

SanMark Study to Assess Demand and Supply Chain Barriers among Rural Communities in Three Provinces in Central Vietnam

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Executive Summary

About the SanMark Study

Plan Vietnam is implementing the CS WASH Pro project from August 2013 to October 2017 with funding from Australian Aid. This project has been supporting changes in sanitation & hygiene behavior and increasing the use of improved sanitation facilities at the household level and in schools in five rural districts in Quang Binh, Quang Tri and Kon Tum provinces. In order to enhance the attainment, and sustainability, of improved sanitation status in Plan's supported communes and villages, there is a need to strengthen the project's market based approaches and capacity-building/business development efforts that aim to increase the availability of affordable and desirable sanitation products for low-income rural households. This study will explore the Sanitation Demand and Supply Chain in Quang Binh, Quang Tri and Kon Tum provinces for a better understanding of the sanitation market—both demand and supply sides—in the CS WASH project's three provinces. This supports the application and scaling up of a sustainable model of sanitation marketing in project target districts.

Methodology

Data collection took place in August and September of 2015. PSI's Research Team led data collection, with support from Plan Vietnam. Qualitative data collection techniques, including in-depth interviews and focus group discussions, were used to collect data for the survey in the three study provinces. Participants were chosen based on criteria regarding type of latrine facilities used and based on their role in the sanitation supply chain. A total of 58 in-depth interviews were conducted with rural households, market players and financiers. A total of 10 focus group discussions were conducted with household heads and other influential individuals.

Key Findings

Consumers

Sanitation practices vary significantly among the respondents interviewed for the study. A combination of open defecation, the use of unhygienic latrines and use of hygienic latrines are practiced throughout the three provinces studies. Regardless of practice, many respondents reported a desire to have improved sanitation for themselves and their family—although this was for a number of reasons, including privacy, cleanliness and pride, and rarely for health-related reasons. However, many households failed to invest in improved sanitation because they did not perceive it as a priority investment, did not have the money needed or the skills and knowledge to build an improved hygienic latrine.

Sanitation Supply

The demand for sanitation is small compared to other construction and supply demands, which translates into few materials and service suppliers having motivation to push for households to improve their sanitation facilities and practices. In addition, the materials

needed for hygienic latrine construction are not available at all levels within the province. Generally, the distributor is found at the provincial level, retailers and wholesalers are found at the district level and occasionally there are retailers at the commune level. Transportation services vary between suppliers, which adds complications and additional costs to sanitation improvements.

Rural Sanitation Supply Chain

The sanitation supply chain has two primary gaps that limit access to and supply of improved sanitation for rural households. First, there is limited access to construction materials and supplies at the commune level. Most suppliers are at the provincial or district level. In addition, there is not one shop, material or service supplier at the commune level that can either provide all of the materials or refer consumers to the appropriate providers at the district or provincial level. This is a barrier to purchase materials that cannot be found at the commune level.

Financers

Financing options to improve latrine construction and maintenance are limited and have limited effectiveness. While loan programs were specifically designed to cater to rural household consumers, both Vietnam Bank for Social Policies (VBSP) staff and rural consumers themselves cited numerous problems associated with accessing loans successfully.

Key Recommendations

- 1) Improve convenience and availability of sanitation materials through a sanitation network map and information sheets for consumers and improve and expand businesses that have a significant knowledge and supply of sanitation materials.
- 2) Increase access to skilled masons through training masons specifically on sanitation construction, provide ways to expand sanitation-specific business and encourage their role as advisors to consumers.
- 3) Address price barriers for rural consumers through a transparent and targeted approach to providing latrine installation subsidies to the poorest families and through promoting lower-cost, appropriate sanitation models which are consistent with MOH guidelines as well as rural consumer aspirations.
- 4) Generate informed demand through designing targeted multi-channel communications emphasizing the benefits of improved sanitation consistent with rural household desires.
- 5) Promote affiliated, trained masons & sanitation retailers to make it easier for rural households to find the sanitation products, services and advice they need.

Literature Review

PSI conducted a systematic review of existing literature on water, sanitation and hygiene (WASH) behaviors and WASH marketing models/strategies. The review covers “grey literature,” including program reports, case studies and other relevant literature available to Plan, in the public domain and published articles. The review identifies the key drivers related to WASH behaviors among rural people—including ethnic minority representatives—in Vietnam, and the theoretical underpinnings for both individual as well as broader community-level drivers. The review outlines a summary of the key findings and lessons from sanitation programming to date.

A major push for improved WASH practices in Vietnam over the last few decades has resulted in significant improvements in hand washing with soap and use of hygienic latrines. National rates of open defecation have declined sharply, from 44% in 1990 to just 5.8% in 2014.^{1,2} However, despite national level achievements, major disparities remain, particularly among rural, ethnic minorities as well as the disabled and other vulnerable populations. The Northern Mountain and Central Highlands (NM-CH) regions are particularly underserved. Among rural populations in these regions, between 12 and 21% practice open defecation, and approximately 10% use unhygienic latrines.³ The ethnic minority populations in these rural regions have even higher rates of open defecation and unhygienic latrine use, at 31% and 47%, respectively. Disabled, elderly, and female-led (single parent) low income households also have distinct, unmet sanitation needs.⁴

Factors limiting WASH progress among remote rural communities include limited resources, insufficient health worker coverage, limited skills and motivation, geographic and logistical barriers and exposure time required to generate behavior change.⁵ Low-income households facing multiple demands on scarce family resources cite affordability barriers. A recent assessment of sanitation interventions in Vietnam revealed that for a typical low-income family, it takes 1.5 years for the economic benefit of a latrine investment to exceed the costs of construction. In general, these families reported spending approximately 17% of the family’s annual income covering recurrent costs associated with latrine construction/upkeep.⁶

Ineffective program approaches—including insufficient involvement of and consideration of local target beneficiary perspectives and needs—have also been a barrier to successful WASH interventions. A number of programs have relied on relatively top-down

¹ WHO and UNICEF: Joint Monitoring Programme: Progress on Sanitation and Drinking Water. 2014.

