the local market. The Safiro design in Huaraz also is worthy of review. One issue to address is promoting in-house construction of the flush toilet and bathroom, as opposed to implying that it must be in an out-building.

Local service providers are innovating on the job. It is helpful to capture their inputs to design, construction, and materials prior to APSS closeout. Each pilot area should be encouraged to think critically about their technical offers and consider local design workshops with appropriate technicians and vendors.

APSS also should use this opportunity to analyze the overall technical norms promulgated by the Initiative—in particular the norms for on-site wastewater disposal and the requirement of septic tanks in all cases.

### **5.1.5 THE OFFER OF QUALITY TECHNICAL SERVICES**

As part of the general QSM model, APSS must develop a general protocol and system for providing some kind of certification for technical service providers. This may or may not be sanctioned by the government. Perhaps it can be linked to the kind of private sector trainings/orientations that were offered in Cusco. Perhaps it can be sanctioned by a government body and operate outside of the SENCICO system or receive a special status under the SENCICO training system.

APSS should assess in each district whether it should offer another round of capacity-building for masons/plumbers. It is recommended that the Cusco model of capacity-building be studied as a best practice. Cusco obtained training from regional distributors of sanitation accessories. The trainings were short orientations for *experienced* masons/plumbers in the key aspects of planning, building, and installing the APSS bathroom designs.

APSS should implement an integrated training for masons/plumbers in the planning, construction, installation, and marketing of the final designs that come out of the affordable sanitation strategy. APSS should facilitate training of no more than five masons/plumbers per district. These masons/plumbers must be established professionals. The training course should not take more than one or one-and-a-half days. A local hardware supplier should be advanced as the primary provider of training on the affordable offer for the future QSM.

Masons/plumbers must be trained in marketing their services—especially in getting on the same page as the rest of the QSM’s actors with regard to the affordability strategy. This will require APSS to identify candidates and to implement training. Training must be heavy on role-playing activities.

APSS needs to support masons/plumbers in structuring packages of services that are in line with the affordable sanitation strategy. Develop technical assistance/service packages with prices that allow the consumer to select the type of assistance they need—from a couple of days to help with layout and dimensioning of the bathroom; to a specific time period associated with certain tricky aspects of construction (e.g., connecting the household wastewater drainpipe to the public sewer, installing the toilet, installing a water heater); to full installation of all plumbing to full bathroom construction.

### **5.1.6 THE OFFER OF QUALITY FINANCIAL PRODUCTS AND SERVICES**

Undertake a simple willingness to pay survey to understand the dynamics in different income groups (seasonal versus monthly employment) with respect to opting for either credit or a savings account. Develop guidelines for the QSM for appropriate financial products for different Peruvian demographics (e.g., agrarian single income, migrant/seasonal worker, peri-urban service provider, etc.).

NGOs need to map the providers of financing in their regions and make contact with each of these to assess their potential role and interest in being part of the QSM and in offering tailored financial products to the home improvement/ sanitation market. There are financial entities operating in APSS regions that have not been contacted by APSS but are being accessed by sanitation customers. On the whole, financial institutions showed much more interest than hardware stores in developing the sanitation/home improvement market and should be courted by APSS as actors who will take on critical market functions currently provided by APSS, such as promotion, marketing and coordination of community-level programs.

In conversations with financial institutions, APSS should highlight the economic impact of sanitation loans—on homes with rental units, on homes that will participate in community tourism programs, on homes that will charge neighbors for showers, etc. These are essentially small business loans as opposed to home improvement loans.

As part of the affordability strategy, APSS must work with the financial institutions to develop clear financial packages/programs (savings, credit) that the do-it-yourself customer can access step-wise to install a toilet or bathroom in segments. Work with financial institutions to assess viability of their organizing and supporting village banking groups similar to those now being established by APSS in Namora, Cajamarca.

APSS should work with at least one financial institution to back a village bank program with the objective of attaining a significantly lower interest rate from the bank for the large loan than would be possible for small individual loans.

### **5.1.7 ADDRESSING THE ENABLING ENVIRONMENT**

APSS could benefit from more backing from the central government in supporting district governments in their effectiveness as QSM partners. The central government could support districts by:

- Providing clarity and guidance on technical norms for household sanitation—especially for on-site wastewater disposal.
- Offering guidance and examples on how district technical personnel can create practical voluntary sanitation monitoring and quality control, and consumer information services. This guidance could come through the participatory budgeting process, district implementation of the Healthy Municipality Initiative. APSS should facilitate and support these central government efforts.

APSS has coordinated with local government entities and programs, but has done so without a clear role for that district as a partner in the sanitation market. APSS should define practical and sustainable roles for the pilot districts in the QSM (based on need, capacity and interest of the district), and (using any central government or other leveraging) work with the district to institutionalize this capacity.

The role of the central government in supporting the sanitation market approach needs to be solidified and communicated. It appears that APSS is being observed as an experiment but that the government is taking little action to support APSS at the district level or with a national policy or strategy. There is still danger that sanitation markets can be undermined by paternalistic sanitation programs funded by public and private sector donors. Market consolidation, sustainability, expansion and replication would be aided significantly by more proactive central government support. APSS needs to take efforts to make this happen.

APSS should therefore ensure that any ‘lessons learned’ or ‘next steps’ workshop has appropriate central government representation and that there are significant follow-up actions between APSS and central government in articulating the central government position on sanitation marketing and on the central government role in impacting the district-level enabling environment.

Environmental sustainability of sanitation systems requires that the GoP coordinate across its levels to establish and communicate technical norms for household sanitation. APSS can facilitate this work, noting that current confusion in norms is resulting in unnecessary adverse environmental impacts from wastewater and increasing the risk of future impacts, while reducing sales of toilets and bathrooms.

### **5.1.8 DEVELOP AND IMPLEMENT EXIT STRATEGY**

APSS must incorporate general best practices in exiting these markets. These practices include a system for follow-up visits to key actors, a plan for future exchange visits to the pilot areas, and a schedule for handing off of APSS functions to appropriate actors. APSS should acquire supplemental funding to support a “skeleton crew” (perhaps one part-time person) in each pilot zone to implement the follow-up support visits.

The Initiative also needs to convene a general lessons learned activity/workshop that brings in actors from each pilot zone as well as key central government participants. This is a prelude to the QSM design workshop(s) that will produce/confirm a general QSM model and produce specific pilot zone QSM designs. It also is an opportunity to solidify the commitment and support of the central government in recognizing sanitation marketing as a principle way forward in addressing sanitation coverage in Peru.

Working on policy, strategies, norms, and regulations can pay dividends in consolidating the pilot markets, providing those markets a more enabling environment with which to function, expand, and ultimately make it easier to establish new sanitation markets in other regions.

APSS can support sanitation marketing by collaborating with the GoP to:

- Discourage the give-away of sanitation products and services by public and private sector donors;
- Create rules that direct public funds that are used in building sewers to include a budget for limited technical assistance to households to connect to the system. This technical assistance would cover the hook-up to the sewer with a pipe, and help in locating and dimensioning the bathroom on the property, as well as overseeing the installation of the household sewer pipe;
- Encourage communities to address sanitation in their annual budgets;
- Develop a marketing role and materials for health facilities in promoting the certified sanitation network;
- Develop a marketing role and materials for schools in promoting the certified sanitation network.

### **5.1.9 ADDRESSING ENVIRONMENTAL IMPACT ISSUES**

Given the severity and scale of potential adverse environmental impacts that could be caused by large-scale success in sanitation marketing, APSS should support, and if possible facilitate, GoP efforts to bring coherence to national rural and urban sanitation norms, by:

- Seriously addressing options for public treatment of wastewater that is collected through public sewer systems and released untreated into the environment and advocating for increased government attention to this critical environmental issue.
- Allowing on-site disposal option of direct disposal of wastewater into an infiltration pit without intermediate septic tank when appropriate physical conditions are present, providing a cost-effective and environmentally sound option for rural and urban households that allows consumers to install environmentally sound sanitation facilities now, as opposed to waiting for public sewerage with treatment, or by installing household wastewater disposal systems that are inexpensive and harmful to the environment.
- Supporting and advocating for improved public and private sector systems to address the safe and hygienic collection, handling, and disposal of bio-solids from latrine pits, septic tanks, and small wastewater treatment plants.

APSS could also, if practicable, help the GoP communicate sanitation design norms to the private sector and local governments. (See Annex 2 for detailed discussion of this issue.)

## **5.2 DISTRICT-SPECIFIC ACTIONS TO CONSOLIDATE THE FIVE PILOT QUALITY SANITATION MARKETS (QSM)**

### **5.2.1 GENERAL ACTIONS FOR ALL DISTRICTS (REFERRING TO THE RECOMMENDATIONS ABOVE, NOTING THAT DETAILED APPROACHES AND MODELS ARE PRESENTED IN SECTION 6 BELOW):**

Ensure that each district has been objectively assessed with respect to its QSM design. APSS does not want to make assumptions on the roles and responsibilities of the actors in these district markets without confirming them in the field. That means pilot teams will need to reassess the current and potential roles of each current and potential actor in the district and adjust the QSM design accordingly should unexpected champions emerge—e.g., financial institutions that were not

participating, governments that are taking a new interest, hardware stores that are now more interested in the markets, donors or government programs that had not been contemplated earlier.

There are QSM models where the role of local government in supporting quality and informing consumers is significant. Obtaining participation of local government representatives in QSM design, and their buy-in with respect to its implementation, are important activities for each APSS pilot team.

Develop a general model for a self-sustaining system for certifying the quality of those providing product and services. Adapt the general model to each pilot district and implement it. Options are presented later in this report and may or may not involve local government support depending on the strength and interest of the private sector actors in the market.

Based on this reassessment of the roles and interests of the market actors, APSS can narrow the number of possible QSM designs for a particular pilot zone and move to strengthen each actor in their role(s) in the self-sustaining and expanding QSM. This set of strengthening activities is what makes up each pilot zone exit strategy and plan.

Each pilot district must focus significant attention on how the promotional and marketing services currently provided by APSS will be maintained or enhanced. Of particular concern is the high attrition rate of field promoters during APSS implementation and the fact that relatively few high-quality field promoters are available for work in the QSM post-APSS. Facilitating incentive systems between promoters and private or public sector actors (hardware stores, financial institutions, local government) is important if the promotion service is to be sustained. Promoters can be in direct employ of individual businesses, the government, or operate independently on a commission basis.

## 5.2.2 ACTIONS BY DISTRICT

Referring to the key take-away conclusions presented in the findings by district, the recommended actions for consolidating markets in each pilot district are presented below. Refer first, however, to the general, overall recommendations for pilot zone actions above, and study the general recommendations to select those most appropriate for a given district. In particular, facilitating the role of local governments as information sources for the quality sanitation offer is key.

**TABLE I: ACTIONS TO TAKE IN EACH PILOT ZONE TO CONSOLIDATE THE LOCAL SANITATION MARKET AND PREPARE A QSM DESIGN**

District / Key Actions	Promotion/ Marketing	Product Offer	Service Offer	Financial Offer	Enabling Environment
<b>Chincho, Cusco/</b> develop role of market leader in Caja Municipal de Cusco	Negotiate with Caja Municipal de Cusco to take leadership. Implement marketing effort with satisfied consumers as centerpiece. Push bulk sales by organizing community programs. Market the affordable sanitation	Develop/ articulate affordable sanitation solutions. Train providers in marketing them. Finalize role of district hardware	Develop certification system for providers based on private sector training model. Train masons in marketing affordable solutions. Apply APSS	Work with Caja Municipal de Cusco to develop new products as part of affordability strategy.	Create a voluntary reporting and information exchange program at District office that supports quality in QSM.

	solutions. Reactivate two or three field promoters.	stores versus regional.	certification system.		
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<b>District / Key Actions</b>	<b>Promotion/ Marketing</b>	<b>Product Offer</b>	<b>Service Offer</b>	<b>Financial Offer</b>	<b>Enabling Environment</b>
<b>Namora, Cajamarca /</b> develop incentive structure between actors that sustains all market functions.	Push bulk sales by organizing community programs, linking to Juntos. Market the affordable sanitation solutions. Consider a QSM that uses independent promotion that is supported through a system of commissions and possible government support. Work to get four or five active field promoters hooked into the incentive system.	Develop /articulate affordable sanitation solutions. Train providers in marketing them. Ensure training for consumers who opt for composting toilets.	Develop certification system for providers based on private sector training model. See Cusco experience. Provide a certification orientation / training to masons who are actually doing the work. Train masons in marketing affordable solutions. Apply APSS certification system.	Work with a financial institution to take on village bank support. Contact and coordinate with other lenders who are operating in zone.	Can the government support the promotion and marketing component of the market? District government as source of information for quality sanitation.
<b>Independencia, Huaraz /</b> develop role of market leader in Hardware Store “Safiro.”	Develop Safiro as a QSM leader. Implement marketing effort with satisfied consumers as centerpiece. Train up new promoters and link them to Safiro through commission system. Market the affordable sanitation solutions. Identify community tourism programs.	Safiro takes lead in marketing its own design with APSS support in articulating it as an affordable sanitation solution.	Develop certification system for providers based on private sector training model. Train masons in marketing affordable solutions. Apply APSS certification system.	Work with local financial institutions to develop savings product for home improvement.	Develop significant role in promoting quality with local government. Leverage funding from district to support sewer hookups. Promote wastewater treatment.

<b>District / Key Actions</b>	<b>Promotion/ Marketing</b>	<b>Product Offer</b>	<b>Service Offer</b>	<b>Financial Offer</b>	<b>Enabling Environment</b>
<b>Pachacutec, Callao /</b>	Market the affordable sanitation solutions.	Develop/ articulate	Train masons in marketing	ADRA financial	Develop local government



develop incentive structure between actors, incorporate ADRA financial institution.	Implement marketing effort with satisfied consumers as centerpiece. Develop incentive system with financial and product providers so that salaried field promoters can continue working.	affordable sanitation solutions. Train providers in marketing them. Take initial steps to investigate potential for septic tank cleaning services.	affordable solutions. Apply APSS certification system.	institution formalizes presence in pilot zone. Develops products for low-income home improvement.	role as information node in QSM.
<b>Belen (Peña Negra), Loreto</b> /use experience to develop affordability strategy and propose a QSM model. (NOTE: In five months, establishing a market is not feasible; efforts should focus on studying the market and designing a QSM that could be implemented in the future).	Develop marketing materials for the affordable sanitation solutions. Develop ongoing relationship with Construyendo Peru and/or other sources of support.	Develop/ articulate the current technical solution as an affordable sanitation solution. Study composting toilet design of the French NGO and articulate as an affordable sanitation solution.	Use APSS certification system for local masons.	Identify and map local financial service institutions and their home improvement products. Use this information as part of the affordability strategy development.	Look to support local government role as information node in QSM.

## **6.0 CREATING SELF-SUSTAINING QUALITY SANITATION MARKETS (CONCLUSIONS, SCALING-UP OPPORTUNITIES, AND KEY CRITERIA FOR SUSTAINABILITY)**

The recommendations found in Section 5 on designing a general QSM model and pilot district-specific QSM designs are general in nature. In this section, specific details on QSM design options are presented. The objective of all QSMs is to be self-sustaining and to expand and replicate without international donor support.

