Scaling Up Rural Sanitation

Understanding Determinants of Access to Hygienic Latrines for Rural Households in Vietnam

From Research Findings to Campaign Development

June 2016

INTRODUCTION

Vietnam has achieved impressive results in increasing sanitation coverage. In 1990, only 31% of rural households had access to improved sanitation.[1] By 2015, this rate had increased to 70%.[2] The Joint Monitoring Program (JMP) of the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) established criteria for 'unimproved'[3] and 'improved' latrines, while the Vietnam Ministry of Health (MoH) has developed a more stringent set of criteria for 'hygienic' latrines used for setting national targets and for monitoring. The Vietnam Health and Environment Management Agency (VIHEMA) under the MoH is responsible for rural sanitation and hygiene. Within communities that have sustained open defecation free status[4], VIHEMA aims to increase the rate of households with hygienic latrines to 75% by 2020, and to 90% by 2030.[5] Since 2010, the government's delivery mechanism for rural water supply and sanitation has been a series of five-year National Target Programs (NTPs).The third NTP (NTP3) for rural water supply and sanitation has been completed. For 2016-2020, the New Countryside Development Program will be the umbrella program under which sanitation is to be addressed.

PROBLEM STATEMENT

Despite overall progress in sanitation coverage, the national average in Vietnam masks significant disparities among regions. Of the total number of households that do not have improved sanitation facilities in the country, 50% are in the Mekong River Delta and another 25% are in the Northern Mountains and Central Highlands regions. While the national rate of open defecation is only 3%, over 20% of households practice open defecation in the Northern Mountains and Central Highlands areas.[6]

Findings from a global review of formative research studies on latrine adoption reveal that non-health drivers such as social status, privacy and convenience are among the key factors that motivate households to invest in latrines, while past approaches in Vietnam have

Key findings

During 2014 and 2015, three research studies were carried out to examine the drivers and barriers to latrine adoption and the availability of desirable, affordable latrines in rural areas of Vietnam. The findings were used to develop integrated behavior change communication (BCC) and sanitation supply chain strengthening programs in Hoa Binh Province and the Mekong Delta region. Insights and lessons learned from these activities include:

- Socio-graphic conditions such as proximity to other households, population density, access to transport and geography (flatlands vs. highlands) – not ethnicity – are key factors that affect a community's access to information, products and services, as well their motivations for latrine adoption.
- Common drivers for latrine adoption across all three regions include a desire for convenience and safety for family members. Moreover, social drivers of belonging, harmony and a desire to keep up with ones' neighbors (i.e status) also influenced purchasing decisions for latrines and other household items.
- An integrated program that combines evidence-based BCC with a sanitation supply chain strengthening component can increase latrine uptake. This approach was used in Hoa Binh Province and resulted in a significant jump in the proportion of households with latrines that meet the Ministry of Health standards for hygienic construction, operation and maintenance.
- Sanitation programs that aim to apply an integrated approach can leverage existing resources – including research insights and communication materials – but new programs may need to adapt their model to fit the local context: small-scale, targeted research is still needed to determine differences in physical, social and emotional drivers for latrine uptake in other regions, followed by pretesting and refinement of communication materials.

[1] Improved latrines are those that hygienically separate human excreta from human contact. Improved latrine types include: water flush to sewer/septic tank/pit, composting, VIP, and simple pit with slab and cover latrines.

[2] World Health Organization and UNICEF. Joint Monitoring Program for Water Supply and Sanitation, 2015.

[3] Unimproved latrines include flush/pour flush to elsewhere, pit latrines without slabs, bucket latrines, hanging latrines, shared sanitation facilities, no facilities, and bush/field.

[4] No one in the village will revert to open defecation.

[5] The Statement of Commitments for Sanitation and Water of the Government of the Socialist Republic of Vietnam at the Spring Forum, 2015.

[6] Ibid.

WORLD BANK GROUP

wsp water and sanitation program

focused mostly on health-based messaging.[7] More recently, Community Led Total Sanitation, BCC, and sanitation marketing also have been applied in some areas of Vietnam. So far, there has been no effort to deliver an integrated program to address both demand creation and supply chain strengthening at scale in the lagging regions.

ACTION

In 2013, the Water and Sanitation Program (WSP)—a multi-donor partnership that is part of the World Bank Group's Water Global Practice—began implementing a three-year technical assistance program entitled "Scaling up Rural Sanitation in Vietnam". The assistance aims to strengthen government capacity for scaling up sanitation promotion with a particular focus on households in low access areas. Through the program, WSP, SNV (the Netherland's Development Organization), CODESPA (a Spanish non-governmental organization) and other partners have supported VIHEMA to develop a strategy and set of tools on BCC and supply chain strengthening for several regions of Vietnam, including the Northern Mountains, Central Highlands and Mekong River Delta. A consistent design process was used for each of the regions, based on formative research to understand the factors that influence consumer demand for, and the supply of, hygienic latrines.

Figure 1. Regional Map of Vietnam

Research findings from the studies were then used to develop BCC campaigns and supply chain strengthening programs for the Mekong River Delta region and for Hoa Binh Province, which was selected as representative of the Northern Mountains region. Hoa Binh Province has a population of approximately 850,000 people from seven main ethnic groups – the Muong, Kinh, Thai, Tay, Dao, Mong and Hoa – and a poverty rate of 15%.[8] The province also served as a "laboratory for lessons" to inform development and implementation of the strategy and BCC and supply chain strengthening tools for other regions.[9]

This Learning Note summarizes key findings and insights from the research and design process used for the BCC campaigns and supply chain strengthening programs for Hoa Binh Province and the Mekong River Delta.