² GSO. Viet Nam Multiple Indicator Cluster Survey. 2014

³ World Bank: Water and Sanitation Program. 2011

⁴ PLAN: Gender and Social Inclusion on water, sanitation and hygiene in Quang Binh, Quang Tri and Kontum provinces. 2014

⁵ Rheinländer T, Xuan Le thi Thanh, et al.: Hygiene and sanitation promotion strategies among ethnic minority communities in Northern Vietnam; a stakeholder analysis. Health Policy and Planning 2012, 1-13.

⁶ WSP: Case Study on Sustainability of Rural Marketing in Vietnam. 2010

approaches, as opposed to more engaging and community-based activities. Numerous studies have shown that this approach is not productive in motivating and sustaining behavior change.⁷ In cases where local leaders and other community influencers are not involved in program design or implementation, sanitation results may be limited. One study in Vietnam found that insufficient support from local village leaders was a key factor limiting uptake of hygienic latrines.⁴ In addition, insufficient engagement and mobilization of private sector players—including commercial masons and other actors in the rural sanitation supply chain—and channels have been documented as a key barrier to achieving sanitation coverage at scale. A 2014 rural sanitation market scan found that because sanitation related-business represents a small portion of revenue for masons and sanitation material sellers, the commercial sector has little motivation to increase sanitation-specific business compared to larger household and business renovation projects.⁸ The World Bank and numerous sanitation projects implemented by iDE and other partners have further explored implementation strategies to increase commercial sector contributions to improving convenient access to hygienic sanitation among rural families.

The large number of ethnic groups in Vietnam—with distinct linguistic and cultural perspectives—requires effective sanitation programs to start with an understanding of the target audience’s perspectives, values and needs, and integrate those into program plans and key messaging. In the past, insufficient efforts have been made to ensure that messaging is delivered using local languages and cultural traditions.⁹

The role males and females play with respect to sanitation decisions and behaviors vary significantly. In general, female caregivers are responsible for family’s sanitation and hygiene practices;¹⁰ however, several studies suggest that men have primary responsibility for sanitation decisions at household and community levels.¹¹ Based on gender-based considerations, different approaches and messages are likely to resonate with men and women differently. A study in rural Cambodia aligned with these findings. It found that women responded to consumer messaging and the advice of influential community figures, like teachers, while men responded to communications regarding technical aspects of latrines.¹²

Previous projects have found that integrating WASH interventions with activities designed to address other health and social needs based on a target communities perceived, local

⁷ Laverack G, Dap DH: Transforming information, education and communication in Vietnam. *Health Education* 2003, 103(6): 363–369.

⁸ PSI: Rural Sanitation Rapid Market Scan Report. 2015

⁹ Rheinländer T, Xuan Le thi Thanh, et al.: Hygiene and sanitation promotion strategies among ethnic minority communities in Northern Vietnam; a stakeholder analysis. *Health Policy and Planning* 2012, 1-13.

¹⁰ Curtis.V: Talking dirty: how to save a million lives. *International Journal of Environmental Health Research* 2003, 13:S73 – S79.

¹¹ PLAN: Gender and Social Inclusion on water, sanitation and hygiene in Quang Binh, Quang Tri and Kontum provinces. 2014

¹² Water and Sanitation Program: Sanitation Demand and Supply in Cambodia. Field Note in Identifying Constraints to Increasing Sanitation Coverage Series. Phnom Penh: World Bank Water and Sanitation Program; 2008.

priorities, i.e. child nutrition, can produce significant results.¹³ Collaboration between multiple actors at multiple levels, i.e. government, WASH sector leaders, community based organizations, private sector service providers, can also lead to stronger, more insightful and targeted efforts. A variety of approaches—including but not limited to community-led total sanitation (CLTS) are needed to achieve scale and to address supply as well as demand side barriers.

The CLTS approach was piloted in Vietnam in 2008 in a few villages in the northwest mountainous provinces, and since then has been introduced to approximately 29% of the country, including one of the study provinces—Kon Tum.^{14, 15} These CLTS programs have been supported by the Government as well as multiple non-profit partners. Plan reports that over 732 CLTS facilitators have been trained under their programs to date. Select projects have documented some success through CLTS in Vietnam;¹⁶ however, rigorous external evaluations over time are lacking. A report conducted by SNV, for example, reports significant success in triggering an immediate reduction in open defecation practices. However, other reports suggest that communities revert back to open defecation practices over time, following initial CLTS success.

The literature to date emphasizes the need for incorporating culturally sensitive, community specific WASH programming in Vietnam. Communication needs to be developed to resonate with the target audience. More focus needs to be placed on community level participation in designing and implementing programs and involving vulnerable populations, like women, people with disabilities and the elderly. Taking these modifications into consideration will help design more effective and efficient sanitation and hygiene programs, increase coverage and reduce the disparities in access to hygienic sanitation facilities throughout Vietnam.