### **6.1 MAKE THE PILOT SANITATION MARKETS SELF-SUSTAINING AND SELF-EXPANDING**

APSS provides critical market functions to the pilot sanitation markets. APSS must ensure that in the next five months that these critical functions are handed off to other actors in the sanitation market network. In this five month period, APSS also must facilitate the creation of QSM systems that permit these actors to provide these critical market functions into the foreseeable future in the pilot districts—with the ability to expand into neighboring districts.

#### **6.1.1 KEY MARKET FUNCTIONS TO BE SUSTAINED**

The QSMs are to be designed and APSS functions passed to local market actors in the upcoming five months. The analysis below addresses the selection of QSM models—specifically the roles of key actors (i.e. hardware stores, masons, financial institutions, local governments, field promoters) and their implementation. The key market functions, now largely supported by the APSS include:

- Marketing and promotion;
  - Sanitation or home improvement fairs;
  - One-on-one sales visits;
  - Promotion at schools; and
  - Radio and media campaigns.
- Training of new promoters, masons, product suppliers;
- Developing a system of certification for service providers, product providers;
- Provision of technical oversight or support to households who are practicing auto-construction;
- Creating and/or maintaining market links between central distributors and new or existing local suppliers;
- Coordinating with financial service providers to structure favorable credit products for sanitation consumers;
- Coordination with government or government programs that support information exchange, support by the counterpart of the marketing concept, etc.

- Coordination with government and/or with government programs that facilitate government spending (subsidy) in the market.

### **6.1.2 PILLARS OF THE APSS APPROACH**

To support sustainability of a QSM, APSS must nurture and build from the following programming pillars:

- Willingness of vendors (product, credit and even masons if they can be certified since that would normally generate more business) to pay for promotional services through commissions or other mechanisms.
- Interest on the part of government (to support or promote the market in order to meet its own development objectives).
- Creation of affordable household sanitation solutions that almost all consumers can find a way to purchase.
- Desire of local leaders to facilitate community and/or district level campaigns to provide household sanitation coverage through the market.
- Government support to public water and sewer systems and desire to promote household hook-ups.
- Interest of vendors of product and credit to adapt their offers to the needs of this market.
- Desire on part of households for quality sanitation facility.

### **6.1.3 KEY CONSIDERATIONS TO ENSURE QUALITY IN THE QSM**

In building upon current work to develop the self-sustaining QSM, APSS must consider some important questions:

- Can quality be ensured in a sanitation market without an active government role? Is the market too open to ensure quality through the participation of private sector actors?
- How is a certification system for products and services sanctioned and how is it sustained?
- What is the role of government (local, regional, national) in promoting quality in the market?
- What strategies are there for promoting quality in the market when consumers purchase outside of the established APSS or QSM network, and government support is weak?
- How do the actors in this QSM ensure that consumers will purchase quality goods and services? What incentives and marketing are required?
- What goods or services can a consumer obtain outside of the network without causing quality problems?
- Can the QSM sustain what appear to be the most important marketing/promotion functions?—multiple household visits? Interventions in schools? Sanitation fairs?
- How are limited APSS resources best programmed to establish QSMs in the pilot regions in the short time remaining?
- To what extent can progress and lessons learned to date in these pilot zones be incorporated into a QSM model?
- How can APSS empower the participants in the QSM to work together to undertake creative actions that generate sales.

### 6.1.4 ANALYSIS OF POTENTIAL QSM MODELS

The following QSM models can be considered by APSS in its last five months of implementation. Note that the actual model put into practice can and probably should incorporate different aspects of those presented in the matrix.

<b>MODEL's defining Characteristics /Example</b>	<b>LEAD ACTORS and Roles</b>	<b>Strengths of Model</b>	<b>Challenges for Model</b>
<p><b>Government “regulates” quality in market through a voluntary system driven by incentives rather than sanctions</b> /variations of this model used in US, except quality is controlled punitively with codes, norms.</p>	<p>District government is node for communication, information and quality control, providing consumer with designs and lists of approved providers. Consumer receives small subsidy/recognition for reporting/completing sanitation improvement. Providers receive free advertising in return for offering quality. Service providers can form strategic partnerships to offer attractive integrated offer*.</p>	<p>Each provider is responsible for their own promotional strategies and activities. Encourages participation by providers and consumers through positive rather than negative incentives. Ideally will require minimal resources and effort on the part of government to support. The “Healthy Municipality” program might be avenue for creating this function at district level.</p>	<p>Requires government point person to manage lists of approved providers, to keep information available, to register and confirm household improvements; requires small budget District governments to date have not made significant efforts to assume a role in supporting the sanitation market.</p>
<p><b>Financial entity (or entities) is focal point of promotion**</b> and assumes a leadership role in the QSM/Cusco with Caja Municipal de Cusco</p>	<p>Financial entity takes on promotion role to increase its portfolio of loans and savings accounts. Financial entity can make arrangements with vendors of product or services for reciprocal referrals.</p>	<p>Promotion is centralized and strongly supported. Offer of product and services can be wide open or linked to certain vendors. Simple reporting system can move coverage information to local government.</p>	<p>Can the financial entity in its role as de facto QSM leader ensure quality? (e.g. purchase of only certain brands of materials or hardware?) Challenge to ensure that credit is used by consumer for sanitation. Financial entity must clearly offer best price to consumer or consumers will escape. Consumers who do not need financial services can escape from QSM</p>

MODEL's defining Characteristics /Example	LEAD ACTORS and Roles	Strengths of Model	Challenges for Model
<p><b>Financial entity in partnership with hardware stores create large closed QSM that can capture significant market share</b> by virtue of superlative offer and marketing/ Micasa Model with ScotiaBank in Pachacutec</p>	<p>Tight partnership between financial entity and hardware store(s). Credit can only be used at these stores. Credit is provided through a credit card at these stores. Stores link consumer to certified service providers. Economies of scale of the participating vendors /distributors can ensure lowest prices and capture significant percentage of consumers in the QSM, ensuring quality without requiring government role in quality control.</p>	<p>Opportunities to sell this approach to Caja Municipal de Cusco in Cusco, ADRA microfinance in Cusco and Pachacutec, EDIFICAR in Huaraz and Cajamarca. Unites actors in a market around common objectives and permits them to focus on what they do best. Ensures that credit goes to hardware purchase. Quality control is voluntary but is part of brand.</p>	<p>With respect to MiCasa— not clear that Micasa is interested in APSS target demographics. Significant organizational inputs required to set up these QSM networks. Partners in this QSM network must be able to <i>clearly offer the consumer the best prices</i> to keep sales within the network. Are poor consumers ready for credit cards?</p>
<p><b>Hardware stores are focal points of quality and promotion</b>/Safiro hardware store in Huaraz (with a financial partner this model is close to the closed QSM discussed above).</p>	<p>The hardware store spearheads the QSM taking on the promotion activities. Financing is the responsibility of consumer but can be facilitated by hardware store. Offer by the particular store is so compelling that it captures majority of market.</p>	<p>Completely open market where vendors of product and services compete for consumer. Vendors are free to establish ongoing or short-term win-win relationships to win market share—e.g. sanitation fairs, sanitation markets.</p>	<p>Government or third party role in ensuring quality is not defined. Quality is voluntarily maintained by the hardware store(s). Can one hardware store cover the market? Do individual hardware stores have resources to do aggressive promotion and to keep costs down? How to organize high cost and complex marketing events? May require APSS to help develop complimentary financial products.</p>
<p><b>A third party (government, donor) hires a firm or individuals to take on promotion and quality control role</b> / APSS model— Pachacutec pays salary to promoters.</p>	<p>Promoters provide critical promotion, quality control and leadership function in the market and link consumers to providers. The providers of product and service are certified members of a network. Promotion links consumers to these providers and to financial services. Providers of</p>	<p>This can be a transitional system to help establish and then transfer all market functions to a QSM that is in a form that is optimal for the particular zone. Firm can perform M&amp;E on quality and sales to optimize design of the QSM. Helps to standardize marketing</p>	<p>Requires external funding source and likely external technical assistance. Can limit flexibility and innovation on the part of vendors to promote or market on their own. Not sustainable unless it becomes part of ongoing government program.</p>

MODEL's defining Characteristics /Example	LEAD ACTORS and Roles	Strengths of Model	Challenges for Model
	product, finance, and services can be tapped to offer additional incentives to promotional/marketing team.	messages and the affordable offer. Can address current issue with attrition of field promoters.	
<b>A firm or individuals to take on promotion and quality control. All actors are compensated through a system of reciprocal incentives with other QSM actors/</b> A possible option discussed for Cajamarca.	The promotional firm may end up being the unifying entity in this market. This firm is responsible for establishing advantageous relationships with different actors—financial, vendors of product and service, government, and donors.	Does not preclude involving government to provide quality control support. Helps to standardize marketing messages and the affordable offer. Can establish the “Network of affordable Sanitation” seal of quality approval. Possible use of coupons to track sales and award commissions.	Requires APSS to set up a system of reciprocal incentives—likely to require multiple MOUs between financial, hardware, service providers. Honor system to pay commissions, coupons or other mechanisms can be used to ensure that market rewards success. Given the number of vendors high likelihood that many sales would escape the incentive system.

\* Integrated offer – a combination of financing, product, and service are bundled by one supplier and offered to the consumer.

\*\* Promotion = Activities in stimulating demand for sanitation, marketing products and services ( material and financial) to individuals, organizing individual and group purchases, directing consumers to particular vendors, creating alliances with government programs or local government activities that open markets or result in sales.

## 6.2 DESIGNING APPROPRIATE MODEL(S)

APSS will finalize a general (theoretical) QSM model and then tailor this model for each pilot zone. The challenge in these last five months of implementation is to develop QSM models for each pilot zone that in a practical fashion, ensure, to the extent possible, the quality of the affordable sanitation solution for all consumers. In designing the specific model for a self-sustaining QSM in a district or region there is appear to be three basic models:

- A model that attempts to ensure quality throughout the market through voluntary participation of a group of private sector actors who by virtue of their superlative offer and marketing capture virtually all sales.
- A model where third parties (i.e. government) support consumer access to quality across an open market. This third party can support quality in the market place by acting as an honest and proactive broker of information on quality designs, products, and services—providing a service to consumers that can include incentives from the government to promote consumer participation. Consumers can still purchase outside the recognized quality market, but do so at their own risk.
- Another option for supporting quality is to create an enforcement capacity to ensure that industry, vendors of product and services offer quality product and services. This

enforcement capacity can also include the consumers themselves who must abide by national design norms and building codes in household facility installation.

### **6.3 ENSURING THAT CONSUMERS USE QUALITY PRODUCTS AND SERVICES (THE “Q” OF THE QSM)**

The QSM model must encourage broad participation (if not active participation) of vendors, consumers and community governments in a network of quality affordable sanitation. Namely:

APSS should define quality for materials, accessories, design, and services. As noted in the Findings section, the key issues with respect to quality of the sanitation solution are, in order of importance, to:

- Ensure that standard bathroom designs (with material lists and approved brands) are disseminated (to appropriate market actors) and respected. A certification/branding system is implied.
- Ensure that mason/plumbers can provide required technical assistance and services and that a straightforward, practical, sanctioned certification branding system is in place.
- Ensure that the materials and accessories used by consumers are of adequate quality (only potential problem observed is with pipe quality and possible issues with certain brands of cheap valves and accessories). Again, a certification/branding system is implied.

Ensuring quality in the QSM through voluntary participation of private sector actors is a challenge. There will always be vendors and service providers who will proffer lower quality designs, materials, products and services. A QSM based on voluntary quality control must be well-coordinated—actors must have clear incentive-driven relationships to participate with one another, an actor who takes a leadership role in marketing and promotion may be helpful, and the QSM must be able to offer lowest prices for the clearly superior product and in this way capture virtually all sales.

The Cusco pilot has shown interesting initiative by coordinating with national and regional distributors of sanitation products to interest them in taking on a supporting role in district and regional sanitation markets. This role can involve sponsoring training to local sanitation service providers (masons and plumbers), reducing prices, and distributing APSS marketing materials to consumers. These activities should be investigated in depth by APSS as to their efficacy and their replicability in terms of supporting local quality and price in a QSM.

APSS must examine models and approaches that can promote quality outside of the formal APSS QSM (the network of actors that coordinate with APSS) or approaches that effectively ensure quality throughout the entire supply side (hardware stores, masons, plumbers). One possible option to explore in promoting quality in the sanitation market outside of the APSS QSM is to work with distributors of products—namely toilet bowls and accessories—to make sure that all of their products are sold with a pamphlet that contains appropriate basic bathroom designs, with key tolerances, offsets, and measurements highlighted. This design would also include a parts list with easy-to-understand quality criteria for each part. Ensuring that these design pamphlets are available at all distributors/hardware stores for perpetuity is certainly a challenge, as is having each distributor or hardware store provide customers with a list of reliable (perhaps not certified) masons/plumbers who can help ensure quality installation. One strategy may be to work with the GoP to stipulate that all the major distributors at the national and regional levels must include the quality bathroom design in all toilet bowl sales documentation. Another option is to ask the major distributors to take this on voluntarily. Another option is below (#4).

APSS might work with GoP entities to establish some type of a “Network of Affordable Sanitation” Seal of Quality Approval. The objective of this network is to address the three quality issues listed above, noting that the quality of materials and accessories is considered to be much less of an issue than the quality of designs and service. The district government is the logical location for this system—there are political incentives for a district to promote quality sanitation (especially if APSS can get the national or regional government to lean on the district), the system will not stifle the market, and the system can be implemented in a very simple way that rewards participation instead of punishing non-participation:

- Come up with a brand or logo and put it on a seal or a card or something that can be displayed by a vendor indicating their membership in the network. This posted document will have a government seal, a VIP signature, and an expiration date.
- Develop the marketing materials for the affordable sanitation solution—designs, construction options, financial options.
- Establish designs and materials list and marketing information that must be supplied to consumers *by the vendor* if the vendor is to be a member of the network. Make these openly available by the government to consumers and vendors.
- Establish very simple criteria for qualification:
  - For vendors of product: list of materials and brands that can be sold by the vendor that meet minimum quality standards. If vendor carries materials that are of proven low quality they do not qualify.
  - For vendors of services: year of experience, testimonials from satisfied customers in plumbing and masonry, and proof that they completed a ½-day course on “implementing quality affordable sanitation solutions.”
  - For vendors of financial products: must agree to promote QSM, must agree to pay credit directly to certified vendor, not to consumer.
- Establish simple system of bi-annual re-certification that minimizes need for government agent to leave their office.

APSS can work with local government to develop and institute simple systems whereby consumers are encouraged to self-report (present receipts or invoices) their household sanitation improvements to the district water/sanitation officer—ideally before and after installation. Government incentives for the consumer can include public recognition of the improvement, technical support in hooking up to a sewer, small gift of cleaning product or tool—some incentive to get people to self-report that helps the local government monitor sanitation improvements. Reporting pre-construction/installation is important as it is an opportunity for government to provide the consumer with information on quality sanitation solutions (designs, material lists, and members of the network) and perhaps even technical support.

APSS should work with district government to establish a system of support (guidelines and information—not technical assistance or funding) targeting district community leadership. This system would encourage community leaders to address sanitation through and availing themselves of the QSM. This can be guidance that finds its way into participatory budgeting, information on how to encourage household hook-up to sewers, how to promote sanitation as part of water development, how to organize cost-saving bulk purchases, how to take advantage of other government programs, etc.—all the time focusing on getting the community and its households to use the network of quality affordable sanitation.



