Global Scaling Up Handwashing Project

Results, Impacts, and Learning from Vietnam

September 2012

OVERVIEW
The Vietnam Handwashing Initiative (HWI) began in January 2006 with the goal of reducing morbidity and mortality from diarrheal diseases in children under five years of age. In December 2006, Vietnam became one of four countries' in the Water and Sanitation Program’s (WSP) Global Scaling Up Handwashing project. The objective of the project was to learn how to stimulate improved handwashing behaviors at large scale, sustain the activities after the project ended, and measure the impact on behavioral, health, and welfare outcomes.

This Learning Note presents the achievements, learning, and reflections that resulted from implementing a large-scale handwashing program in Vietnam and provides recommendations for future hygiene promotion initiatives. During the four-year implementation (2006–2010), the program achieved all four of its key objectives.

However, a randomized control trial (RCT) impact evaluation found no significant changes in handwashing behavior and no impact on health in children under two. Although much has been learned about how to implement a nation-wide communication program in Vietnam, behavior change at scale has proven challenging.

BACKGROUND
Consumer research conducted in 2006 in Vietnam indicated that reported and actual handwashing behavior was low among mothers with children under five. Only 3% of mothers reported washing hands with soap before preparing food, and only 11% of mothers reported washing hands with soap after handling a child’s feces. Further, observations revealed that only 9% of mothers washed hands with soap immediately before feeding a child. Of the mothers who rinsed hands with only water, 60% did not feel that soap was important.

In 2008, WSP’s Economics of Sanitation Initiative estimated that poor sanitation, including hygiene, contributed to nearly 7 million diarrhea cases; 2.4 million cases of scabies, helminthes, hepatitis A, and trachoma; and 0.9 million malnutrition-related cases

1 The other countries were Peru, Senegal, and Tanzania.
2 From 2007 to 2010, the Global Scaling Up Handwashing project was funded by the Bill & Melinda Gates Foundation under grant #42563, Global Scaling Up Handwashing with Soap Behavior Change. A one-year, no-cost extension was awarded in 2010. For more information, visit www.wsp.org/scalinguphandwashing.

Key findings

• Although the country’s vertical structure facilitated efficient scale up, the system may be more suitable to delivering information, but potentially less effective in motivating caretakers to change and sustain handwashing behavior.

• Because Vietnam’s most sustainable channel is interpersonal communication via the government’s system of frontline workers, in order for handwashing to be sustained within those systems, it had to be integrated into other programs rather than implemented as a stand-alone program.

• The lack of substantial changes in handwashing behavior resulting from the project suggests the difficulty of changing behavior at scale, even under seemingly optimal conditions where knowledge about handwashing with soap and access to soap and water are not key barriers.

• Availability of soap and water at the right place and at the right time is a key factor in consistent handwashing with soap. In resource-poor settings, do-it-yourself handwashing stations are widely recommended, but consumer insights from Vietnam revealed that rural households prefer a new product specifically designed for handwashing.
annually in Vietnam. This equated to a loss of approximately US$780 million per year; or 1.3% of Vietnam’s gross domestic product. Although evidence from research studies shows that improved handwashing behaviors can dramatically reduce diarrheal diseases and acute respiratory infections—two of the leading causes of child mortality and morbidity—much of this evidence has been based on small-scale interventions carried out in controlled settings. Until recently, an evaluation of the health impact from a large-scale handwashing with soap intervention had not been conducted.

**TESTING NEW APPROACHES TO WORKING AT SCALE**

The HWI included a multi-channel campaign targeted at caregivers of children under five that used mass media; large, community-based events (sometimes called direct consumer contact, or DCC); and interpersonal communication (IPC) activities carried out by Vietnam Women’s Union (VWU) members and health workers. The program began with an initial phase in 40 communes in eight provinces through the Ministry of Health (MoH). With resources from the Global Scaling Up Handwashing project, the HWI was scaled up to another 500 communes in seven provinces for a total of 10 of the country’s 63 provinces. This effort, carried out by the VWU with technical assistance from WSP, occurred from 2007–2010. Details of the intervention, including the school handwashing campaign, are available in separate publications.