¹³ USAID: Integrating Water, Sanitation, and Hygiene Into Nutrition Programming. Washington, DC: USAID; 2013.

¹⁴ CLTS Knowledge Hub. Community Led Total Sanitation, Vietnam. 2011.

¹⁵ UNICEF. Community Led Total Sanitation in East Asia and Pacific. 2013.

¹⁶ SNV: SNV Vietnam sanitation demand creation- a strength based review. 2010

Objectives

The SanMark study was designed with the aim of accomplishing the following objectives to better inform WASH program design and implementation in the study provinces from 2016-2021. Specifically, the qualitative research was designed to:

- a. Gain an understanding of the lessons and experiences of other sanitation projects within the central and central highlands regions.
- b. Understand the demand side of sanitation within the five districts (Kon Plong, Kon Ray, Huong Hoa, Dak Rong, Minh Hoa) in three provinces selected by Plan.
- c. Understand the supply chain for sanitation products and services within the study area.
- d. Understand the financing options, gaps and opportunities within the study area.
- e. Identify practical recommendations relevant to sanitation marketing and communication campaigns in the study areas.

Methods

A qualitative design was used to gain insight into both supply and demand side barriers to hygienic sanitation among rural communities in three provinces within central Vietnam.

Desk Review

A review of existing literature on sanitation and relevant program strategies was conducted to inform the study design. This review focused on published and grey literature relevant to assessing and addressing both supply and demand side barriers to improved sanitation among rural communities.

Study Sites and Area Context

The survey was conducted in ten selected communes within five districts (Kon Plong, Kon Ray, Huong Hoa, Dak Rong, Minh Hoa) in the provinces of Quang Tri, Quang Binh and Kon Tum. The provinces, districts and communes were selected in consultation with Plan Vietnam, based on Plan's sanitation program coverage as well as local poverty rates.

Three of the five study districts are included in the list of the 62 poorest districts in Vietnam, and all of the communes in the study are classified by the Government of Vietnam as poor. All households included in the study were located between 3-12 kilometers outside of the commune center. Most households included in the study lived in houses

made of wood and other local materials and had been constructed by the families without masonry assistance.

Plan has supported construction of hygienic latrines for poor households in each of the study communes using a variety of programmatic approaches, including: 1) providing WASH communication and training to community members and masons; 2) providing construction materials; 3) providing assistance for substructure installation; and 4) subsidizing construction costs. In two of the three provinces, there were some signs of other, complementary sanitation programming supported by the Department of Health and/or Unions at a limited scale. The study did not assess the scope of implementation or results achieved by sanitation programs other than Plan's.

Study Populations

The study sample included individuals from households which had received Plan support to build a hygienic latrine, as well as individuals from households which had not received Plan support to date. Study participants were selected using purposive sampling with the help of staff from the district health center in each province. In addition, the sampling process deliberately included representatives of socially marginalized groups, including households with disabled individuals and/or single-parent households. In addition to household interviews, the study included masons, retailers and representatives from community loan programs. The following criteria were used in sampling for each of the main study groups:

Inclusion criteria:

- Households:
 - Head of household
 - 18-65 years of age
- Traders/masons:
 - Owners or staff of service providers
 - 18-65 years of age
- Influencers and financiers:
 - Identified as the most influential points of contact for rural consumers in the community
 - 18-65 years of age
- All participants are willing to provide informed consent for participation

Exclusion criteria:

- Individuals were excluded if they were unable or unwilling to provide informed consent.

The specific study populations and the information collected from them are as follows:

Rural consumers: the study included an analysis of the perceived benefits of 1) current sanitation method(s) and behaviors (open defecation and unhygienic latrines) as well as

determinants for behavior change in the future and 2) intentions or plans for improved sanitation. The analysis included an assessment of willingness to pay for hygienic sanitation considering rural household monthly income and current payment practices for related services (e.g. sanitation hardware provision and comparable significant household investments). The analysis also included an assessment of how, where, when and through which channels, i.e. market, non-profit or public, rural households met their sanitation needs.

Sanitation executers: the study included an assessment of current services and capacity among masons (both untrained and trained), sanitation laborers, and other providers. Interviews with latrine builders yielded insights regarding their current business practices and parameters, including analysis of potential constraints to increasing scale, quality and affordability. Potential areas for Plan to add value and build capacity were assessed. The scan also included a review of public sector and INGO/Civil Society Organization sanitation programming in the province, to assess the coverage, quality and results associated with public sector sanitation programming.

Input material suppliers: the study included an assessment of sellers of cement, pans, rings, pipes, roofing and other sanitation materials to analyze quality, price, location and convenience from the perspective of both the sanitation executers and the sanitation customers.

Financers: one person working for Social Policy Bank in each province was interviewed to gather information regarding difficulties and challenges of credit/loan programs in the community: 1) why households were not willing to get loans from this bank, 2) what the most feasible local sources of funding for improved sanitation for rural consumers were and 3) what the barriers, opportunities and considerations (terms) to access these funds were, e.g. community or bank loans?