RESULTS

This section describes in detail the steps taken to develop both the demand generation and supply chain strengthening activities for the Hoa Binh and Mekong River Delta programs, including the research, development of activities, and evaluation results from the Hoa Binh program.[10]

1. FORMATIVE RESEARCH

During 2014-2015, WSP and UNICEF supported three sanitation market research studies: an initial study in Hoa Binh Province; a second study in the Mekong River Delta provinces of Soc Trang, An Giang, Kien Giang and Ca Mau; and a final study led by the London School of Hygiene and Tropical Medicine in the Northern Mountains and Central Highlands provinces of Ha Giang and Kon Tum.[11]

The studies sought to provide insights into household defecation practices in these areas, uncover the barriers and drivers of hygienic latrine adoption, and determine the strengths of, and challenges to, the sanitation supply chain to deliver aspirational yet affordable hygienic latrines. Data collection methods included key informant interviews, in-depth interviews, focus group discussions, and structured surveys with household members. Behavior change frameworks were used to guide the development of the detailed research questions and to inform the design of the demand generation components of all three studies. The first two studies applied the SaniFOAM[12] framework while the study in the Northern Mountains and Central Highlands regions applied the Evo-Eco[13] model.

[7] Other key determinants include: access, availability, social norms, product attributes, affordability, skills and self-efficacy, and competing priorities. See O'Connell, Kathryn. What Influences Open Defecation and Latrine Ownership in Rural Households? Findings from a Global Review. WSP. 2014.

[8] Hoa Binh Statistics Book, 2014.

[9] Development of a BCC campaign for the Northern Mountains and Central Highlands is currently underway.

[10] At the time of writing at-scale results from the Mekong Delta program were not available.

[11] The first studies were supported by WSP and the last study was supported by UNICEF and WSP. Water and Sanitation Progam, World Bank, SNV & CODESPA, Rural Sanitation Consumer Demand and Supply Chain Assessment for Hoa Binh; Jensen, Lene and Usswald, Craig Sanitation Consumer Demand and Supply Chain Assessment for the Rural Mekong River Delta, 2014; London School of Hygiene and Tropical Medicine. Sanitation and Hygiene in the Northern Moutains and Central Highlands of Vietnam: Report of a Formative Research Study and Recommendations for SupRWS, 2015

[12] Devine, Jacqueline. Introducing SaniFOAM: A Framework to Analyze Sanitation Behaviors to Design Effective Sanitation Programs. Water and Sanitation Global Scaling Up Project, Working Paper, 2009. http://www.wsp.org/sites/wsp.org/files/publications/SaniFOAM_Report409_3.pdf/

[13] See http://www.hygienecentral.org.uk/research-behaviour.htm

A. Current Defecation Practices

Based on NTP3 monitoring data, by June 2015 roughly 50% of households in the three regions had a hygienic latrine, compared to the national rural sanitation coverage rate of 64%. Only 25% of poor households, on average, have a hygienic latrine. Table 1 provides an overview of the situation in the three regions.

B. Demand For Latrines

Behavioral Determinants Common to All Three Regions

Analysis of the studies revealed that the three geographic regions have some common barriers and opportunities related to demand creation for latrines. These are presented below by behavioral determinant.

- **Access/availability:** *Materials are available in most communities but may be harder to access for households in remote communes.* While latrine construction materials are available in the majority of communes in flat, lowland or midland regions, more remote communities face challenges in accessing materials.
- **Product attributes:** *Pour flush latrines are the most desired.* Cleanliness and the absence of smell are considered among the most important benefits by members of rural households. Pour flush latrines with ceramic pans are preferred for their durability and ease of cleaning. Flushing with water also prevents odors and allows for the latrine to be located closer to, or in, the home. Households prefer "all-in-one" latrines that include a bathroom, water tank and septic tank, which increases cost.
- **Social norms:** *Open defecation is not acceptable, but unhygienic latrines are perceived to be 'normal'.* Although open defecation is not socially acceptable and there is shame and stigma attached to the practice, the use of unhygienic latrines is a normal, accepted behavior. In the Northern Mountains and Central Highlands regions, smelly, dirty latrines are the norm, while in the Mekong River Delta, fishpond and 'field combat' latrines (i.e. pour-flush latrines without any sub-structure) are common. Because the use of unsanitary latrines is so pervasive, there is little pressure to change.[14] Open defecation is more common in the Central Highlands because adults spend the majority of their day in the fields far away from their homes and latrines.

Table 1: Overview of Sanitation in Three Regions

Region	Sanitation Coverage[a]	Common Latrine Type	
Northern Mountains	• 46% of households use unhygienic latrines and 20% do not own latrines. • Only 30% of poor households own a hygienic latrine.	• Great variation in latrine designs but the most common include dry sanitation options such as unimproved dry pits and double vault latrines.	
Central Highlands	• Nearly 50% of households use unhygienic latrines and 15% do not own latrines. • Only 20% of poor households are likely to own a hygienic latrine.	• Various types of latrine models exist; the most common types include dry pit and wet latrines. • Latrine designs vary greatly from area to area, with households copying their neighbors' – often faulty – latrine designs. • Many latrines are not in use due to faulty design and poor maintenance.	
Mekong River Delta	• Roughly 55% of households use unhygienic latrines and 22% do not own a latrine. • Only 28% of poor households are likely to own a hygienic latrine.	• Almost all latrines are wet latrine types. • Most common improved latrine type is pour flush to septic tank. • Most common unimproved latrine types are 'hanging latrines' (simple latrine structures suspended over a body of water) and 'field combat' latrines (unhygienic latrines with a solid super structure that flush directly into the river or a fishpond. • Sharing latrines is common among poorer households.	