## 6.4 DISTRICT-SPECIFIC STEPS FOR ESTABLISHING THE LOCAL QSM

In the following discussion, the implementation of a voluntary QSM model (limited government inputs to quality control), is referred to as the “Micasa Model.”

1. Make sure that the Micasa Model for providing an integrated offer for quality sanitation that or any market model that does not offer a failsafe system for ensuring that quality design, materials, and services are used by consumers is complemented by a quality assurance network described above.
2. Quickly analyze the potential for establishing the Micasa Model for home improvement in all pilot zones. If this network can ensure lowest prices on product, service, and credit it has a good chance of capturing a major market segment. The key issue to address is whether the financial institution will offer credit to the APSS target demographic. The Micasa Model might be set up in:
  - Cusco – with Caja Municipal de Cusco taking a lead role.
  - Cajamarca – with EDIFICAR or Juntos taking a lead role.
  - Huaraz – with Safiro hardware taking a lead role.
  - Pachacutec – with ADRA finance taking a lead role (ScotiaBank may not be interested in the APSS demographic).
  - Loreto – still has basic steps to take in establishing a market.
3. If setting up the Micasa Model for a voluntary QSM is problematic, consider moving toward other models articulated in the table above. In this case, consumers will have more latitude in selecting vendors, and having a government system to certify vendors is even more critical. Play to the strengths of each pilot market in establishing these systems noting that the strongest from a quality assurance point of view are:
  - a) A key market node is a strong distributor of product or hardware store (they know quality best and have relationships with service providers (masons, plumbers).
  - b) A key market node is a financial institution—especially if formally partnered with reliable vendors of product and services (at which point it becomes a Micasa Model).
  - c) Independent promoter supported by commissions or by funding from third party—the well-trained promoter can ensure that partners in the network respect the quality requirements and can help vendors keep their pricing competitive.
  - d) The free-for-all where all vendors compete openly against the others
4. While establishing these QSMs, keep the door open to other vendors of finance, product, and services to join the APSS-supported networks or to set up competing networks. Getting as many of the existing vendors associated with a quality network is in the best interest of consumers and can help speed sales of quality sanitation solutions.
5. Also implement a full court press on financial institutions to come up with sanitation-specific or home improvement products that permit a wider range of participants, that support village banks, that are supportive of group and bulk purchases

## 7.0 PREPARE A GENERAL APPROACH WITH TOOLS AND SITE-SPECIFIC STRATEGIES FOR EFFICIENTLY STARTING UP NEW SANITATION MARKETS IN PERU AND ELSEWHERE

### 7.1 CAPTURING THE APSS LEARNING TO CREATE NEW QSMS

This table addresses all activities to be considered in efficient replication of APSS Program in new zones. Items that ***are bolded, italicized, and underlined*** are products that APSS should consider producing in the next five months to be used for replication and organized in a Management Manual.

Current APSS role/activity	Replicate to what degree?	Actions to take now
<b>PRELIMINARY PROGRAM START-UP</b>		
Make funding available for all aspects of the replication effort.	The objective is to replicate APSS functions in the most cost-efficient manner possible, and until the national market reaches a tipping point toward auto-sustainability, there will have to be a budget for supporting replication.	Confirm the overall QSM model. Analyze scenarios for paying for the management team, field teams, for all replication activities—e.g. government assumes role, government hires third party, donor supports, national private sector champion, public/private partnership supports. The public/private partnership model is of interest—involving the central GoP, a national-level vendor of sanitation accessories or construction materials, and if necessary a third party partner that provides technical assistance. This set-up could leverage private resources (perhaps social investment moneys), have an inside connection to government policy and strategy makers, and leverage external support for technical assistance. The partnership would operate until private sector actors involved in local “pilot” markets take on replication activities on their own for reasons of profitability.
Assemble a Management Team and kickoff project activities. The Management Team must have a market specialist, a marketing/promotion specialist with applicable community development experience, and have access to technical assistance from a technician familiar with household sanitation technologies.	There must be some entity that helps coordinate and supervise the early replication attempts. A Management Team for a large regional or national-level replication effort is therefore required at this juncture.	Develop a <b><i>Guide for the management team</i></b> that contains all tools noted in this table along with a user’s manual for these tools. The guide must describe roles and responsibilities of each member of the team, provide illustrative timelines and budgets for district level field activities, and as noted, contain all data gathering, design, and implementation tools described herein.
Conduct a desk study of target sites to prepare for data collection.	This is a rapid, low cost activity to be used to prioritize potential field sites and to describe	Prepare a <b><i>Preliminary desk study tool</i></b> that describes how to conduct said desk study. Tool should describe information needs and likely information sources. Must also lay out how findings

Current APSS role/activity	Replicate to what degree?	Actions to take now
	target demographics.	inform design of in-depth research activities and/or actual program elements.
Review the enabling environment—pertinent policies, strategies, norms, ongoing programs, other actors, etc.	Rapid review of current status of programs, policies, actors is mandatory.	Prepare a <b><i>report on the status of the national, regional and local enabling environments.</i></b> Highlight ongoing and planned programs with whom the sanitation market will need to collaborate. Prepare a <b><i>rapid enabling environment assessment tool</i></b> to use in conduct this review that will serve to update the APSS report above and to capture local variations. The tool should describe information needs and likely information sources. Must also lay out how findings inform design of in-depth research activities and/or actual program elements that are impacted by the enabling environment. These can include helping the market collaborate with ongoing government programs, organize community purchases, etc.
<b><i>DATA COLLECTION and IN-DEPTH RESEARCH</i></b>		
Prior to program design, Conduct detailed consumer research studies, and marketing studies.	Step 1: To efficiently replicate this activity, begin with a desk study. Use rapid demographic desk study to inform the degree to which consumer and market research results from the five pilot zones can be applied to this demographic.	Consider development of a desk tool—a <b><i>demographic filter</i></b> —that essentially compares the demographics for which APSS already has consumer preference and marketing with the demographics of a new sanitation marketing geography, and helps the programmer decide if marketing models developed in the five APSS pilot zones might be valid for the new zone. APSS can conceivably develop a GIS tool with social and demographic overlays to help target areas where APSS approaches can be most economically replicated (without having to develop new promotional materials and approaches).
Prior to program design, Conduct detailed consumer research studies, and marketing studies.	Step 2: Use the desk study to reduce the scope and quantity of data required in the field study. Use a reduced and rapid field assessment to gather information on consumer behavior, preference and marketing.	This should be a comprehensive demand-side information gathering tool that can be scaled down significantly if demographic indicators show significant correlation of the target with an already studied demographic (i.e. one of the APSS pilot zones). The field assessment becomes an activity that confirms the employment of marketing approaches and materials that have already been produced, but also identifies any differences in the new demographic that suggest the need for adjustments in marketing approach or more information gathering.
Conduct detailed studies of supply chains—services and products.	The rapid desk study can provide hints as to the maturity of the supply side of local construction and sanitation markets, but it is likely that field	The field research can be conducted rapidly with a <b><i>supply chain assessment tool</i></b> by visiting and interviewing government officials, hardware stores, distributors of sanitation products, and NGOs. Hardware stores and NGOs can identify masons/plumbers to interview. Should be carried

Current APSS role/activity	Replicate to what degree?	Actions to take now
	research will be necessary to confirm these hints.	out in target districts and in closest regional capital.
Conduct detailed studies of household sanitation technologies that are in use.	Use rapid demographic desk study to inform the need to conduct this research. May choose to: skip, do rapid field assessment, or do in-depth research.	Document <b><i>detailed designs of current APSS pilot markets</i></b> . This documentation should include links as to which models are most appropriate for different demographics. Prepare a <b><i>sanitation technology assessment tool</i></b> that will guide a technical specialist through a rapid assessment of representative household and community sanitation technologies that will be used to modify the technical offer in that particular locale.

Current APSS role/activity	Replicate to what degree?	Actions to take now
Conduct detailed study of enabling environment—focus on local government, policy, strategy, regulation, norms, other local actors and their roles.	Before starting a replication activity, a rapid local assessment of the enabling environment is required.	APSS must prepare a rapid <b><i>local enabling environment assessment tool</i></b> to be used by a qualified specialist. Local assessment compliments the general desk study done above. It will map actors, current and future programs, and identify points of contact. The assessment will also describe local government capacity and pertinent regulations, norms, ordinances, or statutes pertaining to the sanitation market.
Conduct detailed study of pertinent financial systems and credit availability.	Rapid assessment is required to identify actors and their products.	The rapid financial sector assessment is a straightforward inventory of financial service providers, their current products (with information on interest rates, payback periods, principals, policies on qualification, etc.), and if they will divulge it, information about their plans for participating in the home improvement market. APSS must develop a <b><i>rapid local financial sector assessment tool</i></b> . APSS should compliment this with <b><i>documentation of the innovative financial products</i></b> so far in use in current pilot zones and perhaps elsewhere.

***APSS PROGRAM IMPLEMENTATION ACTIVITIES/FUNCTIONS***

Assemble a field team, build its capacity, and kick off project implementation activities	Will an independent field team be needed? Or will a team be built inside of one or more local entities? Will the team already have experience? Will independent promoters be supported?	If a new field team is to be created it should have a marketer, a promoter with rural development and preferably some microfinance experience, and a technician who supports quality assurance. APSS must develop <b><i>SOWs and job descriptions for each of these positions</i></b> . APSS should produce an <b><i>illustrative agenda for kickoff meeting and a meeting activity guide</i></b> .
Develop and implement the affordability strategy for sanitation.	Apply one of the current affordability strategies to the new zone if possible. May have to adapt it to the local conditions.	APSS should capture each zone's affordability strategies and generate a <b><i>standard model for an affordability strategy</i></b> that will permit the team to rapidly adapt the strategy for the new zones.

Current APSS role/activity	Replicate to what degree?	Actions to take now
Develop promotion/marketing strategy, messages, and approaches for target demographics.	Rapid marketing assessment will inform degree to which strategy and materials must be adapted.	Marketing materials should present images that local populations can relate to, and if possible existing marketing materials should be so adapted. APSS must compile all current and final marketing materials and strategies and organize them in a <b><u>marketing/ promotional catalogue</u></b> that contains ALL materials with notes on how they were/are used and can be adapted.

Current APSS role/activity	Replicate to what degree?	Actions to take now
Develop catalogue of approved household sanitation systems.	Current catalogue presents a superset of options from which local catalogues can be populated. Demographic and enabling environment assessments can help inform the contents of the local catalogues.	APSS needs to first, as part of the affordability and quality assurance strategies develop and compile detailed designs of household sanitation infrastructure that contains drawings, materials lists, and material specifications with respect to quality. These designs must be organized in a final <b><u>catalogue of household sanitation technologies.</u></b>
Implement marketing and promotion training for all actors/build marketing and promotional capacity in all actors.	Must orient all actors in the QSM to promotion of the affordable quality sanitation offers	APSS must develop <b><u>a training guide for promotion and marketing</u></b> and should consider inviting in staff from current implementing NGOs to compile it. Manual must contain significant guidance on and encouragement for doing role-play exercises.
Implement promotional activities.	Depends on how promotional responsibilities are meted out, but all actors will have to be able to promote/sell the affordable sanitation offer.	APSS must prepare a <b><u>small guide for sanitation product promotion</u></b> that captures techniques, negotiating tactics, and guide a promoter through the use of marketing and promotional materials found in the marketing materials catalogue. There can be specific sections for promoters from different actors —financial sector, hardware stores, service providers, government, etc.
Implement technical training of masons.	Necessary that experienced masons/plumbers be identified and acquainted with the quality sanitation design and construction requirements.	APSS technical specialists from the pilot regions should meet to decide on minimal content for the training/orientation of experienced masons/plumbers, and lay out a basic 1 to 1 ½ day <b><u>technical training course for technicians.</u></b>
Institute system of quality assurance among providers of product and services.	It's assumed that by the end of the current APSS some lessons learned and practices for establishing this system will be in	APSS must implement some kind of quality assurance strategy that creates a self-sustaining mechanism to assure the quality of sanitation goods and services to consumers. (See Section above on creating sustainable systems.) APSS must develop a

Current APSS role/activity	Replicate to what degree?	Actions to take now
	place.	<u>QSM guide</u> that describes the best model(s) and presents the steps used to establish them.
Develop network of financial service providers with products for target demographics.	It's assumed that by the end of the current APSS some lessons learned and practices for establishing this system will be in place.	As noted above, APSS must put together <u>documentation of the innovative financial products</u> so far in use in current pilot zones and perhaps elsewhere. These examples will inform field teams' actions with respect to coordinating financial services.

Current APSS role/activity	Replicate to what degree?	Actions to take now
Collaborate with government programs that will support the market. (e.g. Juntos, community assemblies, etc.)	Best practices in strategies and approaches for helping the market take advantage of opportunities for volume sales.	APSS must <u>document experiences in leveraging resources and coordinating community action</u> in collaboration with other programs and/or government activities. These are instances where APSS has successfully helped the market take advantage of ongoing programs to produce volume sales.
Address the policy, normative, and regulatory environment at the local level to support the QSM.	This may be required to establish the QSM, depending on the model promoted.	SS must capture the role of government in the QSM in the <u>QSM Guide</u> (see above).
Address the policy, normative, and regulatory environment at the national and regional levels.	Not clear that this is an activity for future market replication efforts.	APSS should see the recommendations below and act on supporting national and regional sanitation strategies that promote the sanitation market approach and the QSM in particular. APSS should also address the environmental impact issues raised by increasing household hookups to sewers, and by promoting a flawed on-site wastewater disposal norm. APSS should prepare <u>advocacy papers and strategies</u> directed at appropriate national and regional government entities to address these issues.
Monitor and evaluate the market	Not clear what the requirements for M&E will be in the replication phase.	Monitoring and evaluation systems for the sanitation market are being developed by APSS. APSS needs to work on a quality assurance system that helps to capture household sanitation improvements motivated by market activities (promotion or sales to neighbors) but that occur outside the confines of the closed QSM. (See recommendations on a voluntary certification system above.) Advances in establishing an overarching M&E system that captures a greater volume of sales will be captured as part of the <u>QSM Guide</u> .
Hand off field team functions to the QSM.	This will take place in all sanitation markets that are started up through external inputs.	APSS must <u>document its exit strategy</u> and best practices to provide to future replicators.

Current APSS role/activity	Replicate to what degree?	Actions to take now
Sponsor exchange visits of staff, actors, with current pilot zones.	An important motivational and teaching activity.	APSS should document those current activities, successes, actors, etc. that merit being included in exchange visit agendas as part of an <i>exchange visit guide</i> .

## 7.2 SUMMARY LIST OF PRODUCTS, TOOLS, DOCUMENTS THAT APSS MAY CHOOSE TO PRODUCE TO ASSIST QSM REPLICATION ACTIVITIES

These are simple practical tools and documents to provide those involved in replication with an orientation in how to best design activities in support of new sanitation markets. They are noted in the table above and further described in the table below.