Data Collection

The data was collected in August and September of 2015 using the following methods:

In-depth interviews and direct observations were conducted at all points in the supply chain, including with rural consumers, masons, sanitation product/materials suppliers and financiers. Visits to rural households with and without hygienic latrines provided insight on consumer satisfaction, barriers and opportunities. Conversations with users of non-hygienic sanitation were used to further explore reasons for non-investment in hygienic sanitation. Interviews were purposely designed to include disabled and otherwise marginalized household members. Conversations with sanitation market players (masons and material sellers) assessed access to affordable, quality sanitation and identified opportunities to address supply chain gaps and improve capacity of providers and commitment to providing improved sanitation.

Focus group discussions (FGD) were conducted in each of the ten communes among selected rural household heads and other individuals of influence in the community. At least one participant in each discussion group was a non-governmental influencer.

Informative, introductory discussions were held with district level Government officials responsible for sanitation programming.

Socially marginalized groups such as single parent households, households consisting solely of women and children, poor households and/or households with physically disabled individuals were deliberately included in both the IDIs and FGDs to support study objectives.

Table 1: Breakdown by method of data collection and study province.

Data collection	Study population	Kon Tum	Quang Tri	Quang Binh	Total
IDIs	Households (6 per district, at least 2 with a hygienic latrine & 4 without, at least 1 with a member of a marginalized group)	12	12	6	30
	Market players (at least 4 masons and 1 retailer per district)	10	10	5	25
	Financiers	1	1	1	3
FGDs	Household heads and influencers (13-15 participants per FGD/commune)	4	4	2	10 (132 people)
Total		27	27	14	68

Procedures and Ethical Considerations

The study design was submitted to the Institutional Review Board and was approved prior to data collection. Guidelines regarding participant protection were followed closely. Prior to the interviews and focus group discussions, interviewers introduced and explained the overall study, objectives and other information. Permission was obtained for audio recording and informed consent forms were signed. With informed consent given, the interviews and discussions were conducted. Each interview lasted approximately one hour and each FGD lasted approximately one and a half hours. PSI researchers served as the interviewer and FGD facilitator, Plan primary unit staff assisted FGD facilitation.

Interviews were conducted with rural consumers at their houses and with market players at their worksites so that direct observations could be performed simultaneously.

Interviews with influencers and financiers were conducted at a location convenient for the interviewee. FGDs were conducted at a communal center.

Data Analysis Process

Analysis of transcripts from IDIs and FDGs was conducted using a two-stage process. First, all transcripts were coded using both priori and inductive codes. Priori Codes are those that are developed before examining the data—for example, ‘open defecation behavior’ was a key category for organizing verbatim data before transcripts were completed, so this was a priori code. Other words and themes emerged through the analysis process. For example, when speaking about latrines and defecation, some respondents spoke about beliefs/norms/perspectives around different social norms or habits typical in their community regarding defecation as guiding their decision making. Others spoke about their experiences using septic tanks in other places. These key words and themes were then developed into inductive codes because they were not anticipated prior to the data analysis.

The second stage of analysis involved using coded data to identify common themes and insights relevant to the study research questions. This analysis generated key findings relevant to market barriers to be addressed and potential strategies to address barriers at various levels in the production to use spectrum (i.e. manufacturers, distributors, retailers and consumers.)

Limitations

This study uses a qualitative approach. While qualitative studies have potential to yield rich insights from individuals interviewed, they do not support quantitative analysis given the limited and purposeful sampling.

Given that the study design did not include a cost analysis component, the study was unable to generate specific recommendations regarding specific financing strategies likely to be effective for rural sanitation.

Findings

Respondent Characteristics

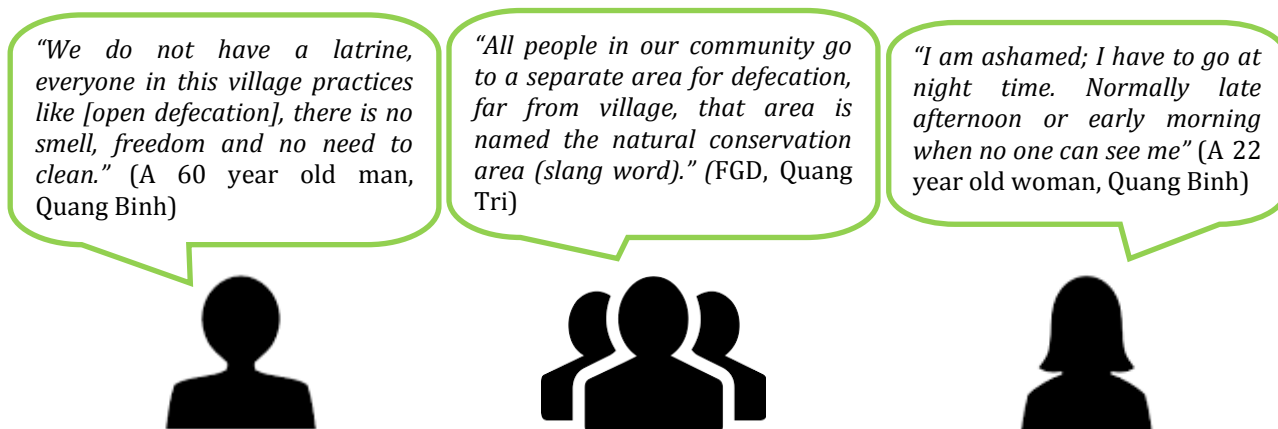
Study respondents ranged from age 22 to 57. Education level of respondents was limited with most respondents not having attended or completed high school. Several female respondents from Kon Tum and Quang Tri did not speak Vietnamese. Of the households

interviewed, around half had children less than 5 years of age. Agriculture and/or animal husbandry was the primary source of income for most households. Extra money is earned through seasonal work including farming or plantation work and collection of forest materials. The average monthly income per household varied by province and—because of crop cycles—also varied significantly by month. On average, the reported monthly income collected per household was 2.5mVND in Quang Tri, 1.6mVND in Kon Tum and 2mVND in Quang Binh. Household saving practices were not reported as common. Most households reported selling farm products or asking for a small loan from relatives or neighbors when major purchases are planned.