[a] Sanitation coverage rates are based on national data as reported by the Center for Rural Water Supply and Sanitation (CERWASS) as of June 2015.

[14] The only exception to this norm is the simple river latrine – similar to the fishpond latrine but built on the edge of a river. Rural residents in the Mekong Delta see defecation into the river from this type of facility as an unacceptable practice, and many reported scolding those who engage in the practice and destroying their facilities. The social norm against the use of simple river latrines appears to be the result of more than a decade of campaigning against river defecation by local authorities.

- **Knowledge:** *Information is limited about hygienic latrines and their affordability.* A key barrier is a lack of knowledge about government requirements for a hygienic latrine. In Hoa Binh Province, only septic tank latrines are thought to be hygienic. In the Mekong River Delta, some residents believe that flushing into a fishpond is hygienic because the fish in the pond consume the fecal waste. In addition, many households think that the only hygienic latrine models are those with septic tanks made with bricks, and they are unaware that other–and less costly–types of substructures, such as tanks or pits made from concrete rings, are also suitable.
- **Affordability:** *Financing options are limited.* There are limited opportunities to access financing for household sanitation improvements. While consumer goods and agricultural inputs can often be bought in installments, credit arrangements for latrines are much more limited.[15] Loans from the Vietnam Bank for Social Policy are the exception. Many non-latrine owners wish to take out a loan but demand far exceeds supply and installment payments are not commonly offered by suppliers.
- **Attitude:** *A hygienic latrine is a 'nice to have', not a 'need to have', item.* Most rural households in the Northern Mountains and Central Highlands regions feel that a hygienic latrine is a luxury item, but an unhygienic latrine is acceptable. In the Mekong River Delta region, dirty, smelly latrines are not acceptable, but latrines with a flush to a pond are. A hygieninc latrine is something they would build if they have a lot of extra money. Households prefer to invest in income generating assets.[16]
- **Drivers:** Despite these barriers, there are opportunities to promote latrines by emphasizing the benefits of latrine ownership. While not all social, physical and emotional drivers are universal, three drivers were consistently found in all three regions:
  - *Convenience:* All households desire a hygienic latrine that can be located near or within the home for easy access, particularly at night or during bad weather.
  - *Safety:* In the Northern Mountains and Central Highlands regions, fears of being bitten by animals were a concern, and meeting ghosts was a fear mentioned in all areas. In every region, the fear that children or the elderly may fall into pit latrines or into waterways when using fishpond latrines were key concerns.
  - *Harmony and affiliation:* In all three regions, households desire harmony with neighbors and within their community. For households in Hoa Binh Province, this is achieved through the solidarity and camaraderie of working together to build latrines. In the Mekong River Delta region, households share canals and waterways and want to build a latrine to avoid contamination and getting into conflicts with neighbors. In the Northern Mountains and Central Highlands in particular, good relations with neighbors and a sense of belonging to the community are also important. At the same time, there was also a bit of rivalry and desire to keep up with neighbors (i.e status), which results in purchases of similar household items and latrines.
- **Willingness to pay:** Previous subsidy programs in the Northern Mountains and Central Highlands have diminished households' willingness to pay for latrines. In the Mekong River Delta, fishponds serve as both latrines and a source of income and/or food. Many households are unwilling to build new or to upgrade to hygienic latrines if it means destroying fishpond latrines and giving up their economic benefits.

Differences among Regions

Despite the similarities presented above, there are also notable differences among the three regions as detailed in Table 2:

- In the more remote communes of the Northern Mountains, households live farther apart and the sense of belonging to a community is less of a factor; households cite disgust and desire for cleanliness as key motivations for obtaining a hygienic toilet.
- In the Central Highlands and lowland communes of the Northern Mountains, communities are linked by relatively good roads and households live closer to one another, making a sense of community and belonging more influential. In these areas, pride, belonging, respect and a desire to be seen as complying with government rules and regulations are important.
- In the Mekong River Delta region, safety and privacy are key drivers because of the risks associated with using hanging latrines. The very high population density also means that it can be difficult for women to find a place with sufficient privacy.

[15] Retailers and masons do provide partial credit for a limited period to some households. Whether or not to provide credit and to whom it is offered is at the discretion of the individual retailer/mason.
[16] 71.4% of survey respondents in Hoa Binh pointed to income generating activities as their top investment priority.