**OBJECTIVES AND TARGETS**

The project’s overall goal in Vietnam was to design and implement an innovative large-scale, sustainable program to improve handwashing with soap behavior at critical times in 750,000 women (ages 15–49) and children (ages 6–10, when children in Vietnam attend primary school). To reach this goal, the project identified four key objectives:

1. design and implement a large-scale handwashing behavior change program;
2. learn how to strengthen the enabling environment;
3. monitor and evaluate behavioral, health, and welfare impacts; and
4. share evidence-based learning and guidance for scaling up, sustaining, and replicating handwashing behaviors in Vietnam and other countries.

Table 1 summarizes these objectives and measurable targets (where applicable).

**MEASURING RESULTS AND IMPACTS**

Progress toward these objectives was measured through continuous monitoring and periodic evaluations using a variety of approaches. A country performance monitoring system was developed to track progress on an ongoing basis, including a series of rapid assessments to monitor program reach and message recall, and a database to track the VWU’s interpersonal communication activities. A media agency was hired to provide third-party monitoring to ensure that TV spots were aired as per the media plan.

Throughout the project, learning events were organized for provincial VWU representatives to review progress and capture lessons learned before further expansion of activities. Enabling environment assessments were conducted in 2007 and 2010 to gauge changes in the policy, institutional arrangements, financing, and other dimensions that could affect the sustainability of an at-scale handwashing program.

Finally, an RCT impact evaluation study was conducted to measure the project intervention’s behavioral, child health, and welfare impacts.

**RESULTS AND LEARNING**

**Objective 1: Design and implement a large-scale, handwashing behavior change program**

Third-party monitoring data estimated that, by November 2010, mass media had reached more than 14 million Vietnamese women (ages 15–49) and children (ages 6–10) with handwashing

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4 Based on 2005 prices.


7 Communes are the lowest administrative unit in Vietnam, consisting of five to 45 villages (depending on location), with an average population of 78,000 people.

### Table 1: Objectives and Targets

<table>
<thead>
<tr>
<th>Objective 1: Design and Implement a Large-scale Handwashing Behavior Change Program</th>
<th>Target by November 2010</th>
<th>Progress by November 2010</th>
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<tbody>
<tr>
<td>Number of women (ages 15–49) and children (ages 6–10) reached through interpersonal communication</td>
<td>2.1 million</td>
<td>2.2 million (^9)</td>
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<tr>
<td>Number of women (ages 15–49) and children (ages 6–10) reached through direct consumer contact events</td>
<td>40,000</td>
<td>5,000</td>
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<tr>
<td>Number of women (ages 15–49) and children (ages 6–10) reached through mass media</td>
<td>17.4 million</td>
<td>14.2 million</td>
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<tr>
<td>Number of frontline workers trained</td>
<td>15,185</td>
<td>14,400 (^{10})</td>
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**Objective 2: Learn How to Strengthen the Enabling Environment**

Strengthen the capacity of public and private institutions to carry out and sustain large-scale handwashing

Handwashing with soap integrated into programming of government, nongovernmental organizations, and other implementing agencies

Funding sources and implementing entities identified and confirmed to continue maintenance program for the foreseeable future

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**Objective 3: Monitor and Evaluate Health and Welfare Impacts**

Number of target population with improved handwashing with soap at critical junctures

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<tr>
<td>Number of target population with improved handwashing with soap at critical junctures</td>
<td>750,000</td>
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<td></td>
<td>Self-reported handwashing after fecal contact and before feeding a child significantly higher in treatment group, but there was no evidence of significant difference between the control and intervention areas when handwashing behavior was directly observed. (^{11})</td>
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**Objective 4: Share Evidence-Based Learning**

Solid guidance (such as training manuals, guidebooks, and workshops), data, and evidence developed for scaling up, sustaining, and replicating handwashing behaviors in Vietnam and other countries

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\(^9\) Some women or children could have been double-counted and hence 2.2 million might represent person-contacts rather than individual people.