Consumer Analysis

Demand: perceptions related to demand for hygienic sanitation

Sanitation practices vary significantly among the households studied. Open defecation is described as typical in all study sites but practices vary by time of day, location and age of the individual. Individuals also have varying opinions regarding the advantages and disadvantages associated with open defecation. Open defecation is practiced because it is convenient, has little to no smell and no cleaning or input costs involved.



The use of unhygienic latrines, including shared, multi-family latrines, is common among rural families. The perceptions regarding these models also vary significantly. Respondents reported perceived pros and cons to all three types—open defecation, unhygienic latrines and hygienic latrines (Table 2). Whereas the need for improved latrines is evident from a public health perspective, it is less clear from the consumer's perspective.



Shared, multi-family latrines (example at left): These latrines are usually shared between 5 or 6 households and are located approximately 50-100m from the houses. While shared latrines have financial benefits, they lack privacy and other convenience attributes that are important for households—and they fail to meet hygienic criteria.

Table 2: Perceived Benefits & Disadvantages of Different Latrine Types

	Pros	Cons
Open Defecation	- Easy for children - Comfortable - Environmentally beneficial - Convenient - No smell - No need to clean - Freedom	- No privacy - Flies - Shameful for women - Safety concerns
Unhygienic Latrines	- Affordable - Require few materials - Most materials can be locally sourced - Privacy	- Smelly - Flies - Less need to clean the area
Hygienic Latrines	- Safety - Pride - Privacy - Admiration, respect from others in the community (particularly for septic tank model) - Clean - Less smelly	- Expensive - Water consuming - Require skills to build - Require materials not easy to locally source



"I'd like to have latrine for my young wife, I normally have to accompany her, especially at night time. She is scared." (A 22 year old, Quang Tri)

While many interviewees had positive perceptions regarding open defecation and unhygienic defecation practices, many still described hygienic latrines as "desirable." Significant value was placed on having a hygienic latrine based on perceived advantages—specifically privacy, cleanliness, safety and lack of flies. In addition, those with a hygienic latrine were described as being respected and admired by others in the community. As a result, a toilet serves as a source of pride and dignity for households. A number of male respondents described feeling a sense of shame because they are unable to provide safety and privacy for their wives and daughters—a unique and gender-based insight relevant to scaling up hygienic sanitation.

Whereas interviewees expressed general awareness that hygienic latrines are beneficial, not all interviewees were unable to specify distinct benefits.

"I want to have a latrine to be proud, to be at the same level with others in my community. It is shameful as I am a man, but cannot ensure a private area for my girls." (A 28 year old man, Kon Tum)



"It is amazing; they (a household who just built a septic tank inside their house) have a new model of latrine. We admire them, everyone in the community has talked about them with respect." (A 37 year old woman, Quang)



This research confirms other data sources indicating that rural households do not perceive latrines as an investment priority compared to other perceived household needs.

Education for children and other items more directly acknowledged as a sign of household wealth and/or status are examples of household investment areas which are prioritized over latrines.

"We do not have enough money to build a latrine. We need to save money to send our children to school. A latrine is not the most important at the moment." (A 25 year old woman, Kon Tum)

"Because I got partial support, I built this latrine. But I do not have the money to complete the upper-structure. Now I have kept it here, I will use it once I complete all of it." (A 23 year old woman, Quang Binh)



A common theme among households who had not received technical support from Plan was not having the knowledge and/or skills required to construct a hygienic latrine according to the sanitation standards. This includes knowledge on what materials are needed, the quantity of materials and the skills to build. One widow shared,

"My husband has died. Now there are only women at home and, we do not know what to do to build a latrine. Moreover, we do not have money." (A 45 year old woman, Quang Tri)

Some households reported receiving non-technical support from Plan, which included supply of key construction materials. While this helps households overcome the barriers to access, without technical training there are remaining barriers to construction. Materials sometimes go unused because households do not know how to properly use them.

"I do not know the techniques related to building a toilet. We have received materials from Plan, such as concrete rings, but do not know how to install them." (A 39 year old man, Quang Tri)

Even with subsidies and Plan support to construct hygienic latrines, multiple households reported not using their latrines. Support frequently helped construct the substructure, but left completing the superstructure up to the household, which sometimes remain incomplete. If households were fully aware of the benefits and placed value on improve

latrines, completing the superstructure may not be a barrier to use. However, this lack of completion and effort to solve the problem of constructing the superstructure demonstrates a failure to understand the importance of hygienic latrines on household health.