Table 2: Regional Differences Related to Demand Generation for a Hygienic Latrine

Determinants	Regions		
	Northern Mountains	Central Highlands	Mekong River Delta
Skills/ self-efficacy	Households prefer and feel confident to build their own latrines. In Hoa Binh, over 70% of households reported building their latrines themselves.	The reliance on masons is very high in these areas.	
Social support	Relatives, neighbors and friends are the key source of information for latrine construction. Communities collaborate and share knowledge about latrine construction, and help one another to build their latrines.	Masons are highly influential in these regions as they are the main source of advice on latrine models.	
Disgust/ cleanliness	Disgust from smelly, dirty latrines is a key driver in mountainous communities as simple pit latrines can easily break down. Having a latrine offers a way for people to be clean and to have a cleaner environment.	Smell is less of a factor due to the climate with low humidity.	Most latrines are wet types and so households are not affected by the bad smells from latrines.
Privacy	Most households have a latrine, and they tend to invest more resources on the superstructure so that it provides sufficient privacy.	Latrines are more temporary (for both the underground part and the superstructure) and privacy is not critical.	Women, particularly river defecators, worry about being seen defecating and feeling embarrassment at being seen.

C. The Supply Chain for Latrine Products and Services

Once interest is generated through BCC activities (see next section), there should also be a supply of sanitation products and services to meet the demand. Supply chain research in the three regions revealed similar opportunities and challenges to achieving this goal.

Challenges Common to All Regions

- **Complexity of shopping for latrine products and services:** To build a latrine, consumers first have to purchase construction materials from multiple retailers, and then find a service provider to build or install the latrine. No supply chain actor in any of the three regions offered both products and installation services.
- **No marketing to consumers by supply chain actors:** Since most of the products that go into building a latrine are also used for other construction purposes, there is little incentive for retailers/suppliers to market their products and services specifically for latrines (i.e. there are no complete latrine packages that could be branded). Masons and retailers also do not formally promote their services and products but instead rely on word-of-mouth for new customers.
- **Insufficient access to financing for consumers and supply chain actors:** Although financing is available through formal and informal channels, it is insufficient (in both number of financing options and amount of financing available). Retailers lack capital to expand their business as they do not qualify for low interest loans from the Vietnam Bank for Social Policy, and they are reluctant to borrow at high interest from commercial banks.
- **Lack of latrine options for challenging environments:** In the water-scarce communes of the Northern Mountains and Central Highlands, there are currently few options for latrines. There is a need to develop robust but lightweight latrine substructures that are easy to transport from district towns to remote communes. For the Mekong River Delta, land-based latrine models are not always suitable due to the large number of rivers and streams. Fiberglass septic tanks and plastic septic tanks are available but have limited market penetration and are the most expensive option. Plastic septic tanks[17] hold promise but need further development to make them better suited to sun exposure.

Distinct Challenges for Each Region

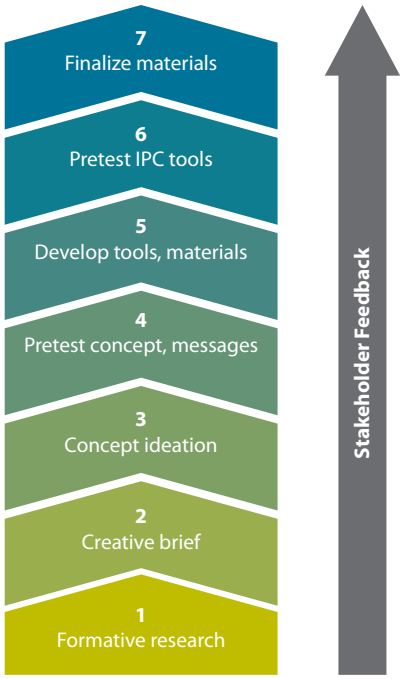
As with the drivers for latrine adoption, challenges to the sanitation supply chain are also context-specific and vary by region. The sanitation supply chain is weakest in the Northern Mountains region due to rugged terrain, low population density and relatively poor transport. The sanitation supply chain is better developed in the Central Highlands thanks to better roads, higher population density, and more communes located in the midlands and lowlands. The sanitation supply chain is most developed in the Mekong River Delta due to large number of lowland communes, high population density and a good network of roads or waterways. Table 3 below presents the challenges specific to each region.

[17] Produced by the company ROTO Plastics Corporation.

Table 3: Differences in Supply Chains among Regions

Factors	Regions		
	Northern Mountains	Central Highlands	Mekong River Delta
The role of masons	Masons are less influential because information about latrines is obtained from family members and friends.	The need for septic tank models and the preference to hire labor for latrine building means that masons determine the size and price of latrines, and thus are very influential. However, many masons do not have formal skills or training in building latrines.	
Transportation	Transport of materials is relatively easy in lowland and midland communities but more challenging for remote villages.		Most communes are easy to reach; however, in remote villages, boats may be required to transport materials.
Market development	Lower population density, lower income levels and the preference for self-building results in lower market potential for sanitation businesses.	Households have higher, more diversified sources of income, including farming and harvesting trees. Households readily accept mason services.	High population density, higher income levels, fewer suitable latrine types (primarily only septic tank varieties) and preference to have latrines installed by masons results in high market potential for sanitation business.
Technological options	Concrete ring septic tanks are completely new to this region.	Concrete ring septic tanks have been adopted by some consumers, though their use is still limited.	Concrete ring septic tanks can be promoted for land-based households, though in general they were perceived to be of inferior quality and less durable. Such product perceptions would need to be addressed. In non-land-based areas, plastic septic tanks have been adopted by some consumers though their use is still limited.