with soap messages; and IPC activities reached roughly 2.2 million women and children in the target age ranges. As Figure 1 shows, the project exceeded its goal (the dotted line) for the number of target audiences reached by IPC. A limited number of DCC activities were initially carried out in 2008, but an additional phase of DCC was cancelled due to the difficulty of finding qualified firms and the limited reach of these activities. Thus, the project was unable to achieve the target for audience reach from DCC. Results from the RCT impact evaluation study revealed that caretakers in the treatment group were nearly two-thirds more likely than those in the control group to have talked to someone from the VWU about handwashing.12

There are two distinct factors in the Vietnam context that facilitated a large-scale communication program. First, the highly centralized, vertical government structure and WSP’s partnership with the VWU—a mass organization formed by the government to disseminate messages at the grassroots level—enabled rapid and relatively smooth scale up of interpersonal communication activities in 500 communes. In addition, television spots were concentrated during high viewership times, such as the evening news, when only one program is aired throughout the country, resulting in national reach.

**Key learning:** Although the vertical structure facilitated efficient scale up, the system may be more suitable to delivering information, but potentially less effective in motivating mothers to change and sustain handwashing behavior. As detailed in other publications,13 efforts were made in this area, but improving the capacity of frontline workers to convey messages beyond knowledge—in an effort to change beliefs, social norms, and so on—remains a challenge. Future behavior change programs in Vietnam might consider allocating more resources to improve frontline worker capacity.

**Objective 2: Strengthen enabling environment**

The HWI’s second objective was to build an enabling environment where handwashing with soap could be sustained after the end of the project. The enabling environment was measured through nine dimensions: 1) policy, strategy, and direction; 2) institutional arrangements; 3) implementation capacity; 4) partnerships; 5) financing; 6) monitoring and evaluation; 7) program methodology; 8) availability of products and tools; and 9) cost-effective implementation. According to the endline enabling assessment, progress was made in six of nine dimensions.14

In the policy, strategy, and direction dimension, WSP’s activities, in concert with those of other stakeholders in the food safety and the water, sanitation, and hygiene sectors helped to increase the government’s awareness of the role of improved hygiene. In 2010, the endline enabling environment assessment indicated that most stakeholders agreed that handwashing with soap was considered an integral and important part of Vietnam’s hygiene and sanitation programming, and a stand-alone policy on handwashing with soap was not required. The National

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Target Program for Water Supply and Sanitation, 2012–2015, cited the HWi as an example of a successful hygiene promotion program. The program placed particular focus on evidence-based communication programming, coupled with a comprehensive training curriculum for partner institutions. In addition, two Handwashing with Soap Integration Kits were developed for use by health workers and VWU members to give them tools to better emphasize handwashing with soap messages across their various functions or sectors.

Partnerships were established with public and private institutions, as well as several World Bank investment projects, to facilitate scale up of activities and integration of handwashing with soap into programs beyond the sanitation sector and outside of WSP’s direct support areas. However, the idea of a formal public–private partnership (PPP), which was originally pursued in other countries, did not materialize in Vietnam because the MoH did not see a need for a PPP model to promote handwashing with soap. Stakeholders agreed that, in the Vietnam context, the best way to promote handwashing with soap was to work with the MoH (which was responsible for hygiene promotion), mass organizations such as the VWU, and the Ministry of Education and Training.

The product and tools area included development of training curriculum and Handwashing with Soap Integration Kits for health workers and VWU members to promote handwashing with soap as stand-alone activities or as part of larger health and water and sanitation programs, respectively. The program also supported the initial design of a commercially produced handwashing station with WaterSHED, a USAID-supported nongovernmental organization, which resulted in leveraging a grant for further business development and the commercial introduction of the handwashing device in Vietnam. With regards to financing, handwashing with soap has been mentioned in both the National Target Program 2012–2015 and the draft National Rural Water Supply and Sanitation Communications Plan. However, it is unclear how much will be allocated to handwashing activities until the government issues cost norms for implementing these programs.

In the Monitoring and Evaluation area, WSP engaged with the MoH to include Handwashing with Soap indicators in the

Contestants washing hands before preparing food during cooking contest

National Target Program. Ultimately these indicators were not adopted, but the MoH and Unicef did incorporate two indicators in the nationally representative 2011 Multiple Cluster Indicator Survey: 1) observations of whether households had a specific place for washing hands, and 2) whether water and soap (or other local cleansing materials) were present at a specific place for handwashing.