Limited access to other materials perceived as necessary to use the latrines, such as water, toilet paper and waste basket for disposal—was also cited as a barrier. One household head in Kon Tum explained,

“We use this [septic tank] only when we have the napkin used with this kind of latrine. But my family normally uses the school paper which makes the latrine get stuck easily.” (A 27 year old man, Kon Tum)

Although interviewees do not specifically reveal this, it is possible that these findings can be attributed to the low value and lack of perceived need that households link to sanitation. Many of the barriers, such as construction skills, materials for superstructure and supply of complementary materials, can be overcome relatively easily but require the household to place sufficient value on having and using a latrine. For example, if a household head felt it was crucial for their family’s health and happiness to have access to a hygienic latrine, they may be more likely to overcome barriers to investing in a hygienic latrine.

Some barriers may be perceived as easier to overcome than others. For example, obtaining supplementary materials to construct a superstructure, like wood and bamboo for nearby forests, is easier, both in terms of convenience and expense, compared to travelling to the district center to purchase materials for the substructure or to secure a loan from a bank to fund the materials and construction.

Supply—perceptions related to access to hygienic sanitation

Affordability: willingness and ability to pay

There is a general perception among most participants that they cannot afford to construct a hygienic latrine. Even households that are not classified as poorest households reported the perception that they cannot afford to pay the entire cost of constructing a hygienic latrine. Upon seeing other households receive support from programs such as Plan’s, many respondents stated that they were waiting their turn to receive financial and construction support. This demonstrates that many households are willing to pay for improved sanitation and hygiene, but not without a partial subsidy.

Many household are not aware of public funding for sanitation improvements. Those who are aware of loans available explain their perception is that they are inaccessible for families like theirs because the interest is too high.

“We did not know that there is a sanitation loan. No one told us about it.” (A 32 year old woman, Quang Tri)

“We do not want to get loan because the interest is too high.” (A 39 year old man, Quang Binh)

There may be ways to build lower cost hygienic latrines, but rural families have limited understanding of the technical and construction aspects of sanitation. Without this knowledge or good guidance from a mason, it is difficult to make decisions about whether and how to reduce costs in select areas.

Different respondents reported desires for either pour flush or septic tank latrines. Pour flush latrines were perceived as a more realistic, affordable option for many households.

Despite this, some households expressed interest and desire for septic tank latrines because they were perceived as a powerful symbol of the family’s status, which is an important factor for aspirational poor households in the Vietnam context.

Based on the study findings, average consumer cost for a pour flush latrine in the study areas is approximately 1.5 million VND, compared to 2.6 million – 3.8 million for a septic tank. Details regarding latrine cost data collected through this study can be found in Annex I. Considering average consumer price and monthly income, study participants described a willingness to contribute 50-70% of the cost of constructing a latrine if support for the remaining amount was available through loans, discounted materials or services and/or other forms of subsidy. Preferred loan terms were described as interest free with monthly payments between 60,000-100,000 VND over a 3-5 year repayment period.

Availability: physical access

Respondents revealed that there are multiple ways they procure the materials necessary for construction of hygienic latrines through existing commercial suppliers. All districts sell the necessary materials but because of the distance from the rural consumer’s homes an additional charge is incurred for transportation, either through the supplier or through an independent transporter. Some households are willing and able to collect local materials, like sand from the river or bamboo and wood from the forest, to reduce the cost of construction. Finally, many households described receiving materials from Plan to support construction.

While all of the necessary materials are accessible in one way or another, some of them are significant distances (and costs) away. In addition, households are required to visit multiple shops and locations to access all of the sanitation materials and services required to build a latrine. In 1 of 10 communes included in the study, respondents explained that there were no professional masons in the commune—which is consistent with the reality that most of these rural houses have been constructed by families using wood.

Supply-side Analysis

This section describes findings from interviews with various market-players including commercial masons and sellers of sanitation materials. It is important to note that the market players interviewed for this study are not sanitation-specific professionals, but rather are broader construction professionals/businesses. The demand for latrine-specific construction is small compared to broader household/business renovations and other construction projects. In urban areas, households and businesses doing construction or renovation projects, which include sanitation facilities, are the most common source of materials and service requests. In rural areas, the construction of wells and cemeteries are the most common.

Distributor

Distributors are classified into two distinct types: heavy material and light material distributors. Heavy materials include cement and sand, while light materials include ceramic bowls and piping. These distributors are typically found at the provincial level, sometimes transporting materials from different regions. They provide materials to almost all points in the sanitation supply chain, including directly to masons who they may work with providing two-way customer referrals. A distributor in Quang Tri shared that his business sometimes provides masons with phone calling cards to facilitate business communication.

“We provide everything for construction and meet all of the demand of volume, selling to wholesaler, retailer and consumer, providing carrying services if request. We do have our own system of sub-distributors at communes far from the center.” (A distributor, Quang Binh)

Wholesaler and Transporters

Wholesalers receive both heavy and light materials directly from the distributors at the district level and sell to masons and/or consumers at the commune level.

The means of transporting construction materials varies by province and by material source. Some providers charge an additional fee based on the quantity of materials and/or transport distance. The extra charge is waived if there a large quantity of materials being sold. Other providers require consumers to hire a third party transporter. Wholesalers often have a transport function incorporated in their service.

“I have a network of construction shops and providers, if I get a request from a consumer, I will bring it to their house. The price includes price of product and carrying service.” (A wholesaler with a transport function, Quang Binh)

District and Commune Retailer

Sanitation and construction retailers are small businesses, often with little interest in expanding their scope of work or client base. This may make it challenging to encourage improving access to hygienic sanitation construction for rural, low income consumers. They specialize in selling either light or heavy materials, which means consumers need to visit multiple locations to access all materials required.