APSS Product for Replication	Details
<b>GUIDES</b>	
Guide QSM for the management team.	Overall steps in creating a QSM—from assessment to model design, to implementation activities and M&E. Presents QSM theoretical model with functional descriptions and example models from the APSS pilot experiences
Illustrative agenda for kickoff meeting and a kickoff meeting activity guide.	Tailored to a workshop with different public and private sector actors.
Exchange visit guide.	Identifies households, vendors, government representatives that are available for exchange visits from new programs.
Advocacy guide—strengths of the sanitation market approach, technical norms and regulations.	Advocacy issues, messages, and target audiences.
General guide for sanitation product promotion and marketing.	Steps in designing and implementing different promotional activities—sanitation fairs, setting up teams of field promoters, using the media, coordinating with government and schools, etc.
Promotion guide for field sanitation market promoters.	This is essentially a field guide for implementing the affordable sanitation strategy – selling affordable sanitation solutions
M&E Guide for sanitation marketing project.	Key programmatic and results indicators, their usefulness and how to efficiently monitor them. This will be a subsection of the general QSM program guide.
<b>TOOLS</b>	
Rapid enabling environment assessment tool.	Set of questions on issues impacting local enabling environment—norms regulations, government capacity, etc.
Preliminary desk study tool.	Set of questions to answer in the review of secondary information.
Analytical demographic mapping tool.	Set of steps and questions to help a programmer gather useful demographic information and map

<b>APSS Product for Replication</b>	<b>Details</b>
	it—Can be GIS or printed guidance?
Supply chain assessment tool.	Set of questions to help programmers understand sanitation supply chain of goods and services
Sanitation technology assessment tool.	Set of questions to rapidly assess current level of sanitation technologies in use in public, private facilities, households, and available in local markets and potential for technologies in target zones—e.g. status of water services, wastewater treatment, etc.
Rapid local environment risk assessment tool.	To assess potential adverse environmental impacts. Looks at climate, soils, population densities, presence of water service, wastewater treatment systems or plans, etc.
Rapid local financial sector assessment tool.	Presence and activities of financial service providers, micro-finance NGOs, informal financial practices.
<b>REPORTS</b>	
Report on the status of the national, regional and local enabling environments.	Recap of APSS findings to aid future desk studies and enabling environment assessments.
Documentation of the innovative financial products.	Models for future replication.
SOWs and job descriptions for each of these positions.	Help to rapidly implement replication programs.
Exit strategy documentation.	Might be in the form of a guide—for use in future replication.
Document experiences in leveraging resources and coordinating community action.	For use in future replication activities.
Standard model for an affordability strategy.	For use in future replication activities.
Detailed designs of current APSS pilot markets.	For use in future replication activities.
<b>CATALOGUES</b>	
Marketing/promotional catalogue of materials and messages.	For use in future replication activities.
Catalogue of household sanitation technologies.	For use in future replication activities.
<b>CURRICULA</b>	
Technical training course for sanitation technicians.	For use in future replication activities.
A training guide for promotion and marketing.	For use in future replication activities.



## **ANNEX I: APSS DETAILED SITE VISIT FINDINGS**

### **CHINCHERO, CUSCO**

Implementation – ADRA/Peru

Demographic – rural Sierra, largely indigenous, rural communities with household water service with some installing sewer systems

Visit – 4, 5, and 6 May

Key take-away observation – Potential for a Champion financial institution to provide marketing leadership and to help create incentive-driven links with product and service providers

#### Facts and Findings

- Team consists of two marketers and a promoter/micro-finance specialist. There is not a sanitation engineer or technician.
- Program is taking advantage of a favorable demographic (two-income households, strong influence of tourism industry) to promote and sell sanitation facilities as part of home improvement and small business investments.
- All sales have been to households with household water service. No dry-bathroom technologies have been purchased.
- Large numbers of documented sales—Chinchero toilet and bathroom sales are highest of the five pilot zones.
- Strong support for APSS from Cusco-based distributors of sanitation products who have provided training support, promotional support, price cuts for district hardware stores.
- High level of interest from local financial institution—the Caja Municipal de Cusco is close to providing commissions to one of the ADRA-sponsored promoters and most importantly is showing keen interest in assuming the promotional activities of APSS post-project.
- Independent promoters who are paid by APSS team on a commission-only basis.
- Significant attrition of the market promoters has occurred (approximately 15 trained and two to four currently active).
- Not strictly promoting technical norms of APSS for on-site disposal facilities (no septic tanks).

#### Conclusions... Strengths (activities that appear to support a viable self-sustaining sanitation market):

- Team is developing links between sanitation product distributors and local hardware stores that have led to price reductions in Chinchero.
- The interest of the Caja Municipal of Cusco in participating in this market as part of a home improvement financial product appears to be unique and should be nurtured, studied, and replicated as possible in other regions. The monthly interest rates are the lowest found in the five pilot zones, around 2.5%. Note that these are promotional rates offered as part of the APSS.
- The team here is very close to realizing a system of incentives that supports the critical function of the sanitation promoter, who makes multiple household visits to make a sale. This incentive is through a commission paid by the Caja Municipal de Cusco to promoters who initiate loans.

- By taking advantage of interest by the Caja Municipal de Cusco, the team is very close to creating a market model where the key marketing and promotional activities are assumed by the financial provider.
- The team did well to leverage private sector contributions in providing capacity-building for masons/plumbers. The selection and rapid training/orientation of locally respected and experienced masons is sound strategy.
- The team is exploring strategies to integrate sanitation objectives and activities into annual participatory budgeting activities at community and district levels. This can lead to stronger role of local governments in quality assurance, promotion, and perhaps resource allocation.
- Chinchero-based hardware stores are largely bypassed by consumers who travel to Cusco to make purchases of toilet and bathroom products. The team has spent considerable effort in creating links between these local hardware stores and regional distributors, and will have to decide what the role of the local hardware store is with respect to providing products for construction, toilets, and bathrooms.
- Masons in Chinchero are skilled and appear to be business-savvy. They are also “ignoring” the APSS Technical norms for on-site septic systems. This appears to be because: 1) the ADRA team does not have a sanitation engineer or technician to enforce the APSS norms; and 2) because the APSS norms for on-site septic systems often mandate installation of expensive and unnecessary hardware that these masons are omitting (the septic tank). This is the only pilot zone with relatively large number of bathrooms constructed with on-site disposal systems.
- Chinchero is an advantageous demographic in which to create a sanitation market. Households tend to have two incomes (men in agriculture and women in artesania). Years of heavy tourist traffic has perhaps helped to both introduce and reinforce improved sanitation and hygiene technologies and behaviors. There are opportunities for households to turn improved sanitation facilities into income via community-based tourism. Local institutions, hardware stores and financial institutions, have embraced the APSS Initiative.

Conclusions... Gaps and challenges (that appear to be potentially inhibiting a viable self-sustaining sanitation market):

- The ADRA team is investigating but has not yet articulated a strategy for promoting/organizing group purchases—building on existing culture of community organization and action. This can be linked to the annual participatory budgeting process as well.
- Current printed marketing materials contain outdated information that has proven to be of low interest to consumers. This information (e.g. on composting toilets etc.) can distract the consumer from the technical options that are most viable and desired.
- Before updating marketing materials the team articulated an affordability strategy for consumers.
- The team has not yet organized to make a push for post-harvest sales (when many households have spending money).
- Current sales to two-income (middle-income) families is strong, but there is not a clear plan for expanding the market to include the poorest households.

Consolidating this market to prepare for APSS exit:

- Key upcoming activities to be undertaken to establish the market include:

- Design and implement a strategy for post-harvest sales (this includes articulation of an affordability strategy);
- Articulate and implement a plan to organize community-level purchases and credit, likely as part of the participatory budgeting process;
- Work with local governments who have or are constructing sewers to budget for technical assistance that facilitates household connections;
- Follow up with Caja Municipal de Cusco to help establish a clear leadership role for them in the post-APSS sanitation market; and
- With almost 200 toilets or toilet and bathrooms sold to date, facilitating intra-household and community exchange visits as part of a marketing strategy is important.

## **NAMORA, CAJAMARCA**

Implementation – CARE/Peru

Demographic – rural Sierra, largely Spanish-speaking mestizo, rural communities with household water service with some installing sewer systems

Visit – 7, 8 May

Key take-away observation – Potential for market leadership by champion district hardware stores that leverage coverage in partnership with government programs and local governments

### Facts and Findings:

- Team consists of a coordinator, two promotion specialists and a part-time technical specialist who was added recently to the team.
- There is strict adherence to all APSS technical norms.
- The strategy strongly links promotion to local hardware suppliers.
- The CARE team is aggressively pursuing opportunities to link the market to the GoP Juntos social fund.
- This is the only pilot zone that has established a functioning village bank. This experience can serve as model for future credit schemes, perhaps supported by financial institutions.
- The hardware stores/promoters are pursuing a wide range of sales opportunities—e.g. linking to local sewer projects, going after public sector contracts, coordinating with government rural development funds.
- The only pilot where dry toilet technologies are being contemplated (composting toilets for high water table zone).

### Conclusions... Strengths (activities that appear to support a viable self-sustaining sanitation market):

- Locating promoters within the local hardware stores seems to be a strong strategy with respect to providing incentives for promoter and hardware store to make sales.
- The local hardware stores in Namora appear to be the most advanced district-level stores in the APSS pilots with respect to the stock they have on hand and the aggressiveness with which they are pursuing the market.
- Coordination with the GoP Juntos program can serve as a model for sanitation marketing initiatives that take advantage of government social programs to increase raw sales. Replication in areas with a Juntos presence should look at the Cajamarca experience for guidance.

- Local hardware stores/promoters are targeting communities with recently or soon-to-be installed sewer systems where household hookup rates are very low.
- Village bank model could be extremely useful for APSS, especially if it can be passed on to a financial institution which can provide future support to these banks. The Team must ensure that village bank formation does not conflict with household eligibility for JUNTOS assistance.

Conclusions... Gaps and challenges (that appear to be potentially inhibiting a viable self-sustaining sanitation market:

- The team relied on SENSICO (the national training program for technical and trade professionals) for mason training—a reasonable strategy, but does not appear to be the best way to go for the APSS program. The bureaucratic delays, and extremely heavy/lengthy course load, ended up precluding the participation of experienced masons who are trusted locally and provided training to novice masons who, because of their general lack of experience are not being hired.
- Support by local financial institutions has not been strong although EDIFICAR in Cajamarca shows continued interest in exploring collaboration and creating innovative financial products, and supporting village banks. Consumers have taken loans from other financial institutions that are not “officially” part of the APSS market network – e.g. (list)
- A history of chronic tardiness in loan repayment and loan default on the part of local borrowers has made it more difficult to get lenders to make credit available and lessens their interest in entering the pilot area.
- Local hardware stores, for all of their buy-in to the APSS project and their outreach to consumers, are being bypassed by consumers, who are making their purchases in Cajamarca where prices are somewhat lower and physical stock of product is much higher. It does not appear that local hardware stores are able to counteract this tendency with catalogue shopping.
- The CARE team can follow up with local financial institutions mentioned by local respondents with whom APSS has not yet made contact.
- The impacts of large mining interests, which through their social investment activities, have often implemented highly paternalistic development programs, are undermining consumer will to participate in the market, opting instead to wait for handouts. Local government does not appear to be controlling paternalistic investments on the part of these resource extractors. If the mines are moving their programming funds through the participatory budgeting process, there are opportunities for APSS to help better direct funds to support a market rather than undermine it. (e.g. a la Huaraz, support technical assistance for hooking up to sewers)
- The strict application of APSS technical guidelines for on-site systems has resulted in very low sales of toilets with on-site disposal. Households will not pay for a septic system with leach field, and lacking a cost-effective intermediate technology, opt to wait for the construction of a sewer system or choose to simply sluice the household wastewater directly into receiving water.

Consolidating this market to prepare for APSS exit:

Prospects are good for increasing sales and for expanding into neighboring districts. CARE can look at providing brief “certification” training to other masons/plumbers who are locally recognized as

competent and whose services are in demand. With APSS, CARE can re-examine technical offer to address issues related to on-site disposal options, and with APSS support articulate the affordable sanitation solution/strategy. This implies a reworking of promotional materials. The market can (a la Huaraz) attempt to obtain local government support for technical assistance to hook up to sewer networks. Tension between Namora-based hardware stores and Cajamarca stores is significant. Financial options for rural Cajamarca can be further investigated and linking village banks to established institution. Juntos collaboration is excellent opportunity to get quality bathrooms built and viewed by the public.

## **INDEPENDENCIA, HUARAZ**

Implementation – CARE/Peru

Demographic – urban neighborhoods and more rural villages in the Sierra, largely Spanish-speaking mestizo, urban areas with sewers, other communities installing sewers

Visit – 11, 12 May

Key take-away observation – Strong potential for a champion product provider (hardware store) to work in partnership with local governments to increase sewer hookups and install quality toilets and bathrooms

### Facts and Findings:

- Team of three promoters and a sanitation technical specialist.
- Extremely low use of credit (three of 45 households).
- The mason/plumber (service provider) acts as the market promoter.
- There is a strong pressure for subsidy which APSS has managed to access in the form of technical assistance to connect to sewers.
- Strategy whereby local governments that are building sewer systems support and fund technical assistance to each household to help them properly connect to the sewer. This assistance also ensures the proper location of the toilet/bathroom on the property and tips for construction so as not to damage the public infrastructure.
- The CARE team has a focused strategy to facilitate community-level coordination for sanitation coverage, leading to bulk purchasing of goods and services.
- Huaraz-based hardware store “Safiro” is the most proactive of all hardware stores in the APSS project and should be studied as a model for replication.
- Hardware stores and promoters are pursuing a wide range of sales opportunities—linking to local sewer projects, going after public sector contracts

### Conclusions... Strengths (activities that appear to support a viable self-sustaining sanitation market):

- Strong work with local governments to facilitate their support of technical assistance for hookup to sewers is an extremely promising strategy to replicate.
- The proactive participation of the Huaráz-based hardware store “Safiro” can be nurtured and studied as a potential model for creating a self-sustaining market nexus.
- Good relationship with the mayor of Independencia who has a budget that can be programmed to help motivate consumers act on improving sanitation.

### Conclusions... Gaps and challenges (that appear to be potentially inhibiting a viable self-sustaining sanitation market):

- The strategy of dual role of the mason as promoter has limitations—e.g. time that the mason can devote to marketing, skill that the mason has to market and close the sale.
- The NGO team is very active in coordinating community-level sales and will be challenged to hand that activity off to an appropriate champion/promoter (Safiro?).
- Addressing the low participation of financial institutions is important—working to develop products that meet the needs of an agrarian population with uncertain, seasonal income. Are savings options more viable than lending here?
- Developing a more inclusive market (more product suppliers directly involved) in Huaraz is tricky given the position and interest of Safiro in developing the market. Can APSS take steps to actively include other vendors?

#### Consolidating this market to prepare for APSS exit:

Prospects for market consolidation and expansion depend upon the APSS team being able to identify and train champions to carry on its innovative collaborations with local governments—leveraging support for sewer hookups that have been instrumental in tipping communities toward participation in the market. The role being played by Safiro hardware store in Huaraz can be nurtured and perhaps Safiro can become the SanMark champion/catalyst in the region. This is an interesting model in that it makes for a tightly “closed” market for quality bathrooms. Developing an affordability strategy here and rolling out appropriate marketing and promotional materials is important.