Key learning: A key HWi objective was to sustain handwashing activities after the life of the project. The most sustainable channel in Vietnam is through interpersonal communication via the government’s system of health workers, VWU members, and teachers. For Vietnam, this meant that handwashing had to be integrated into other programs in water, sanitation, and health, rather than implemented as a standalone program. The Handwashing with Soap Integration Kits serve as institutional resources to guide the content and delivery of handwashing with soap within existing and new programs that have ongoing funding and support.

Objective 3: Monitor and evaluate behavioral, health, and welfare impacts

The communication campaign’s aims were three-fold: to dispel existing caretaker beliefs and convey the message that even clean-looking and clean-smelling hands can have germs;
to increase knowledge of the four critical times to wash hands; and to generate a habit of washing hands with soap. Results from the RCT impact evaluation study show that the campaign was successful in reaching its target audience and led to greater knowledge of good handwashing practice. Caretakers in treatment communities reported greater exposure to handwashing messages and were nearly two-thirds more likely to have talked with someone from the VWU about handwashing in the past month than in the control communities (56.4% in treatment vs. 34.7% in control). Caretakers also reported washing their hands with soap more often. However, when observed in the home, rates of handwashing at the key times emphasized by the campaign were low. The improvements in handwashing behavior reported by caretakers were not sufficient to result in impacts on child health or reductions in time spent caring for sick children.\textsuperscript{22}

**Key learning:** Given the lack of substantial changes in handwashing behavior resulting from the project, no impact on child health or reductions in time spent caring for sick children were found. These results suggest that even under seemingly optimal conditions—where knowledge about handwashing with soap and access to soap and water are not key barriers—changing behavior at scale is difficult. Some hypotheses for why health impacts were not seen include:

a. The causal chain between handwashing with soap and reductions in diarrhea is incorrect; however, this is unlikely because efficacy studies have demonstrated the linkages.

b. The intensity (duration and frequency) and quality of messaging were not sufficient to achieve significant changes in behavior and therefore in health. This is a possibility, particularly since the project took place on a large scale, across several provinces spread throughout Vietnam and was not implemented in a controlled pilot setting.

c. The population exposed to the intervention was found to have low rates of child diarrhea and high access to improved water and sanitation infrastructure. It is possible that if the study had been done on a more vulnerable population, the reported changes in handwashing behavior would have resulted in health impacts.

d. The behavioral determinants addressed in the communication campaign were chosen based on findings from formative research conducted in 2006; however, it is plausible that the wrong determinants were selected for inclusion in the communication campaign.

Although the impact evaluation findings show that the program was successful in reaching the target audience, the resulting behavior change was not of the magnitude anticipated. Changing behavior at scale remains a critical challenge.

**Objective 4: Share evidence-based learning**

The Global Scaling Up Handwashing project was a global initiative, so lessons learned at the country level were captured and disseminated at both country and global levels. In Vietnam, annual learning events were organized for provincial and district representatives of VWU before further scale up, with the goal of improving future activities.\textsuperscript{23} In addition, several workshops to share lessons learned in developing and implementing evidence-based communication programs were organized for all partners working in Vietnam’s water and sanitation sector. One workshop brought in experiences from other countries, including a water and sanitation social marketing program conducted by Population Services International in Madagascar.

WSP also organized exchange visits for delegations from India and Laos to observe Vietnam’s handwashing activities with the objective of improving or replicating these activities in their own countries. In addition, WSP supported a visit to Indonesia by a Vietnamese delegation of key stakeholders so they could learn about the Indonesian government’s strategy for sanitation and hygiene, which includes handwashing with soap as one of five key pillars. The project also disseminated its experiences through several WSP publications and in peer-reviewed journals (see Box 1).

**Key learning:** One of the challenges to consistent handwashing with soap is the availability of soap and water in the right place and at the right time. In resource-poor settings, do-it-yourself handwashing stations that households can assemble with locally available materials have been widely recommended. Consumer insights from Vietnam revealed that rural households do not want a simple, homemade device assembled with reusable materials; they’re willing to pay for a new product specifically designed for handwashing if the device is attractive, durable, and can be installed in a location visible to their neighbors. These insights, along with the human-centered design process used in developing the handwashing station in Vietnam, have challenged previous assumptions of what low-income consumers aspire to and are willing to pay for in a handwashing station.