Retailers typically focus either on selling light materials for the superstructure, like this one, or selling other heavy construction materials required, like sand and bricks.



“We do not have a plan to extend the business, we are small and our clients are our friends. We do not have any kind of promotion or marketing and do not think about it.” (A retailer, Kon Tum)

The retailers interviewed provide construction materials for all types of work—primarily household or business renovation or construction. The demand for latrine construction is small compared to the previously mentioned demands. Because their businesses do not profit hugely from sanitation requests, the retailer’s knowledge of latrine construction is limited and they have little incentive to adjust pricing or give loans to assist low income, rural households.

“The margin for latrine construction materials is not high, around 4-7%. Clients who I know pay on account. We do not provide carrying service, clients arrange carrying by themselves.” (A retailer, Quang Tri)

Mason and ring provider

Masons, assistant masons and ring providers are primarily found at the commune level. Mason Assistants have no official or professional training as masons and they typically work seasonally earning a daily income of 150,000-220,000 VND/day. However, there was a commune in Quang Bing that reported having no local masons. The demand for masons is much higher in urban area than rural areas, and the services requested are rarely latrine-specific. In

"I received support from Plan to build this latrine, I paid around 1.3m VND for the superstructure; however there are very few households that can make a superstructure like this; they typically use simpler and easily available materials." (A mason with his new septic tank)



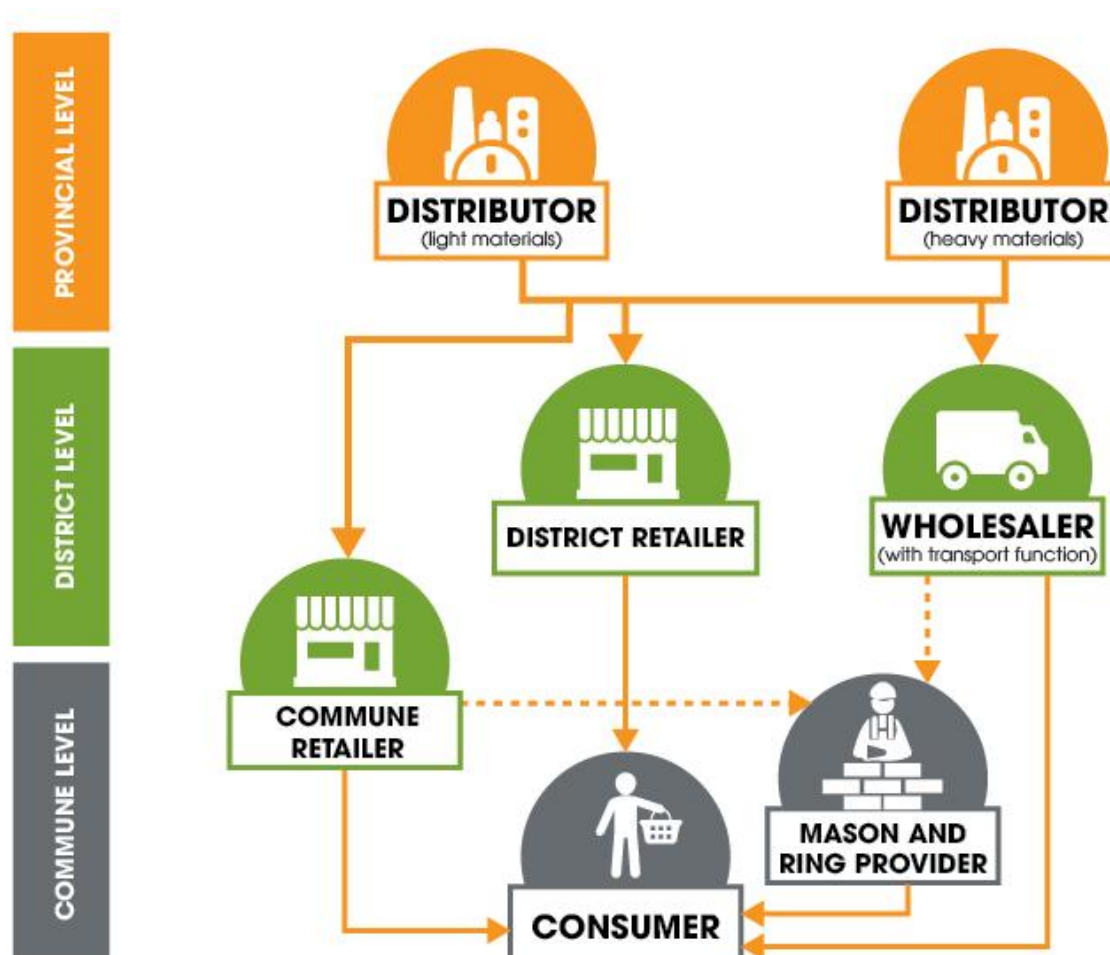
other words, rural latrine construction typically takes place infrequently and in cases of larger house renovation projects. In areas supported by Plan, the masons interviewed were specifically recruited and trained to build hygienic latrines by Plan. Some of these masons were not originally masons by trade. In areas not supported by Plan, there were few masons found and those who were found reported not receiving any formal training related to latrine construction. An assistant mason explained that,

"[there is] no demand in the area, houses are made of wood, people often build them by themselves with support from neighbors or relatives. Dry pit latrines and simple pour flush latrines with wall unlined are not complicated; people can make [them on their own]." (A 35 year old mason assistant, Quang Tri)