### **PACHACUTEC, CALLAO (LIMA)**

Implementation – ADRA/Peru

Demographic – peri-urban neighborhoods in proximity of Lima, largely migrant, Spanish-speaking mestizo, water delivered by tanker or hose to roof-top water storage tanks

Visit – 13 May

Key take-away observation – The ADRA team stands out for their work to optimize the sanitation product for local conditions, remaining open to options for sustaining the promotion/marketing functions in the market.

#### Facts and Findings:

- Team consists of a coordinator, a marketer, and a part-time engineer.
- Very innovative re-design of sanitation product to address local realities of urban environment.
- Promoters employed by the project and paid a minimal salary and a commission for each sale.
- Difficult environment to attract mainstream credit providers to the area.
- Interesting promotional activities taking place at meetings of neighborhood organizations.

#### Conclusions... Strengths (activities that appear to support a viable self-sustaining sanitation market):

- Modification of the product offer to reduce material costs to consumer; this was a significant achievement, and includes production of new marketing materials.
- Strong group of masons who work within the APSS system.

- Bringing ADRA’s financial institution into the program holds promise for providing locally-viable and sustainable access to credit.
- There is a strong group of promoters who are thinking innovatively—e.g. marketing to community groups.
- The ADRA team has made significant forward strides in establishing a market in the last few months.
- Use of local loudspeaker announcements for marketing seems sound.

Conclusions... Gaps and challenges (that appear to be potentially inhibiting a viable self-sustaining sanitation market:

- Excessive amounts of time invested in facilitating the ACE/Scotiabank link to credit and product that for different reasons (distance, disinterest) did not produce results.
- Given large population, entrepreneurial tendencies in these communities, and multiple local options, it appears very difficult to monitor actual sales resulting from APSS activities. The team observed consumers in local hardware stores preparing to purchase toilets; and in one case the consumer indicated that an APSS sanitation fair was the origin of his interest in purchasing a quality toilet.
- Abiding by APSS norms, septic tanks are being installed without system for septic tank emptying.
- It is not clear how promotional and marketing activities will be sustained post-APSS, since current promoters are salaried employees of APSS.
- The number of sanitation fairs has been low, and seem to have shown some success in generating sales.

Consolidating this market to prepare for APSS exit:

Raw demand appears to be very high here. Ensuring quality in product and services in this peri-urban market network may prove difficult given the size of the population and the number of supply options available. Articulating an affordability strategy here and finding financial partners who are willing to provide credit will be important. Consider additional sanitation fairs since there is now a new, less expensive sanitation product to sell, and perhaps better access to credit (via ADRA). Work with the ADRA Financial arm is very promising and might be the logical location for the promotional function of the future market.

**BELEN (PEÑA NEGRA) IQUITOS – IMPLEMENTED BY CARITAS/PERU;  
VISITED 14 MAY**

Implementation – CARITAS/Peru

Demographic – Belen, peri-urban neighborhoods in proximity of Iquitos, neighborhoods often inundated, some houses built above perennial water, Spanish-speaking mestizo. CARITAS changed from Belen to community of Peña Negra, urban densities in community on main road 30 minutes out of Iquitos.

Visit – 14 May

Key take-away observation – The CARITAS team has developed a household sanitation solution for relatively small lots that is technically viable albeit expensive, and coordinated with government programs to subsidize installation of this sanitation solution at the household level.

### Facts and Findings:

- The team consists of a coordinator, a marketer, and an engineer.
- The technical product offer is of sound technical design for water rainwater collection, on-site treatment and disposal (uses Rotoplas biodigester).
- History of paternalistic development challenges ability to establish viable market in this area.
- The team has focused on developing a household technical solution that can be subsidized by government or donor programs.
- There is not a market promotion aspect to the APSS project, nor actions to hand the technical solution off to the private sector providers of goods and services.
- The team is close to entering a partnership with “Construyendo Peru” a government infrastructure /economic stimulus program to install bathrooms in one village.

### Conclusions... Strengths (activities that appear to support a viable self-sustaining sanitation market):

- Development of a sound technical product for onsite sanitation that is appropriate for areas with rainfall catchment as water sources, no sewer hookup, and very high water tables (with periodic flooding).

### Conclusions... Gaps and challenges (that appear to be potentially inhibiting a viable self-sustaining sanitation market):

- The CARITAS team must work to adapt the current technical offer into an affordable sanitation solution (that addresses credit, temporal, and do-it-yourself, issues that impact affordability) that can be marketed with limited or zero subsidy.
- Can “Construyendo Peru” actually fund the construction of private household infrastructure?
- The CARITAS team can identify and nurture relationship with financial entities that are players in the local micro-credit market.
- The CARITAS Team can investigate other viable and less costly technical options for the challenging Belen environment (eco-sanitation?).
- The culture of paternalism inside CARITAS is strong as it is in the consumer (beneficiary) population, making a dedicated attempt at building a self-sustaining market difficult.

### Consolidating this market to prepare for APSS exit:

The gaps and challenges need to be addressed even if they do not result in a viable market within the remaining months. Coming up with alternate technological solutions for the periodically flooded environment and packaging them within an affordability strategy would be a useful achievement. Develop an affordability approach to the current sanitation product offer. Investigate opportunities to collaborate with government programs in a way that would reach much higher numbers of clients by reducing government subsidies for the individual household infrastructure, spreading out the government investment to cover a larger population.



## ANNEX II: ENVIRONMENTAL IMPACT ANALYSIS TABLE

### Potential Adverse environmental impact of the water-based technical options

Water-based Disposal option	Description of fate of pollutants	Environmental impacts	Comments
Direct pipe to receiving water.	Removed from household compound and transferred to directly to receiving water.	Complete fecal contamination of receiving water. <b>VERY NEGATIVE IMPACTS</b>	This is a typical option exercised by households without access to a public sewer and without an economic alternative for on-site disposal (norms that require complex on-site treatment facilities, i.e. septic tanks).
Public sewer.	Removed from household compound and transferred to directly to receiving water.	Complete fecal contamination of receiving water. <b>VERY NEGATIVE IMPACTS</b>	Essentially the same impacts as a direct pipe from toilet to the receiving water.
Septic tank with infiltration pit or leach field	Solids collected onsite for three to five years, liquid treated by contact with/percolation through soil environment.	Very low if properly designed and installed. Without septic tank emptying service, this becomes very dangerous option, with the <b>HIGHEST NEGATIVE IMPACTS of ANY OPTION</b> . Infiltration pits increase potential for groundwater contamination in areas with high water tables and/or very permeable soils.	Full septic tank will discharge solids, quickly clogging a leach field and eventually filling an infiltration pit. When field is clogged or pit is filled, sewage will flow directly from tank, often above ground in populated areas.  Requiring the purchase of a septic tank adds significantly to costs of system, leading households to forgo the purchase of a bathroom until a sewer is built, or to bypass the quality sanitation network, directing sewage directly into a receiving water or, in a best-case scenario, using an infiltration pit.
Infiltration pit	Solids and liquids enter the same covered pit. Solids remain, liquids are treated by contact with/percolation through soil environment.	In most soil conditions, very low—essentially the same as a septic tank with an infiltration pit. See above.	The infiltration pit is abandoned after it fills and a new one dug. The first pit can be emptied of its now-benign contents after a couple of years to be rehabilitated and reused.
Rotoplas “biodigester” with infiltration pit or leach field	Tank captures and digests solids. These benign solids are removed annually and	Very low if properly designed and installed. Infiltration pits increase potential for groundwater contamination in areas	These are costly, but if they work as designed are the optimal onsite solution to solids accumulation and wastewater disposal.

	disposed of as a soil amendment.	with high water tables and/or very permeable soils.	
<p>Conclusions: Serious reconsideration of the septic tank norm is in order. This norm is hindering the installation of bathrooms, is driving households to install bathrooms outside of the quality sanitation network, is promoting environmentally harmful wastewater disposal practices, and when used without any options to empty the tanks when they have filled, is setting the stage for contamination of compounds and public areas by raw sewage. In the medium- to long-term, it appears that the use of alternating onsite infiltration pits is the most cost effective and environmentally positive solution in the majority of rural conditions (population density, soils, water table).</p>			

## ANNEX III: QSM ANALYSIS

### DISCUSSION OF OPTIONS FOR ESTABLISHING A SELF-SUSTAINING QUALITY SANITATION MARKET (QSM)

This annex presents an analysis of the factors that must be considered in developing an overall general model for a Quality Sanitation Market (QSM), defined as a sanitation market that provides consumers with the means to easily obtain sanitation goods and services of acceptable quality at in an affordable fashion. This is in some ways a theoretical discussion, but the conclusions presented here are grounded in and supported by data collected in this formative field assessment. The analysis in this annex informs the functional models that are presented for APSS consideration in the recommendation section of this report.

In this annex, the functions of a sanitation market are:

- Briefly described to help ensure that the reader and writer are “speaking the same language.”
- Analyzed with respect to their role in establishing or supporting acceptable quality in the QSM.

#### The Quality Sanitation Market Network

The Quality Sanitation Market refers to the group of actors who compose the supply and demand sides of the market, as well as the enabling environment. These actors are collaborating with or competing against each other in a market that is committed to providing consumers with **quality** sanitation products and services. Each of these actors, by virtue of the value that they add to meeting the consumer’s demand for quality sanitation at an affordable price are patronized by that consumer—the basic transaction that drives participation of actors in the QSM.

The essential functional components systems that support the QSM:

- The QSM is made up of a network of **linked actors** who provide technical services, informational services, financing, materials, and products that are of acceptably high quality.
- The QSM is sustained by a **system of mutually-recognized incentives** between the actors in this market network.
  - Incentives move reliably and transparently between actors in the network. Incentives can be political and regulatory. More commonly incentives will be financial. Ensuring that within the playing field of a competitive market, all parties that participate in making a particular sale are monetarily compensated for that sale will be critical to sustain key market functions
- All actors in the QSM will be able to clearly articulate to the consumer options for **affordable sanitation**; that is the affordability strategy will be the lynchpin of the sales approach.
- The QSM will provide the **promotional, marketing, collaboration, and organizational functions** currently supplied to the market by the APSS.
- The QSM will provide the **capacity-building functions** currently supplied to masons and hardware stores by the APSS.
- The QSM will provide the **quality control (designs, norms, certification etc.)** functions currently supplied to the market by the APSS.

## Providing market functions in the QSM

Perhaps the key issue for APSS to address in establishing working QSMs is the role played by the government in ensuring quality and protecting consumers. The following analysis assumes a relatively low local government capacity for supporting or ensuring quality products and services in a sanitation market and looks at the sanitation market as one that operates with little external government regulation—national norms, local codes, local monitoring systems.

Without an active government role, the QSM attempts to create a market network of private sector actors that maintain quality and that therefore ensure quality by capturing, to the extent possible, *all* sales of sanitation products and services. This requires that the QSM creates an offer that the consumer cannot refuse—that is the QSM keeps prices low/competitive compared to the non-QSM competition. The low-income consumers targeted by this initiative appears to act in accordance to their pocketbooks, and will avail themselves of all of the good information and marketing that a QSM can provide, only to make purchases elsewhere where products are offered at a lower perceived price. This is akin to the US consumers who avail themselves of the helpful staff and the physical product at stores to inform their purchase decision, a purchase that ends up being made through the internet from a faceless distributor. Actors who benefit from the sanitation market but who do not participate in the network of reciprocity nor adhere to standards of quality, price, etc. undermine the viability of the QSM.

The QSM can provide the key functions of promotion, marketing, product, sales, finance, quality control in series or in parallel. In a model where functions are provided in **series**, the actors tend to offer a distinct function to the market—e.g. financial services, or technical services, or product and material sales, or marketing and promotional services. Each of these functional areas depends upon the performance of the others and is linked to them through a system of reciprocal incentives. For example, in a model that operates in **series**, upon the sale of a sanitation facility, the actor who provided the market promotion services that led to the sale receives a commission from whichever of the six hardware stores the sale was made, a commission from whichever of the three financial institutions is participating in the network, and a small commission from the district government who has sanitation coverage goals to reach. *The APSS Initiative is creating a market where most functions are offered in series by different actors.*

A market that provides the functions in **parallel** will have fewer reciprocal incentive links between functional areas and will tend to provide multiple functions (sales, service, financing, and promotion) under one roof. The market will tend to consist of multiple actors who all offer the quality sanitation and who are all in competition with one another—the only incentive being the captured sale.

## Analyzing how quality can be maintained in key functional areas

The following section looks at the status of the QSM in APSS from the point of view of three critical market functions:

1. Provision of marketing, promotion, coordination and organizational function;
2. Ensuring quality control of products and services in the market; and
3. Ensuring an affordable offer.

The analysis examines the status of APSS activities relative to each of these functions, focusing on who and how a function is provided. The conclusions from this analysis form the basis of the recommendations found in the main body of the report.

**1. Provision of marketing, promotion, coordination and organizational function, ensuring that the market is able to provide consumers with accurate information and marketing messages**

This is a critical role currently assumed almost exclusively by APSS and sustaining it in the post-APSS sanitation markets is of paramount importance. There are a number of models for providing and sustaining marketing and promotion services in a sanitation market and all models require that those who are doing the marketing and promotion are adequately compensated for their services through sales, commissions, salary, or other incentives. Marketers and promoters will not be limited to marketing to individual consumers but will also take on the current APSS role of organizing community group purchases, and coordinating with government programs to facilitate government support (e.g. Juntos, Construyendo Peru, participatory budgeting, community water committees).

This table presents and analyzes the status and potential of different models (observed and theorized) for sustaining the marketing, promotion, and organizational /coordination functions currently provided by APSS.

<b>Marketing/promotion Role assumed by</b>	<b>Status of model in pilots</b>	<b>Comments</b>
<b>Hardware stores act as principle marketing node</b> —incentive is sales.	Cajamarca is developing this model at district level with promoters who are part of hardware store staff (spouses of owners in two cases). Huaraz has a regional hardware store that is proactive in assuming this role.	Promising in that hardware stores have the capacity to ensure technical quality, can link to qualified (certified) masons and plumbers, and can minimize purchases outside the quality network. Eliminates the need for an independent actor who provides this service and who must be somehow compensated. Given consumer tendency to purchase in regional markets, a regionally-based model that extends to districts may be warranted.
One or more <b>financial institutions act as principle marketing node</b> —incentive is loans or savings accounts.	Caja Municipal de Cusco is proactive in operationalizing this model in the Cusco region with promoters teamed with loan officers working under a home improvement rubric.	Depending on the terms of the loans, ensuring quality control is more of a challenge—especially if loan goes directly to consumer. Likely that model would involve cooperative agreements with hardware stores and perhaps masons as well.
<b>Masons/plumbers</b> are principle marketing and promotion node.	Huaráz model. Certified masons must have training in selling and marketing the affordable product, but model is not showing success in reaching consumers or in coordinating group sales.	Any marketing model is smart to include masons and plumbers (service providers) as part of its marketing team. Service providers must be able to articulate the affordable product and direct consumers to best options for product and financing.
<b>Independent firm or individuals are marketers/promoters</b>	Cusco’s promotional services are almost completely commission-dependent—paid by the NGO,	APSS promotional systems can transition into this model relatively simply. Unfortunately, ensuring that promotion is properly

and supported by commissions from other actors in market.	with Caja Municipal de Cusco participating. Other zones have or are exploring third-party commissions.	recognized by vendors (of product, service, and credit) is a significant challenge where multiple suppliers operate outside of the APSS sanitation market network.
<b>Government acts as principle marketing node</b> using staff or hiring contractors.	This can be a variation on the prior option with the government paying commissions on new connections or sanitation improvements. Government can also assume ongoing promotional role.	With limited exceptions, the government has not yet fully established a role in addressing household sanitation, but APSS is making inroads into the Participatory budgeting process and in linking household bathroom construction to public sewerage, which can yield information on how the role of the government can be better brought into the market.
<b>Donor entity supports promotion, marketing, and coordination</b> in the market though in-house team or by hiring contractors.	This is a “more of the same” approach that with the APSS experience should be more efficient in sustaining, establishing and/or expanding markets.	WSP can facilitate some type of minimal support to sustain promotion and marketing in the pilot areas as the promotion and marketing function transitions to another model. WSP can also work with other donors to replicate APSS best practices in establishing markets in other zones.
<b>CONCLUSIONS:</b> Putting working models into place in pilot zones that sustain a robust promotional and marketing capacity is an APSS priority. Challenges are to ensure that structure incentives move to those doing successful promotion and marketing. Letting hardware stores take this on themselves and compete in the quality sanitation marketplace is simplest structurally, but it is not clear that an individual store can support the intense marketing activities required. Documenting promotion and sales using coupon referral systems can help to ensure reciprocal incentive structure functions.		