\textsuperscript{23} Vietnam Women’s Union quarterly reports.
**BOX 1: HWI PUBLICATIONS**


**PROGRESS SINCE 2011**

After completing the intensive intervention phase in 2010, the HWI continued to scale up and replicate its model through partnerships with government and nongovernment institutions working in education, health, and water and sanitation programs. These partnerships enabled the program to scale up to another 15 provinces, training 980 additional frontline workers and supporting 258 more primary schools. By the end of 2011, the HWI had reached a total of 790 communes and 758 schools in 25 provinces, and 15,380 frontline workers had been trained in areas supported directly by WSP and beyond through the various partnerships.

One outcome of the partnership efforts has been the provincial-wide scale up of handwashing with soap within schools in Nghe An province, one of the largest and most populated provinces in Vietnam. Vinh City, the capital of Nghe An province, is one of three cities included within the World Bank’s Medium Cities Development project. The partnership between WSP and the Department of Education and Training (DoET) initially covered only Vinh City and one other semi-urban district. WSP’s support included two training courses and materials for 22 urban schools. After attending the training and seeing the potential for replication, the DoET sent instructions to all districts within Nghe An province asking them to carry out training courses on handwashing with soap for all teachers in the province. Participants in the HWI training served as master trainers, and the DoET provided financial support.

As mentioned earlier, in late 2011 WSP supported the development of two sets of Handwashing with Soap Integration Kits to assist MoH staff and VWU members in integrating handwashing with soap messages into their ongoing sanitation, nutrition, food safety, and emerging infectious diseases programs. Both the VWU and MoH have issued requests for all provinces to begin integration in 2012.

Beyond Vietnam, the program has influenced the design of several other sanitation and hygiene programs, including one in Bhutan where WSP provided training to the SNV Netherlands Development Organization and their partners in developing evidence-based behavior change communication programs using the FOAM and SaniFOAM behavior change frameworks. Since the 2011 collaboration, SNV Bhutan has built national and district counterparts’ capacity to develop and implement behavior change campaigns in rural and urban Bhutan using the two FOAM frameworks.

**CONCLUSIONS**

**Practical tools enable replication and expansion.** The program’s evidence-based approach extended beyond mass media products. During the development of the IPC,

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Handwashing with Soap Integration Kits, and their corresponding training manuals, several rounds of pretesting were carried out for each product to ensure that the messages were clear and the tools were user friendly. Once the tools and training methodology were presented to potential partners, they were eager to partner with the HWI because the approach was innovative, concrete, and practical.

Champions can facilitate greater program reach. In Vietnam’s society, highly motivated and supportive leaders—whether from the national or provincial government—can significantly multiply the program’s achievements. The DoET-facilitated provincial scale up in Nghe An province is an example of how one or two critical decision makers can be the key for scaling up an entire province.

Look beyond individual motivations to change behavior. As discussed above, behavior change at scale has been a challenge. In 2006, existing data in Vietnam revealed low rates of handwashing with soap; however, the formative research study conducted for the HWI did not explore how social norms could affect individual hygiene behavior. At that time, experience from other countries indicated that researching and targeting disgust or affiliation were key drivers in changing handwashing behavior. Since then, practical experience and learning from programs such as Community Led Total Sanitation show that social norms have an immense role in catalyzing individual and community collective action.28 Within the context of Vietnam, where government, families, and community are very influential in socialization and behavior adoption, the role of social norms merits further exploration and focus for future hygiene promotion programs.

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About the project
Global Scaling Up Handwashing is a project by the Water and Sanitation Program (WSP) focused on applying innovative behavior change approaches to improve handwashing with soap behavior among women of reproductive age (ages 15–49) and primary school-age children (ages 5–9). It was implemented by local and national governments with technical support from WSP in four countries: Peru, Senegal, Tanzania, and Vietnam. For more information, please visit www.wsp.org/calininguphandwashing.

Contact us
For more information, please visit www.wsp.org or email the authors at wsp@worldbank.org.

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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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