Despite limited sanitation-related training/skills, the older, more experienced masons provide advice related to sanitation construction to both consumers and to other masons. They guide consumers on what and where to buy materials, as well as the quantity and quality of required materials. An assistant mason explained,

"We learn from each other, one will teach experience to another one. There is not any training for us on any special skill." (A 25 year old, Quang Binh)

Illustrative Rural Sanitation Supply Chain Map



Financiers Analysis

Representatives of VBSP offices at the district level in two provinces were interviewed to further understand the extent which these programs were accessible to rural families. Based on the interviews conducted, VBSP has a program in place specifically designed to benefit rural households. There are loans available for household latrines or safe water systems—both valued 6 million VND. However, both VBSP staff and rural consumers described available loans as inaccessible for rural households due to high administrative burdens related to the complicated and nontransparent application process and impractical interest and repayment terms.

"We have not pursued a loan from [VBSP] because of high interest and the complicated procedure" (FGD participant, Quang Binh)

VBSP staff also acknowledged concerns about loan default risk among poor families, as a disincentive for them to promote these loans.

"Very few people get loans from these programs. Because of the high interest, they are not able to pay. Moreover, this is a form of credit loan without any deposit or mortgage. We do not have mechanism for addressing [non-compliance with loan terms]." (VBSP staff, Kon Tum)



"No one has been getting loans for sanitation improvement, although we have a 6mVND loan for water treatment and 6mVND loan for sanitation." (VBSP staff, Quang Binh)

"We do not want to lend money for latrine construction projects because [rural households] are unable to pay it back." (VBSP staff, Kon Tum)

Recommendations

Based on PSI's experience designing, implementing and monitoring market-based approaches to generate measurable improvements in healthy behaviors including use of hygienic sanitation, the following suggestions are provided consistent with the SanMark study findings:

1. Improve convenient availability to sanitation materials by:

- a. developing locally specific sanitation market maps for each rural district, including information regarding the location, contact information and scope of materials available;
- b. promoting businesses with a significant proportion of sanitation materials available onsite to reduce time/effort/money required by consumers to purchase supplies and
- c. linking recommended sanitation material sellers with masons and encouraging and facilitating communication not only between them but also with consumers.

2. Increase access to skilled masons capable of building quality and locally appropriate latrines by:

- a. training masons as well as mason assistants in underserved communes/districts;
- b. providing additional support to increase sanitation-specific business for trained masons—the specifics will need to be further explored with further input from Masons and communities they serve.
- c. equipping masons with knowledge, skills and tools (simple leaflets, for example) to support demand-creation and sustained use goals to enable them to counsel families correctly—building on their pre-existing role as “advisors”

3. Address price barriers for rural consumers by:

- a. using a transparent and targeted approach to providing latrine installation subsidies to the poorest families;
- b. identifying and promoting lower-cost, appropriate sanitation models which are consistent with MOH guidelines as well as rural consumer aspirations, i.e. pour-flush latrines. Lower-cost options may be presented as “first step” in a family's longer term plan;
- c. facilitating bulk transport of heavier materials to select areas to reduce transportation costs;
- d. encourage retailers to stock and masons to use less expensive but appropriate materials;
- e. depending on latrine model specifications, developing user-friendly guidelines to help consumers “do-it-yourself” (part or all, depending on latrine type).

Further discussions with local loan programs, masons and sanitation retailers are needed to identify feasible ways to improve accessibility of community loans and to improve affordability of commercial masonry support, e.g. through the acceptance of deferred payments.

4. **Generate informed demand** for hygienic sanitation by designing and implementing multi-channel (targeted) social marketing campaigns designed to emphasize the benefits of hygienic sanitation (i.e. admiration from others, privacy for women, convenience and cleanliness including less flies--compared to the current situation) and to address common misperceptions (i.e. complexity of construction, low awareness of where/how/who to ask for health), etc. Campaigns should be designed with local insights from target beneficiaries, pre-tested for comprehension/appeal/possible unintended negatives and placed through multiple channels, consistent with international best practices for effective behavior change communication.
5. **Promote affiliated, trained masons & sanitation retailers** to make it easier for rural households to find the sanitation products, services and advice they need. Where possible, link affiliated and accredited/trained masons with suppliers who are most accessible to target households.

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Annexes

Annex I: Approximate Consumer Costs of Latrine Models

The approximate costs of both the septic tank and the pour flush latrine models were determined based on information gathered from Masons and sellers of sanitation materials in the study areas. Consumers reported little knowledge on the price of sanitation materials given that most of their materials had been provided from Plan. Prices below represent a summary of data collected from private sector informants across the study provinces, as cost data did not vary significantly by province.

Septic Tank	Cost (VND)
Substructure: including 4 rings, 0.5m ³ sand & 100kg cement	1.3-1.8 m
Frame (one time cost)	
Superstructure (non-local materials): - 300 wall bricks - Steel - Piping - Ceramic bowl	0.9-1.2 m
Superstructure (local materials like bamboo, iron sheet, wood)	200-500 k
Carrying Service (varies based on distance and how much material is being transported)	35k-70k/km
Mason (daily rate/person)	150k-250 k
TOTAL	2.6-3.8 million

Pour Flush Latrine	Cost (VND)
2 concrete rings	300 k
Ceramic bowl	150 k
Super structure	300 k
Mason	750 k
TOTAL	1.5 m