## 2. Ensuring quality control of products and services in the market

The materials and products sold for sanitation in the general market are typically of acceptably high quality. There are of course exceptions; low-cost PVC pipe used for water supply and wastewater disposal, and certain low-cost Chinese-manufactured valves and accessories are poor quality. These quality issues are definitely recognized by masons, plumbers, and hardware stores, but may not be evident to a rural home-owner. There is plenty of opportunity for unscrupulous masons, plumbers, and hardware stores to provide these low quality products and materials to consumers and it is an APSS imperative to create a product and accessory blacklist as part of its affordable sanitation solutions.

That said, the quality of sanitation products found in the Peruvian marketplace is acceptable, toilets, tiles, etc, and APSS must address quality issues related to design and to plumbing and construction services. Currently, the quality of these services is assured by APSS, who provides designs for sanitation facilities that meet national norms and training to masons and plumbers. APSS has not found a reliable means of ensuring the quality of work performed by do-it-yourself practitioners, although there are some potential options. Certification of service providers and promulgation of accepted designs must be provided in the future QSM as must a system that supports do-it-yourself practitioners in adhering to technical norms.

The two following tables look at quality assurance or control from two perspectives:

- a. Models that, by virtue of the roles assumed by market actors, provide quality control; the status and potential of these models for ensuring and sustaining quality control in a QSM.
- b. Degree of control that must be exercised over different QSM market functions to ensure that these functions do not undermine quality in products and services.

**This table presents and analyzes the status and potential of different models (observed and theorized) for ensuring and sustaining the provision of consistently high quality product and services to consumers.**

<b>MODEL for ensuring quality control</b>	<b>Status of this quality control model in pilots</b>	<b>Comments</b>
<b>Hardware Stores sell and market quality materials</b> as part of a “quality sanitation package” and make available detailed design drawings to do-it-yourselfers and masons/plumbers.	This is a core piece of most of the pilot activities. All pilot programs are dealing with transactions that are occurring outside of the APSS quality sanitation network.	Even suppliers outside of the quality network offer quality accessories (although cheap poor-quality pipe and accessories have been an issue). No hardware suppliers make available detailed designs or materials recommendations to do-it-yourselfers. Most hardware stores can link the consumer to a preferred service provider. Enormous challenge is keeping a quality-assurance capacity involved in all household systems.
<b>Hardware Stores certify masons/plumbers</b> in quality sanitation construction and offer range of sanitation-related technical packages that accommodate the do-it-yourselfer.	APSS is currently arranging for “certification” of masons/plumbers, in Cusco training has been provided through hardware distributors.	APSS must examine approaches that provide continued training and certification of masons/plumbers in sanitation system construction and installation.
<b>Local government establishes building codes</b> and design norms for household sanitation and enforces them through inspections. Makes available recommended materials lists/ recommendations and detailed design drawings to do-it-yourselfers and masons/plumbers.	No local governments actively engaging in setting up regulatory support or oversight to sanitation sector. Huaráz working with the district that is supporting household sanitation as part of sewer construction.	A common sanction-driven approach in “developed” countries where local government building codes and enforcement along with professional certification and bonding of service providers ensure quality. Local governments in pilot areas do not demonstrate capacity or interest to develop a government-supervised quality control system.
<b>Local government establishes building codes and design norms</b> for household sanitation and promotes them through a self-reporting system linked to incentives for households.	Not currently being pursued by APSS. This is hypothetical. Is this something that should be tried out by APSS?	Consider a quasi-regulatory system that captures all sanitation construction and provides basic quality control or enhancement services through an incentive-driven rather than a sanction-driven system. (See recommendations.)
<b>Government (local or regional)</b>	Not currently being	Government provides a certificate or seal

<p><b>establishes certification rules and system</b> for masons and for hardware stores and provides incentives for participation.</p>	<p>pursued by APSS.</p> <p>This is hypothetical. Is this something that should be tried out by APSS?</p>	<p>of approval to those businesses or individuals who agree to use/sell quality materials, products, and facility designs. Certification of masons might be experience-based rather than coursework based.</p>
<p>CONCLUSIONS: Quality of the installed product is of critical importance to APSS, but perhaps not as important as price and/or convenience to the Peruvian consumer. Analysis of consumer decision-making behavior can help APSS decide on what kind of market model can most efficiently offer quality and self-sustain. The particular entity responsible for “certifying” any of the actors in a quality sanitation market is not yet clear, although the role of government, local and/or regional, in promoting or “enforcing” quality merits investigation.</p>		

**This table examines the supply and demand side functions in a QSM and analyzes each function with respect to the degree to which that function must be “controlled” in order to ensure quality**

Function in the QSM	Control* over this function required to ensure <u>quality</u> in QSM	Comments
<p>Provide supply of and ensure use of high quality <b>sanitation accessories</b>—toilets, hand washing basins, showers, tiling, valves, pipes, etc.</p>	<p>LIMITED CONTROL REQUIRED: Most items available in general market are of adequate quality, save cheap, low quality PVC pipe. Designs must specify quality and brand names of acceptable materials.</p>	<p>The Sanitation market must strongly market high quality materials, ensuring that all promoters and service providers in the network are on message with respect to acceptable and non-acceptable brands. If marketing and promotion is strong enough, it may not be critical that hardware suppliers are in the formal market network to ensure quality.</p>
<p>Provide supply of and ensure use of high quality <b>general construction goods</b>—cement, bricks, roofing material, rebar, etc.</p>	<p>VERY LIMITED CONTROL OR NO CONTROL REQUIRED: All items available in general market are of adequate quality. Designs can make any required quality notes to consumers and service providers.</p>	<p>These items are essentially commodity items that do not vary terribly in quality. Providers of these products, from a quality control perspective, do not need to be in the quality sanitation network.</p>
<p>Provide and ensure use of <b>appropriate approved designs</b> that conform to technical norms.</p>	<p>CONTROL REQUIRED: In APSS, detailed facility designs are in hands of masons and in some cases promoters. Not currently distributed to do-it-yourselfers nor to a large number of suppliers who provide sanitation products. Post-APSS, the incentives for encouraging auto-construction or for bringing more sellers into the market might go against the interests of current suppliers.</p>	<p>Use of proper designs is critical for ensuring overall quality of a household facility. Getting these designs to both masons/plumbers and to do-it-yourselfers and getting them to respect these designs is a key challenge for the future sanitation markets.</p>
<p>Provide and ensure use of high <b>quality technical assistance</b> in</p>	<p>CONTROL REQUIRED: Cadre of “certified” service delivery professionals is tenuous in most pilot</p>	<p>The tendency for auto-construction/do-it-yourself and for general cost-cutting on the part of the</p>



construction and installation.	zones. There must be a responsible entity that provides capacity-building and “certification” post-APSS. Must be incentives for consumers to contract these services.	consumer makes it critical that the consumer have ready access to, information about, and incentives to incorporate quality materials, design and installation services.
Provide and ensure use of appropriate, reliable <b>financial tools and products</b> that make capital affordable to as many clients as possible while ensuring that clients use credit to purchase quality goods and services.	<b>CONTROL NOT NECESSARILY REQUIRED:</b> Depending on the network model, financial institutions could have a large impact on quality, by stipulating in a loan agreement the use of a certified supplier and/or mason, or conversely a negligible impact if they do not or they are not used.	Financial entities can exert significant pressure on consumers to avail themselves of quality goods and services. However it will be a challenge to bring all of the potential providers of credit and savings into the network of quality sanitation.
Ensure provision of <b>promotion, marketing, and organizational functions</b> that promote quality in affordable sanitation and identify sources of quality product, services, and information to the widest possible audience.	<b>CONTROL REQUIRED:</b> Promotion, marketing and especially organization of purchases can strongly influence consumer choice in purchase of services and materials. Directing consumers to sources of quality service, product, and information (e.g. designs) is critical marketing and promotion function.	Promotion and marketing are typically the market’s first line of attack in moving the consumer toward making choices to purchase and to install using providers that are within the quality sanitation network. Although purchases might take place out of the network, consumers need to have access to quality design or services.
<b>CONCLUSIONS:</b> Quality of the installed product is of critical importance to APSS. APSS must decide on which market components to focus to most efficiently and sustainably ensure quality in a sanitation market. The components of facility design, service provision, and promotion appear to be those where quality can be most effectively promoted and ensured. Which actor takes on an overall role for ensuring quality in the market after APSS terminates operations is not yet apparent.		

\* Control can be provided in numerous ways – voluntarily if quality lapses are possible, by default by virtue of inherent quality of a product or service, through enforcement, etc.

### 3. Ensuring affordability in the market

Affordability in the QSM refers to creating an integrated product that the consumer is able to pay for. This integrated product is composed of different options with respect to the following components:

- Quantity and quality of materials and accessories, related to the design of the facilities.
- The amount of third party technical assistance that is contracted versus the amount done through do-it-yourself/auto-construction.
- The cost of credit, with respect to interest rates, principal amounts, and payback periods.
- The ability of the consumer to arrange discount purchases by organizing preferential conditions and economies of scale.
- Structuring installation and construction timelines to complete the work in stages that allow the household to spread the total costs of products and services out over time.
- Structuring installation and construction timelines so that a household can take advantage of naturally-occurring low-demand periods in the market, potentially reducing costs.

APSS will have to analyze these components of the affordability strategy and come up with straightforward messages for consumers that will enable them to make appropriate choices in materials, design, accessories, labor, credit, and timeline to purchase the bathroom that they want. The following table analyses the affordability strategy by its components, highlighting actions in the current APSS pilot zones that might be modeled or otherwise studied for incorporation into the affordability strategy.

**This table breaks down the affordability strategy into its components—the cost to consumers of products/materials, service/labor, financing, scheduling, subsidy.**

Affordability Component	Status of this component in current pilots	Comments
Alternative designs that reduce material and/ or labor costs.	Pachacutec is the best example of radically changing design for superstructure. Cusco masons are installing cheaper on-site systems contrary to APSS norms.	Pachacutec is a special case with respect to the superstructure model. APSS should consider modifying the on-site disposal offer to include an option without septic tank for appropriate conditions—cheaper and can be more environmentally appropriate
Using lowest price materials and accessories that meet quality criteria.	APSS does not endorse any products or have official quality criteria.	APSS needs to document low quality materials and accessories and inform consumers and masons as part of design packet.
Negotiating reductions in price of materials and products through bulk purchases, loans, and other techniques	All pilots understand this opportunity and are preparing to act. Huaráz has acted. Cusco is advocating sanitation at community participatory budgeting. Cusco also negotiates price discounts with Lima suppliers/distributors	It is important for APSS to pursue these activities and to document how to best negotiate bulk purchases, loans, and reduced prices in order to pass the techniques on to those who will take on market support functions in the future.
Use of do-it-yourself labor instead of contracted labor for construction.	Common to all pilots, promoted by APSS with conditions.	Most households have a member skilled in general construction who can dig holes, build walls, etc. It is important that there is oversight or training to ensure that proper dimensions for superstructure are respected or installation problems can result.
Use of do-it-yourself labor instead of contracted labor for installation of bathroom fixtures.	Common to all pilots, but not promoted by APSS.	Installation of fixtures requires skills that are often not found in a household and an experienced plumber/mason should be involved.
Use of do-it-yourself labor instead of contracted labor for connecting to the sewer system.	Experience indicates reticence on the part of households to make connection to sewer without experienced technical support.	Connecting to sewer system may be a bottleneck for households in improving their sanitation. Local government technical support to this action has resulted rapid uptake in sanitation improvements.
Credit products that bring	Status is incipient. Several	APSS should investigate the creation of different

<b>Affordability Component</b>	<b>Status of this component in current pilots</b>	<b>Comments</b>
down monthly payments by offering low interest, low principles, longer paybacks, and flexible payback schedules.	micro-credit institutions have offered promotional interest rates (as low as 2.5%/month in Cusco).	credit and savings products that are linked to different construction/installation stages (see below), offering reduced interest rates to village banks, or bulk loans, extending payback times, etc. Also should examine savings opportunities for areas where income is linked directly to agricultural calendar.
Organizing construction and installation into stages, permitting costs to be spread out over time or scheduled during periods of low demand (and low cost) for services.	Households engage in construction and installation themselves as an affordability strategy. Pilot teams have yet to capture and articulate into an approach.	Implementation in stages is perhaps the most straightforward strategy for the poor to ultimately be able to purchase and install the bathroom that they desire.
Facilitating support from government or donor entities.	APSS has taken on the role of engaging government entities (national programs, local governments) in subsidizing installation of household sanitation facilities.	Huaraz actions in coordinating local government technical support, Cajamarca actions in leveraging participation of Juntos, Cusco, and others actions in getting sanitation onto participatory budget agenda are important models. Key is to hand this activity off to another market actor (e.g. Safiro hardware in Huaraz) post-APSS.
<p><b>CONCLUSIONS:</b> Articulating a comprehensive affordability strategy is a critical activity for APSS in consolidating the current pilot markets and in providing these markets with a strategy to self-sustain and expand. The affordability strategy with associated tools, messages, and promotional materials will be a linchpin for creating new markets. APSS has five months to implement a model(s) that provides this critical organizational and coordination service to the market.</p>		



## **ANNEX IV: FINDINGS AND CONCLUSIONS PRESENTED AS LESSONS LEARNED IN PRIVATE/PUBLIC PARTNERSHIPS AND IN UNDERSTANDING MARKET INCENTIVE STRUCTURES**

The following annex presents key findings and conclusions in the form of “lessons learned,” organized by the following categories:

- Strengthening of public-private-social alliances.
- Innovation in the development of sanitation products and services (technological options and prices).
- The role of incentives for starting and sustaining the QSM process.

Because these lessons learned are essentially a re-presentation of information already found in the findings and conclusions of this report, they are presented in an annex.