Figure 2. Process to Develop BCC Campaigns



2. BEHAVIOR CHANGE COMMUNICATION CAMPAIGNS

The process to develop the Hoa Binh and Mekong River Delta campaigns followed the same key steps (see Figure 2). The first step included formative research as described above. The second step involved distilling the key research results into findings that were used to support development of the creative brief (a document that defines the parameters for the BCC campaign). The creative brief helped to ensure that stakeholders and the advertising agency hired to develop the campaign shared the same vision and desired outcomes from the campaign. Based on the creative brief, several campaign ideas were developed and underwent multiples rounds of pretesting (steps 3 and 4). Based on the pretesting results, multimedia, print materials and interpersonal communication (IPC) tools were drafted (step 5). Before finalization, the IPC tools were tested once more with frontline workers to ensure that the tools were easy to understand and to apply in the field (step 6). Feedback from stakeholders, including VIHE-MA and the provincial Departments of Health, was obtained throughout.

The Hoa Binh campaign was developed in 2014 over the span of eight months, and included the campaign concept, visuals, messages and tools for frontline workers to conduct face-to-face or IPC activities. Research revealed that IPC was the most effective channel for rural communities, and therefore almost all of the tools were designed for village- or household-level activities. Two packages were designed comprising a "basic" and an "extended" package of IPC tools, as described below:

- **The basic package** included guidelines for a village mapping activity and for village and household meetings, as well as banners, and scripts for loudspeaker announcements. This package was designed based on government cost norms for communication activities and is recommended for provinces with limited budgets for BCC activities.
- **The extended package** included the basic package along with guidelines for additional activities such as the Sanitation Festivals (education-entertainment activities), newspaper article writing, mural paintings and content for longer radio messages. The extended package was developed for provinces with resources to implement additional BCC activities beyond the basic package.

A logo was developed for VIHEMA to use in all future sanitation campaigns. It depicts a stylized, modern latrine with a substructure, middle structure and superstructure. The tagline "Sanitation for All" emphasizes the government objective of a hygienic latrine for every family in Vietnam. It was developed following an extensive process of pretesting, which resulted in a visual that audiences felt represented progress, modernity, cleanliness, comfort and family.

Figure 3. Logo for Sanitation Campaigns

VIHEMA recommends that all organizations working on sanitation in Vietnam use this logo and tagline, though regional campaigns will be able to add specific calls to action. For example, in Hoa Binh, the call to action is "Join hands for a beautiful village" (*Chung tay vi lang que sach dep*). In the Mekong River Delta, the call to action is "A hygienic latrine for your family's peace of mind" (*Nha tieu hop ve sinh, an tam cho gia dinh*).

The development of the campaign for the Northern Mountains and Central Highlands regions is currently underway and is likely to be based upon a similar concept to the one used in Hoa Binh. Additional tools developed from the Northern Mountains and Central Highlands campaign may include TV spots, videos and mobile audio-visual tools.

Table 4 presents more details of the two campaigns that have been developed to date.

Table 4: Details of the Hoa Binh and Mekong River Delta Campaigns

Hoa Binh campaign	Mekong River Delta campaign
Drivers: • pride and recognition • belonging and social cohesion • cleanliness, comfort • better health for children	**Drivers:** • false belief that feces do not contaminate fish and water quality • safety for children and the elderly • privacy • status and affordability • being a good neighbor
Campaign concept: "Join hands for a clean village" Given the strong sense of community in Hoa Binh communes, the campaign highlights the personal, family, and community benefits of having a hygienic latrine. It does this by emphasizing the collective effort by all households to create a cleaner environment.	**Campaign concept: "It's not what you think it is"** The campaign was developed based on misperceptions about the risks (or lack of) of using unhygienic latrines. The four key risks are food safety (fish that are contaminated by eating feces), swimming in contaminated water, falling into a fishpond, and being seen while defecating. There were also two key positive messages about collective action to build latrines and how even poor families can afford a latrine.

Table 4: Details of the Hoa Binh and Mekong River Delta Campaigns *(continued)*

Hoa Binh campaign	Mekong River Delta campaign
Messages: Nine key messages were developed that included, among others: • *Be a better neighbor.* • *Be a pioneer, be a bright example.* • *Provide comfort for your family* • *Act for solidarity.* • *Make your community a better place to live.* • *Choose a civilized lifestyle* • *Do you want your children to be healthier and taller?*	**Messages:** Six messages were developed that included, among others: • *Don't feed your children fish feces - stop defecating in the water!* • *Don't put the elderly and children at risk - stop using hanging latrines!* • *Don't let women be embarrassed - stop using a hanging latrine!* • *Be a good example and good neighbor - help each other build a hygienic latrine now!* • *Even poor families can build a hygienic latrine!*
Tone: The tone is positive and aspirational with crisp, clean visuals that capture the beauty of Hoa Binh Province. The encouraging and suggestive tone reflects a preference for a more roundabout, indirect style of communication among northern Vietnamese. The color green was chosen for its association with being clean, fresh and healthy; the flower depicts households that are connected together in a community.	**Tone:** The tone is sharp, direct and shocking, combining disgust and fear. The tone reflects the preference amongst southern Vietnamese for more straightforward communication style. The visuals depict realistic situations in front of fishpond latrines, unlike in Hoa Binh where latrines are not featured in any of the key visuals.

Hoa Binh materials

Mekong River Delta materials

3. SUPPLY CHAIN STRENGTHENING APPROACH AND TOOLS

Based on the findings from the research, a market strengthening strategy was developed that included: 1) the introduction of innovative and more affordable sanitation technologies to reduce cost and increase profitability for the private sector; 2) support for development of sales agent and distribution networks of sanitation products and services that reach households at the village level; 3) strengthening of financing mechanisms that facilitate rural households to invest in sanitation products; and 4) support for capacity building of the private sector to operate profitably in the rural sanitation market.

To address the lack of suitable latrine choices, the following product options were developed:

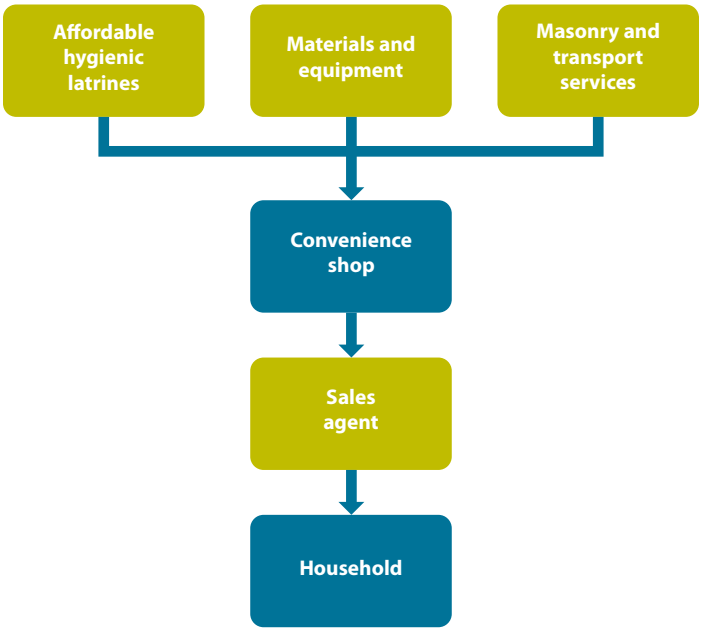
- **Hoa Binh** – Lower cost substructure options were needed that would reduce the total cost of a latrine yet ensure that it is still hygienic. The recommendation of using concrete rings for septic tanks rather than clay bricks or cement bricks resulted in a 50% cost reduction in cost (from approximately USD 168 to USD 87) for the same size of substructure and mid-structure – two critical components of a hygienic latrine. In addition, the concrete rings reduced the possibility of incorrectly connecting tanks, a very common mistake made by both masons and households when building brick tanks.

- **Mekong River Delta** – For households in flood prone areas or locations with limited land space, plastic tanks were introduced. This is the most appropriate option currently for households in this area as the tanks are durable, light weight, easy to install and affordable, especially for households that already have invested in a toilet (see Figure 4).

Figure 4. Plastic Septic Tanks for Flood-prone Areas

In addition, the One-Stop-Shop model was adapted to all three regions and renamed as Sanitation Convenience Shops (SANCONs). SANCONs are places where customers can, in one visit, obtain advice on latrine types, prices and operation and maintenance requirements, and also purchase materials and arrange for delivery and installation of latrines by trained masons (see Figure 5). Importantly, SANCONs allow households to spread out payments for latrines for up to 4-6 months, depending on the SANCON.

Figure 5. SANCON Model



Existing concrete ring producers or retail shops that sold construction materials such as cement, sand, gravel, and latrine pans were eligible to become a SANCON. However, only those with capacity to extend their product line to cover sanitation products and services were invited to participate in the training program. The SANCON owners received training on how to operate their sanitation business. This included learning about key latrine types, training on how to develop a business plan, recruitment of sales agents, financial management, and on-site practice for concrete ring production, among other things. In addition, to help the SANCONs recruit their sales agents, the Commune Health Station helped connect the owners of the SANCON with the network of Village Health Workers, Vietnam Women's Union members or Village Chiefs. Training of SANCON staff was carried out by external resource agencies because provincial health staff were inexperienced in this new approach.

Sales agents are responsible for actively promoting and marketing sanitation products and services provided by the SANCON. This is often done in two ways. In the first approach two people pair up, with one person (a frontline worker) leading the IPC session and the other (a sales agent) providing information on latrine options at the conclusion of the IPC session. The sales agent is then responsible for placing the order with the SANCON and follow-up with the customer. The second scenario is for only one person to do all of these tasks. The sales agent(s) receives a flat fee for each latrine sale completed with the SANCON.

To equip sales agents with tools (other than for BCC), product catalogues were developed with pictures of latrine products and information on prices of components, including combinations of materials for latrines within a range of consumer budgets (see Figure 6). Guidelines were developed to explain how sales agents and village motivators could work together in village meetings so that households could easily access product information at the end of the IPC session.

Figure 6. Latrine Options Catalogue

The SANCON model that utilizes a network of agents working directly at the village has worked well in Hoa Binh Province. However, the model has needed adaptation for the other regions. In the Mekong River Delta, the high population density and greater number of villages per commune required that a commune coordinator role be created to directly manage the day-to-day operations of the sales agents and consolidate orders before sending them to the SANCON. On the other hand, in areas that are sparsely populated like parts of the Northern Mountains, the SANCON model may need to be modified again. For example, individual sanitation retailers may need to develop latrine molds and provide installation services on-sight at the household level in order to help extend the supply chain to hard-to-reach consumers.