### **KEY LESSONS LEARNED IN ESTABLISHING AND STRENGTHENING PUBLIC-PRIVATE ALLIANCES IN THE MARKET**

Public-private alliances are not sustained voluntarily by the parties involved unless there are strong incentives for all involved to participate. In the case of APSS these incentives are:

- Financial support for sanitation facility installation—with respect to the consumers.
- Satisfying a programmatic mandate—with respect to public programs.
- Satisfying a normative mandate—with respect to government ministerial participation.
- Addressing political necessities—with respect to local governments.
- Opening up new market to increase sales—with respect to private sector vendors.
- Satisfying a perceived or felt social mandate—with respect to private sector vendors.

### **ALLIANCES INVOLVING CENTRAL GOVERNMENT – MINISTRIES, REGULATORY AGENCIES**

Active support of or involvement in the pilot APSS sanitation markets by central government entities—e.g. regulatory entities and ministries—was not observed. This type of alliance or support would have been helpful in leveraging local government interest in supporting quality sanitation through the participatory budgeting process, in the form of local building codes, in forming a consumer information/protection function.

It was not observed that national government entities are proactively embracing the sanitation marketing approach and looking for ways to promote it nationally. National sanitation policy, strategy, and operations have not formally acknowledged sanitation marketing a key strategy in addressing sanitation coverage.

The national government role in establishing APSS technical norms for on-site wastewater disposal systems were detrimental to the project in terms of sales, and to Peru in terms of adverse environmental impact. (This is discussed in detail above.)

The Assessment Team cannot comment on the support of the central government in sanctioning or providing other support to APSS, although it appears that the government role has not been proactive.

There is no formal partnering between national government ministries or agencies with the private sector in sanitation that further the sanitation marketing pilots.

## **ALLIANCES INVOLVING CENTRAL GOVERNMENT PROGRAMS**

APSS pilot teams were successful in creating win-win relationships with different central government programs that have development mandates. These include, as noted elsewhere in this report, *Juntos in Cajamarca*, *Construyendo Peru* in Iquitos.

## **ALLIANCES INVOLVING LOCAL GOVERNMENT ENTITIES AND PROGRAMS**

District governments do not have the personnel, the financing, or the mandate, to actively address sanitation in their constituent communities. Districts combine water and sanitation infrastructure and water receives virtually all of the attention. To change this, APSS might consider entering into relationships with district governments with a defined role in mind for the district, a role that is supported by the central government and linked to GoP MDG objectives in sanitation.

APSS pilot teams are developing partnerships and collaborations with local governments, establishing relationships through existing local governance activities. These governance activities include the annual participatory budgeting process, general open community meetings, community and district water committee structures, the health group, school parent teacher associations, local public infrastructure project planning, and implementation activities.

The partnering and collaborations are occurring through the organization and periodic meetings of a district “platform” group for sanitation. It is not clear that the activities of the “platform” are sustainable, but they are important to acquaint the myriad of local actors to sanitation marketing.

It is not clear that APSS has had a specific role defined for local government entities and programs other than involving them in “coordination platforms.” No district to date has taken active or independent steps to support the sanitation market financially, or with respect to quality control of the vendors, with respect to quality of the household installation. Perhaps districts would be more active if APSS, with some kind of central government support, could provide a district government with a practical straightforward role in the market and then establish a plan for building district capacity in implementing that role.

The “Healthy Municipality” program, pushed by the central government provides opportunities to amplify the district role in supporting sanitation. APSS can help insert sanitation into the district program and can help define how the central Healthy Municipality program addresses sanitation by creating a clear, practical, and sustainable role for the district government as a partner in a QSM.

Programmatic collaboration is also facilitated by APSS through overt project planning and implementation with district, community, and private sector partners—e.g. linking household sanitation with community public sewer projects.

## **ALLIANCES INVOLVING NATIONAL-LEVEL PRIVATE SECTOR**

APSS has done a commendable job of keeping key national private sector players in the “loop” with respect to the sanitation marketing work. There has been limited ongoing participation in the markets by these groups (e.g. ENTERNIT, ROTOPLAS, etc.). Nevertheless, the inputs from these groups are beneficial to the overall sanitation marketing push in Peru (and elsewhere), and keeping

these influential groups involved now will pay dividends to sanitation marketing during replication and scale-up.

These same national players express a disconnect between APSS and their interest in selling their products, noting, for example, that APSS does not have a formal sales plan with numerical targets. Given that APSS is focused on creating a market for a product that was formally given away to a target group regarded as poor, it is understandable that APSS efforts have not been articulated in what might be termed a completely private sector approach. Nevertheless, the advice for APSS to address the markets in these terms resonates now that over a year of preparatory work has been invested by APSS and the markets are beginning to show life.

The Cusco pilot has shown interesting initiative by coordinating with national and regional distributors of sanitation products to interest them in taking on a supporting role in district and regional sanitation markets. This role can involve sponsoring training to local sanitation service providers (masons and plumbers), reducing prices, and distributing APSS marketing materials to consumers. These activities should be investigated in depth by APSS as to their efficacy and their replicability in terms of supporting local quality and price in a QSM.

## **ALLIANCES INVOLVING LOCAL LEVEL PRIVATE SECTOR**

There is not yet a pilot zone with a market that is being driven by the reciprocal payment of incentives between key actors, the private and public sector. This type of partnership between the providers of sanitation product and services (including financing) will likely be important in sustaining future sanitation markets.

Nevertheless, APSS is working in different districts to set up just these types of systems with the goal of sustaining the marketing and promotional services that are now provided by APSS.

APSS is close to developing models for private/public collaboration for household sanitation coverage in work that is being done to link household sanitation infrastructure to public sewer projects, in work that pulls the private sector into discussions on sanitation coverage an issue in annual participatory budgeting, and in activities that bring the local private sector and government together to address issues of quality in sanitation products and services.

## **KEY LESSONS LEARNED IN THE INNOVATION OF HIGH QUALITY AND AFFORDABLE SANITATION PRODUCTS AND SERVICES**

The APSS norms for onsite wastewater disposal that requires the installation of a septic tank is resulting in important adverse environmental and programmatic impacts. (see discussions in the body of the report, 5.1.9 and in Annex 2.

The accomplishments of the Pachacutec pilot team in developing a lower-cost, more locally appropriate bathroom structure and the household sanitation facility design being done by “Safiro” hardware store in Huaráz are worth sharing across APSS for possible replication.

The normative environment for sanitation in Peru is unclear. Representatives from the national entity for technical training had a very different interpretation of norms for rural sanitation than the APSS Initiative. No national design norms or codes for rural on-site sanitation were reviewed, and it is not clear in what form they exist. APSS can support national sanitation efforts by advocating for practical and environmentally sound sanitation norms, regulations, and strategies. APSS can also help the GoP in promulgating these to local districts once they have been adopted.

Local service providers are innovating on the job. Capturing their inputs to design, construction, and materials is warranted prior to APSS closeout. One issue to address is promoting in-house construction of the flush toilet and bathroom as opposed to implying that it must be in an out-building.

## **KEY LESSONS LEARNED WITH RESPECT TO THE ROLE OF INCENTIVES FOR STARTING AND SUSTAINING A QSM**

### **THE ROLE OF INCENTIVES IN STARTING A QSM**

There is always a strategic dilemma that faces a project with respect to investing in project activities that further the objectives of the project in the short-term but that are intrinsically not sustainable after project closure. In different pilot zones, APSS provides what are currently unsustainable activities that function as incentives for actors and consumers to participate in the sanitation market. The following table contains a list of these APSS-supported activities and comments on their sustainability:

<b>INCENTIVE provided by APSS to support Market</b>	<b>Comments on sustainability (post-APSS)</b>
Commissions paid to field promoters for toilet or bathroom sales.	Must be monetary award to the private sector entity that provides the market and promotion service. Either a vendor promotes themselves or pays for the service through a sales commission.

<b>INCENTIVE provided by APSS to support Market</b>	<b>Comments on sustainability (post-APSS)</b>
Salary paid to field promoters.	Sustainable if promoters are part of an organization—government, hardware store, financial institution
Training provided to field promoters.	Can be sustained if promoters are affiliated with a local business or the government.
Technical designs and materials lists.	This is largely a one-time investment into the market made by APSS. Can be updated and improved.
Provide marketing and promotional materials to vendors.	APSS inputs a useful start that can be carried on by private sector as well as local government.
Vet vendors of product and materials to ensure the quality of their offer.	Private sector unlikely to assume. Difficult for APSS to hand this type of responsibility to government given current government capacity.
Pay for and organize large-scale marketing – e.g. sanitation fairs, school activities, media advertisements, etc.	APSS challenged to create mechanism that can bring together sufficient resources—financial, labor, and organizational—to sustain these marketing activities.
Coordinate with local governments for policy support—e.g. control competing highly subsidized sanitation programs, promote market, protect consumer.	Difficult to establish and sustain this function in underfunded local governments who have limited interest in sanitation.
Coordinating bulk purchases with community groups.	APSS should mentor one or more local market actors in facilitating these kinds of arrangements that can result in bulk purchases. APSS should also document best practices in conducting these kinds of negotiations for replication.



Coordinating with local leaders to receive targeted support for household sanitation.	APSS should mentor one or more local market actors in facilitating these kinds of arrangements that can result in bulk purchases. APSS should also document best practices in conducting these kinds of negotiations for replication.
Coordinating with government programs to subsidize household sanitation.	APSS should mentor one or more local market actors in facilitating these kinds of arrangements that can result in bulk purchases. APSS should also document best practices in conducting these kinds of negotiations for replication.
Negotiating with private sector materials and product distributors to reduce prices and support marketing.	APSS should mentor one or more local market actors (hardware stores) in facilitating these kinds of arrangements that can result in bulk purchases. APSS should also document best practices in conducting these kinds of negotiations for replication.
Providing free training and “certification” to local service providers.	Cusco model of providing orientation to experienced masons and plumbers is interesting model. Coordination of this training can pass to local hardware store or government program.
Negotiating lower interest rates for sanitation with financial institutions.	Most likely to self-sustain if financial firm has significant interest and lead role in supporting the market.
Providing capital to support village banks.	Alternative is to hand off program to local financial institution. Likely will require significant APSS effort to establish this kind of post-APSS program.

These activities are necessary inputs to engage and build capacity in the key actors in the market. They are also necessary if sales are to be made to consumers. Sales are critical because they serve as the incentive for vendors and service providers to stay engaged and participate in the market. Sales are also critical because they serve as a key marketing resource. Word of mouth and visits to these “early adopter” households are important in building market momentum, increasing sales, and motivating private sector actors to stay involved in promoting sanitation.

## THE ROLE OF INCENTIVES FOR SUSTAINING A QSM

APSS is challenged to leave the incipient sanitation markets to proactive and confident actors that clearly understand the value and rewards of sustaining the functions noted in the table above, and who therefore take on leadership roles to optimize their realized rewards from participating in the market. The incentives (rewards) for these actors are financial, political, and social. APSS must work to ensure that relationships among the actors are clear with respect to their roles and rewards (incentives) in the market. There is no question that actors will provide market functions only to the extent that they are rewarded financially or politically, and the QSM must provide for transparent and reciprocal reward to those responsible for a sanitation sale.

The QSM models presented in the recommendations section (section 6) of the main report address functions, potential roles, and incentives for the various actors in a market. The following table presents options being used or considered in the APSS pilot zones with respect to institutionalizing systems of incentives that will sustain a QSM. These can be systems that incorporate only a few actors where the actors take on multiple market functions under one roof. They can also be systems of transparent and reciprocal incentives that are agreed upon between different actors who maintain different functional roles in the market. This is also discussed in detail in section 6 of the report.

Market Function	Notes on incentives arrangements to sustain that market function
PROMOTION and MARKETING	
Multiple household visits	<ul style="list-style-type: none"> <li>▪ Function retained in-house by a hardware store or financial entity.</li> </ul>

	<ul style="list-style-type: none"> <li>Independent field promoters hired by market actor, government or private sector.</li> <li>Independent field promoters free-lance and claim monetary commissions paid by providers of services and product.</li> </ul>
Media advertizing	<ul style="list-style-type: none"> <li>Larger actors pay to advertize their products and services.</li> <li>Government or other entity (e.g. contracted by government) coordinates and funds general support in the media for sanitation and participants in the QSM.</li> </ul>
School promotion	<ul style="list-style-type: none"> <li>QSM, with government approval, links quality product and service to school promotion of sanitation and hygiene.</li> <li>Government overtly supports QSM in schools or permits private sector actors to do so.</li> </ul>
Sanitation Fairs	<ul style="list-style-type: none"> <li>Government organizes and coordinates financial support from private sector participants.</li> <li>Private sector actors organize fairs themselves with leadership typically going to most active actor, be it a vendor of product, service, financial services or all three.</li> </ul>
Promotion within government facilities	<ul style="list-style-type: none"> <li>Health ministry, etc. makes sanitation promotion materials available and visible in their facilities and link messages and materials to the QSM.</li> </ul>

<b>Market Function</b>	<b>Notes on Incentives Arrangements to Sustain that Market Function</b>
Technological innovation and improvement	<ul style="list-style-type: none"> <li>Responsibility of hardware stores, masons, with possible government normative oversight.</li> </ul>
Links to government subsidy programs	<ul style="list-style-type: none"> <li>Private sector realizes increased sales by linking consumers to these programs.</li> </ul>
Coordinate community-level action	<ul style="list-style-type: none"> <li>Private sector realizes increased sales by helping organize these actions and linking consumers to these programs. Community leaders realize political rewards and perhaps are able to access central funds.</li> </ul>
QUALITY ASSURANCE	<ul style="list-style-type: none"> <li>Voluntary private sector network options and government support options discussed in detail in section 6 of report.</li> <li>Help GoP address technical norms for household sanitation and help government create system to communicate those norms to private sector providers and local government representatives. Link this and all government support for a QSM to the political rewards that can be realized through successful QSM that has high-profile government support.</li> </ul>
Design	<ul style="list-style-type: none"> <li>Produce best (certified) designs and make available to public and private sector; the incentive is sales.</li> <li>Institutionalize system (with government role) to provide periodic review of norms and designs. The incentive is political gain from supporting sanitation.</li> </ul>
Materials, products, accessories —certification	<ul style="list-style-type: none"> <li>Word-of-mouth promotion for high-quality products and services is incentive for voluntary quality control.</li> <li>Government can make information available to consumers on products.</li> <li>Certification system needs to be exceedingly simple and may just include lists of products and materials for the consumer to avoid.</li> </ul>
Training and certifying service	<ul style="list-style-type: none"> <li>Arrange through government coordination with government gaining</li> </ul>

providers	<p>from improved coverage statistics.</p> <ul style="list-style-type: none"> <li>▪ Private sector can organize if certification system is in place and it is clear that certification can lead to improved sales.</li> </ul>
FINANCIAL SERVICES	<ul style="list-style-type: none"> <li>▪ Integrated product can bring financial services under the roof of hardware store, but these hardware businesses not interested in playing the credit game.</li> <li>▪ Service providers can make formal arrangements with other actors to pay commissions for sanitation loans originated to other actors (e.g. hardware stores, masons, independent promoters, etc.</li> </ul>
Environmental Sustainability	<ul style="list-style-type: none"> <li>▪ Limited regulatory capacity promotes households to implement cheapest available disposal method.</li> </ul>

## ANNEX V: PEOPLE AND ORGANIZATIONS CONTACTED

All individuals and organizations with whom the Assessment Team met are listed in the tables below. These tables are organized by location – one table for each of the five pilot regions.