Achievements as of December 2015

Hoa Binh: Over 1,000 health staff and sale agents trained and 10 SANCONs established

Mekong Delta: 60 key senior staff trained from 13 Mekong provinces representing the Center for Preventive Medicine, Women's Union and National Center for Rural Water Supply and Sanitation

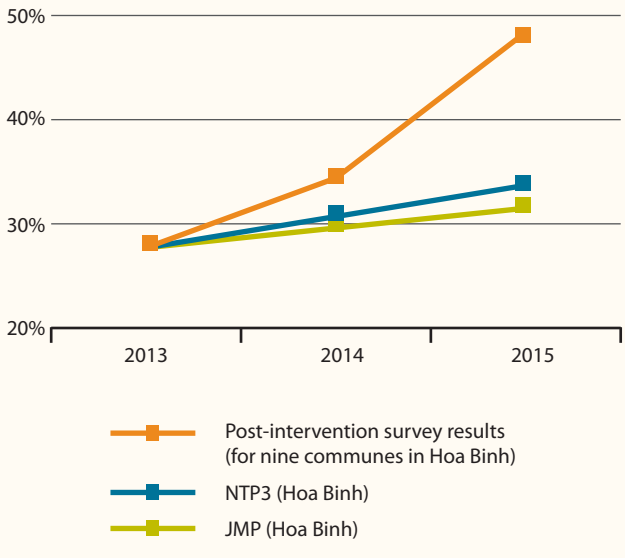
4. EVALUATION OF THE INTEGRATED APPROACH IN HOA BINH

Prior to the use of BCC in Hoa Binh, the Hoa Binh Department of Preventive Medicine used traditional informational methods to generate demand for latrines. Beginning in 2015, the department started implementation of the basic BCC package alongside the supply chain strengthening strategies. An assessment was then carried out in nine pilot communes to evaluate the effectiveness of the evidence-based approach compared to the previous activities under the NTP. The assessment included pre- and post-intervention evaluations conducted at the beginning and the end of 2015.[18] The evaluation aimed to: 1) assess the impact of BCC and SANCON interventions in increasing coverage of hygienic sanitation in nine intervention communes; and 2) evaluate the potential for sustainability and replicability of the sanitation promotion approach in other communities characterized by limited budget and capacity. The key endline findings are presented in Figure 7.

The BCC approach and tools developed for Hoa Binh Province have been adopted by VIHEMA for roll-out within the World Bank-funded Results-Based Rural Water Supply and Sanitation Project implemented in eight provinces of the Red River Delta in northern Vietnam.

Figure 7. Key Findings from Hoa Binh Post-Intervention Evaluation

1. Following an intensive intervention of combined BCC and supply chain strengthening activities, there was a rapid increase in hygienic sanitation coverage in Hoa Binh – from 27.7% to 48.4% over a 20-month period. This compares with a national increase of 1.9% per year (estimated by the JMP) to 2% per year (the NTP estimate), as shown in the chart below.
2. The increase in hygienic sanitation in Hoa Binh benefited all nine intervention communes and was found among all income and ethnic groups: the poor, near poor, and non-poor. Access among the poor rose 6% (from 18% to 24%) while for the non-poor it almost doubled (from 34% to 60%). The increase in hygienic toilets was associated with a decrease in unhygienic facilities, as most of the households in these communes already had some form of toilet already.
3. Eighty-five percent of all respondents said they had participated in sanitation activities in 2015. Of these, 87% had attended sanitation village meetings, 29% had attended sanitation festivals and 13% had received a household visit by outreach workers.
4. Approximately 83% of respondents without a toilet said they were now planning to construct one, 44% of them within the next year (compared to a baseline of 7%).
5. Ten SANCONs were set up as part of the intervention, with one dropping out and another one established independently. Approximately 43% of respondents said they were aware of the existence of SANCONs.



[18] Quattri, Maria, Demand Creation and Supply Chain Development for Scaling up Rural Sanitation in Hoa Binh province: Post Intervention Rapid Assessment Report, 2016

LESSONS

The following lessons learned are based on research and results of implementation of the BCC programs in the Hoa Binh and the Mekong River Delta provinces.

- **Geography influences drivers for both latrine adoption and strengthening the sanitation supply chain.** A common assumption in Vietnam is that cultural differences between various ethnic groups (particularly between Kinh and non-Kinh groups) are key factors in influencing latrine adoption. However, the formative research shows that drivers are not primarily determined by ethnicity but rather by the socio-geographic situation of communities, such as the proximity to other households, density of community and the physical environment (which varies significantly between river delta and mountain communities). In addition, the presence of roads is a key factor that shapes the supply chain and influences preference for products and services (e.g., use of hired labor), and thus drives latrine adoption. These factors also shape socio-emotional drivers. Households living in more densely populated areas were more likely to mention the influence of neighbors and community on their decision to invest in a latrine, whereas in less densely populated areas disgust was more of a motivator.
- **Substituting evidence-based sanitation BCC for the traditional approach of using health motivators requires acceptance by senior provincial implementers.** Senior government health leaders, especially at the provincial level, may be comfortable with their established approaches to hygiene promotion that emphasize education, information and health-based messaging rather than the use of emotional or social drivers, such as social norms, which have been shown to be more powerful in changing latrine adoption behavior. Therefore, it is critical to involve these stakeholders right from the beginning of developing an innovative BCC campaign. They should be given orientation and training, and afforded time to adapt and appreciate new tools and methodologies. While grass-root level implementers at the commune level are usually more open to trying out "new ways", getting the full support from provincial health systems for adopting a new BCC campaign is difficult, but essential; resistance to change from established practices may be highest at this level.
- **Latrine adoption requires more than BCC.** Formative research in the three regions indicates that while BCC must be a central part of any effort to promote hygienic latrine ownership and usage, other barriers must be addressed equally. Aspirational and affordable product design, more marketing and information provided to households about sanitation services and, importantly, financing for poorer households, all require multi-faceted interventions that go beyond communication.
- **The SANCON model has demonstrated potential, but requires modification, particularly in areas with dispersed villages and weak supply chains.** The establishment of SANCONs has provided households with reasonably priced, good quality latrines that meet hygienic standards. However, in Hoa Binh Province, market penetration by the SANCONs, particularly in remote communes, has been somewhat limited. This is due to limited location of the SANCONs in accessible district or commune centers; consumer preference for self-built latrines or the use of local, often untrained, masons; lack of consumer familiarity with new products (latrines made using concrete rings rather than bricks); and low profit margins for SANCONs in remote, dispersed locations with high transportation costs. Experience in other countries has also shown that it takes time for sanitation enterprises to gain market penetration.[19] For such areas, a modified approach is proposed in which linkages between SANCONs and local shop owners is facilitated and further innovations in mason-led latrine construction are promoted.
- **The government can finance BCC activities but external support is still required to spur sanitation supply chains.** Given sufficient political support from the national level, provincial governments can self-finance the operational cost of BCC activities, resulting in significant change. However, supply strengthening activities may still require external support. Market research shows that without external support, current supply chain actors may not have sufficient incentives to extend their business lines to include sanitation products and services. There is a role for government support to actively facilitate supply chains, including training for actors on new business models, particularly in remote areas where access to products and services is a challenge.

RECOMMENDATIONS

The following section provides recommendations that may be useful for future rural sanitation programs in Vietnam.

- **Additional rapid research is needed to understand the drivers to latrine adoption and supply chain strengthening for other areas of Vietnam.** Significant evidence now exists related to both the demand and supply sides of latrine adoption in rural Vietnam. Future rural sanitation programs can utilize these insights and avoid the

[19] Similar low levels of market penetration (20%) were found in early sanitation marketing programs in remote rural areas of Lao PDR, while in Cambodia newly established sanitation enterprises typically were able to capture 30-50% of sales.

need for full scale studies. However, small-scale, targeted studies are still needed to uncover any differences in social, physical and emotional drivers among community members residing in geographic regions outside of those in the Mekong River Delta, Northern Mountains and Central Highlands. Understanding the nuances of these drivers will help program managers determine the direction of their BCC campaigns (e.g., the degree to which the program should emphasize family versus community benefits). Supply chains are also influenced by geography, so targeted research is also needed to understand the challenges and opportunities within local supply chains.

- **New BCC and supply chain strengthening tools can be developed more rapidly if based on existing campaign materials, but pretesting is still required.** The development of evidence-based BCC campaigns and tools have typically required at least 1.5 years, especially if broad quantitative research is needed. The experience of developing materials for the Mekong River Delta, which were based on the materials used in Hoa Binh Province, shows that the time needed for rapid research, field testing of draft materials, and completion of the final materials can be reduced. It is important, however, that shorter development periods still allow sufficient time for rapid research and pretesting of messages and tools to ensure that BCC materials are persuasive, engaging to audiences, and easy to use.
- **The role of frontline workers should be expanded beyond IPC.** Experience has shown that frontline workers have the capacity to deliver both IPC and sales information, and thus toolkits should be designed with both roles in mind. In particular, where commission-based incentives from sales are insufficient, it may be pragmatic for various outreach workers[20] to carry out these dual roles (both BCC and sales).
- **Proof of concept for the business model needs further institutionalization.** Documented evidence of the model's feasibility is needed so that governments, with support from development partners, will scale up business and sales training. Training for sanitation businesses and their sales agents is often outside the comfort zone and core capabilities of the Vietnamese government health staff. External resources could be used for this purpose, particularly in large-scale projects where public funds are available for technical support. In addition, linkages to other programs – such as livelihood, vocational training, and small-medium enterprise training initiatives – may need to be developed in the long-term to institutionalize business training for sanitation enterprises.

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[20] In Vietnam, outreach workers are individuals in villages who collaborate with different organizations such as the Women's Union, the Department of Family Planning and Population within the MoH, Youth Union, and Farmer's Union, among others. They can work for more than one organization and they receive allowance.

WSP is a multi-donor partnership created in 1978 and administered by the World Bank to support poor people in obtaining affordable, safe, and sustainable access to water and sanitation services. WSP's donors include Australia, Austria, Canada, Denmark, Finland, France, the Bill & Melinda Gates Foundation, Ireland, Luxembourg, Netherlands, Norway, Sweden, Switzerland, United Kingdom, United States, and the World Bank.

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About the program

Today, 2.5 billion people live without access to improved sanitation. Of these, 71% live in rural communities. To address this challenge, WSP is working with governments and local private sector to build capacity and strengthen performance monitoring, policy, financing, and other components needed to develop and institutionalize large scale, sustainable rural sanitation programs. With a focus on building a rigorous evidence base to support replication, WSP combines Community-Led Total Sanitation, behavior change communication, and sanitation marketing to generate sanitation demand and strengthen the supply of sanitation products and services, leading to improved health for people in rural areas. For more information, please visit www.wsp.org/scallingupsanitation.

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