### CHINCHERO – CUSCO; 05 AND 06 MAY, 2009

Name	Date	Group /Title	Topics	Interviewer(s)
1. Mariano Sayllo Aucapoma	05.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased	Patricia
2. Isabel Cáceres Quispe	05.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased	Patricia
3. Tomasa Ttito Raymi	05.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased	Patricia
4. Faustina Aucacusi Quispe	05.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
5. Ignacio Levita Vara	05.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
6. Gregorio Flores Quispe	05.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
7. Elías Cayo Ramírez	05.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
8. Juan Huaypa Yunga	05.05.09	Head of Economics Office; Chinchero Municipality Manco II 140 Chinchero 511 84306049	Development and consolidation of the local public/private alliance to support quality sanitation	Patricia
9. Graciano Cusihuaman Quispe	05.05.09	Sanitation office head; Chinchero Municipality	Development and consolidation of the local public/private alliance to support quality sanitation	Patricia
10. Dra. Gabriela Bermúdez Ríos	05.05.09	Director of CLAS Chinchero	Development and consolidation of the local public/private alliance to support quality sanitation	Patricia

11. Julio Pumayali Sallo	05.05.09	Sanitation service Provider (mason/plumber)	Capacity building of service providers and the viability of service provision models	Patricia/Scott
12. Walter Cjuiro	05.05.09	Sanitation service Provider (mason/plumber)	Capacity building of service providers and the viability of service provision models	Patricia/Scott
13. Carlos Villafuerte	05.05.09	Sanitation service Provider (mason/plumber)	Capacity building of service providers and the viability of service provision models	Patricia/Scott
14. Genaro Ayma Rayme	05.05.09	Hardware store AYMA	Viability and sustainability of the local sanitation market	Scott
15. Pedro Condori Sanac	05.05.09	Hardware store CONDORITO	Viability and sustainability of the local sanitation market	Scott
16. Braulio Quispe Auccapuma	05.05.09	Sanitation sales promoter	Viability and sustainability of the local sanitation market	Scott
17. Cirila Quillahuamán Condori	05.05.09	Sanitation sales promoter	Viability and sustainability of the local sanitation market	Scott
18. Basilia Quillahuaman Condori	05.05.09	Sanitation sales promoter	Viability and sustainability of the local sanitation market	Scott
19. Walter Cusihuaman Ttito	05.05.09	Sanitation sales promoter	Viability and sustainability of the local sanitation market	Scott
20. Irma Carvajal Zegarra	05.05.09	Administrator; CMAC Urubamba	Viability and sustainability of the local sanitation market	Scott/Patricia
21. Ing. Josías De la Cruz Pérez	06.05.09	APSS Team ADRA Cusco	Key issues to address in the last months of the APSS Initiative.	Scott/Patricia
22. Jaime Bazán Díaz	06.05.09	APSS Team ADRA Cusco	Key issues to address in the last months of the APSS Initiative.	Scott/Patricia
23. Claudia Vásquez Ballón	06.06.09	Gerente Valcosa	Building capacity in sanitation product and service providers	Patricia/Scott
24. Carlos Vargas	06.05.09	Gerente Grupo “A construir”	Building capacity in sanitation product and service providers	Scott/Patricia
25. Rubén Hermoza Muñiz	06.05.09	Gerente REMOSA – Cusco	Viability and sustainability of the local sanitation market	Scott/Patricia

## NAMORA – CAJAMARCA; 07 AND 08 MAY 2009

Name	Date	Group /Title	Topics	Interviewer(s)
1. Celso Colque Michu	07.05.09	Sanitation service Provider (mason/plumber)	Capacity building of service providers and the viability of service provision models	Patricia
2. Faustino Perez Lucas	07.05.09	Sanitation service Provider (mason/plumber)	Capacity building of service providers and the viability of service provision models	Patricia
3. Luis Flores Soncco	07.05.09	Sanitation service Provider (mason/plumber)	Capacity building of service providers and the viability of service provision models	Patricia
4. Jenny Noriega	07.05.09	Field Promoter – Juntos program	Development and consolidation of the local public/private alliance to support quality sanitation	Patricia
5. Ing. Geiner Loja Reyes	07.05.09	Economic Office Head, Namora Municipality	Development and consolidation of the local public/private alliance to support quality sanitation	Patricia
6. Elvira Quiroz Romero	07.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
7. Mercedes Cabellos Arteaga	07.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
8. Juana Romero Cárdenas	07.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
9. Gladis Riquelme Flores	07.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
10. Jobita	07.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased	Scott
11. Nelly	07.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased	Scott

12. Susana	07.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased	Scott
13. Modesta	07.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased	Scott
14. Sonia	07.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased.	Scott
15. Giovanna	07.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased.	Scott
16. Juan Alva Cotrina	07.05.09	Owner Hardware Store JHAIR	Viability and sustainability of the local sanitation market	Scott
17. Enrique Briones	07.05.09	Owner; Hardware store San Roque	Viability and sustainability of the local sanitation market	Scott
18. Verónica Mendoza Alvarez	07.05.09	Co-Owner; Hardware store San Roque	Viability and sustainability of the local sanitation market	Scott
19. Vilma Tello	07.05.09	Operator Wastewater Treatment Plant Namora	Operation of WWTP	Scott
20. María Manuela Mestanza Cárdenas	07-05-09	Savings committee "14 de Agosto"	Function of the savings committee	Patricia/Scott
21. Nelly Cárdenas	07.05.09	Savings committee "14 de Agosto"	Function of the savings committee	Patricia/Scott
22. Rosina Cárdenas	07.05.09	Savings committee "14 de Agosto"	Function of the savings committee	Patricia/Scott
23. Modesta	07.05.09	Savings committee "14 de Agosto"	Function of the savings committee	Patricia/Scott
24. Susana Mestanza Cueva	07.05.09	Savings committee "14 de Agosto"	Function of the savings committee	Patricia/Scott
25. William Arroyo	08.05.09	Chief of capacity building; SENCICO	Building capacity in sanitation product and service providers	Patricia
26. José Alaya	08.05.09	Trainer of masons and plumbers – SENCICO	Building capacity in sanitation product and service providers	Patricia
27. Napoleón Becerra	08.05.09	Administrator SENCICO	Building capacity in sanitation product and service providers	Patricia

28. Lizandro Ramos Zamora	08.05.09	Director EDYFYCAR – Cajamarca	Viability of local sanitation market with respect to access to finance	Patricia
29. Omar Briones	08.05.09	Credit Analyst EDIFYCAR (la Encañada)	Viability of local sanitation market with respect to access to finance	Scott
30. José Ney Díaz	08.05.09	Project Coordinator - PROPILAS; CARE Cajamarca Jr. Baños del Inca 290 Cajamarca 511 363284	Public policy and promotion in the sanitation market	Scott/Patricia
31. Nelly Horna	08.05.09	Department Coordinator; CARE – Cajamarca	Public policy and promotion in the sanitation market	Scott/Patricia
32. Olinda Posadas	08.05.09	CARE APSS Team - Coordinator	Key issues to address in the last months of the APSS Initiative	Scott/Patricia
33. Daniela Navarro	08.05.09	CARE APSS Team – Communication Specialist	Key issues to address in the last months of the APSS Initiative	Scott/Patricia
34. Nancy Vásquez	08.05.09	CARE APSS Team – Market Promoter	Key issues to address in the last months of the APSS Initiative	Scott/Patricia
35. Marco Ortega	08.05.09	APSS Team – Hardware specialist	Key hardware and infrastructure issues to address in the last months of the APSS Initiative	Scott/Patricia

### INDEPENDENCIA – HUARAZ; 11 AND 12 MAY 2009

Name	Date	Group /Title	Topics	Interviewer(s)
1. Marina Bolívar de Sánchez	11.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased	Patricia
2. Juana Rodríguez de Copertino	11.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased	Patricia
3. Clorinda Shuan de Vino	11.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased.	Patricia



4. Claudia Rodríguez de Miranda	11.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased	Patricia
5. Clara Rosales	11.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
6. María Silva	11.05.09	Family did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
7. Julián Romero	11.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
8. Gregorio Mezarina	11.05.09	Mayor of Chinchero Municipality	Development and consolidation of the local public/private alliance to support quality sanitation	Scott
9. Julia Mejía	11.05.09	Salesperson; hardware store Zafiro	Viability and sustainability of the local sanitation market	Scott
10. Benito Sánchez	11.05.09	Sanitation Service Provider (mason/plumber)/Promoter	Capacity building of service providers and the viability of service provision models	Patricia/Scott
11. Florencio Chávez	11.05.09	Sanitation Service Provider (mason/plumber)/Promoter	Capacity building of service providers and the viability of service provision models	Patricia/Scott
12. Karina Torres Munguía	11.05.09	Administrator EDYFICAR Huaraz (Jr. Jose de Sucre 659 Huaraz 511 043 421621)	Viability and sustainability of the local sanitation market	Scott
13. Ing. Ciro Fernández	12.05.09	APSS Team CARE Huaraz	Key issues to address in the last months of the APSS Initiative. Building capacity of providers of goods and services	Scott/Patricia
14. Yasnina Barboza	12.05.09	APSS Team CARE Huaraz	Key issues to address in the last months of the APSS Initiative. Building capacity of providers	Scott/Patricia
15. John Nolasco	12.05.09	APSS Team CARE Huaraz	Key issues to address in the last months of the APSS Initiative. Building capacity of providers	Scott/Patricia

16. Ing. Julio	12.05.09	APSS Team CARE Huaraz	Key issues to address in the last months of the APSS Initiative. Building capacity of providers of goods and services	Patricia / Scott
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### **PACHACUTEC – VENTANILLA (CALLAO) AND LIMA; 12, 13 AND 18 MAY 2009**

<b>Name</b>	<b>Date</b>	<b>Group /Title</b>	<b>Topics</b>	<b>Interviewer(s)</b>
1. Julio Aguirre	13.05.09	Sanitation service provider (mason/plumber)	Capacity building of service providers and the viability of service provision models	Scott/Patricia
2. Teodoro Clemente Cacho	13.05.09	Sanitation service provider (mason/plumber)	Capacity building of service providers and the viability of service provision models	Scott/Patricia
3. Luis Santa Milla	13.05.09	Sanitation service provider (mason/plumber)	Capacity building of service providers and the viability of service provision models	Scott/Patricia
4. Juan Campos Requejo	13.05.09	Sanitation service provider (mason/plumber)	Capacity building of service providers and the viability of service provision models	Scott/Patricia
5. Liduvina Vilchez	13.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
6. Irene Vergaray	13.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
7. Esther Perea	13.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
8. Juliana Mamani Choque	13.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
9. Carol Cárdenas	13.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased.	Patricia

10. Deida Tuesta	13.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased.	Patricia
11. Martha Grandez	13.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased.	Patricia
12. Hermelinda Yacira	13.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased.	Patricia
13. ACE Home Center/ScotiaBank Representative	13.05.09	ACE Home Center/ ScotiaBank – Naranjal Puente Piedra	Viability and sustainability of the local san. market	Scott
14. Cristina Quispe	13.05.09	Owner – Hardware store DISMACOM	Viability and sustainability of the local san. market	Scott
15. Stanley Vergada	13.05.09	Owner – Hardware store HORIZON	Viability and sustainability of the local sanitation market	Scott
16. Samuel Espinoza	13.05.09	Sales Promoter	Viability and sustainability of the local san. market	Scott/Patricia
17. Juliana Mamani	13.05.09	Sales Promoter	Viability and sustainability of the local san. market	Scott/Patricia
18. Deida Tuesta	13.05.09	Sales Promoter	Viability and sustainability of the local san. market	Scott/Patricia
19. Irene Vergaray	13.05.09	Sales Promoter	Viability and sustainability of the local san. market	Scott/Patricia
20. Miguel Arce Téllez	12.05.09	Scotiabank	Viability of local sanitation market with respect to access to Finance	Scott/Patricia
21. Indira Melgar Salazar	13.05.09	Microfinance department head / ADRA Sv. Angamos Oeste 770 Lima 18 511 712 7700	Viability of local sanitation market with respect to access to Finance	Scott/Patricia
22. Abraham Horna	18.05.09	ADRA APSS Team	Key issues to address in the last months of the APSS Initiative.	Scott/Patricia
23. Victor Hugo Urcia	18.05.09	ADRA APSS Team	Key issues to address in the last months of the APSS Initiative.	Scott/Patricia

24. Ever	18.05.09	ADRA APSS Team	Key issues to address in the last months of the APSS Initiative.	Scott/Patricia
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### PEÑA NEGRA – IQUITOS; 14 MAY, 2009

Name	Date	Group /Title	Topics	Interviewer(s)
1. Pedro Huayma	14.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased	Patricia
1. Lucinda Curimozón Andrade	14.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased	Patricia
2. Gilly García	14.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased	Patricia
3. Lidia Saldaña	14.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased	Patricia
4. Arcila Correa	14.05.09	Family that purchased a bathroom through APSS	Factors that motivated the decision to purchase; satisfaction with product purchased	Patricia
5. Ana María Inuma Chávez	14.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
6. Francisca López Huayma	14.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
7. Amelia Huayma	14.05.09	Family that did not purchase a bathroom through APSS	Motivations, reasons for not making purchase	Patricia
8. Martín Panduro	14.05.09	Program Director for <i>Construyendo Perú</i> – Iquitos Calle Echenique N° 473 Iquitos 511 065 243001	Coordination and alliance for sanitation project for Peña Negra	Scott/Patricia

9. Hno Victoriano Vallinas Alvarez	14.05.09	Department Coordinator CARITAS Iquitos Mlc. M. Tarapaca Nro. 260 Iquitos (511) 2 065-222200	APSS program activities	Scott/Patricia
10. Gustavo Gamarra		APSS Team CARITAS, Iquitos	Review of progress to date and key actions for APSS in Iquitos before end of pilot	Scott/Patricia
11. Isabel Saénz Mora		APSS Team CARITAS, Iquitos	Review of progress to date and key actions for APSS in Iquitos before end of pilot	Scott/Patricia
12. Ing. Germain Zevallos	14.05.09	APSS Team CARITAS, Iquitos	Review of progress to date and key actions for APSS in Iquitos before end of pilot	Scott/Patricia

#### **OTHER ACTORS INTERVIEWED IN LIMA; 12 AND 15 MAY, 2009**

<b>Name</b>	<b>Date</b>	<b>Group /Title</b>	<b>Topics</b>	<b>Interviewer(s)</b>
1. Carlos Nicolini	15.05.09	General Manager CELIMA- Trébol Av. Alfredo Mendiola 1465 Lima, 31 511 6140300 cnicolini@celima.com.pe	Viability of sanitation finance for poor populations	Scott/Patricia
2. Alfonso Vásquez	15.05.09	General Manager Rotoplas Av. Alfredo Mendiola 6298 Lima, 39 511 614 2424	Viability of sanitation finance for poor populations	Scott/Patricia
3. César Benavides	12.05.09	General Manager Multi-tiendas y multicasa	Viability of sanitation finance for poor	Scott/Patricia



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