

# Water, Sanitation, and Hygiene (WASH) Business Centers promote better household and community WASH services

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## Abstract

Because of challenges with water point functionality and low rates of basic household sanitation (7%) and hygiene (8%), World Vision Ethiopia introduced WASH Business Centers (WBCs), a one stop center for production, distribution, and sale of essential products for constructing WASH facilities (e.g., latrine slabs) and performing key behaviors (e.g., liquid soap for handwashing).

Monitoring data show that over an average operating period of three years, 16 WBCs reached 88,000 households, with total profit of \$40,000. World Vision conducted a survey of 1,586 households within 5 kilometers of a WBC to understand household WASH conditions, awareness of and experiences with WBCs, and to assess willingness and ability to pay for WASH products and services. The study also considered what combination of coverage, marketing, product line up, and financing would need to be

strengthened to reach universal WASH service coverage.

Few respondents had an improved toilet (11%) or a place for handwashing (12%). Only one-third of respondents had heard of the WBCs, but there were no differences in any outcomes by distance to the nearest WBC within the sample. For those who had heard of WBCs, half had made at least one purchase there, and they were more than twice as likely (22% vs 9%) to have an improved toilet. Vouchers for WASH services offered with a 10% discount redeemed by 2.7% (improved slab) and 3.2% (handwashing station) of respondents. Discounts of 30%-50% led to higher rates of redemption (about 5% for improved slabs and 7% for handwashing stations) indicated that rates of sanitation and hygiene coverage could rapidly increase from very low baseline levels if financing and marketing gaps were addressed.

## Background

Achieving sustainably high levels of WASH service coverage has been a major challenge for World Vision and the WASH sector. Perhaps one-third to one-half of rural water points are nonfunctional.<sup>i</sup> Widespread adoption of Community-led Total Sanitation (CLTS) due to ease of implementation led to generally disappointing results of 5-10 percentage point (pp) increases in sanitation coverage when rigorously evaluated. The 2017 World Vision 14-country Evaluation by the Water Institute at the University of North Carolina<sup>ii</sup> found that in the places where we work, only about 32% of all

households had access to basic sanitation and less than 10% had access to basic handwashing.

World Vision Ethiopia has been implementing WASH interventions across the country and reaching children and families with clean water supply, improved sanitation services, and improved hygiene practices since 1975. However, per the Ethiopian Joint Monitoring Program report, the sustainability of water systems, sanitation facilities, and hygiene practices remain a challenge for the nation. The nonfunctionality rate of water systems is high nationally at 11.2%.<sup>iii</sup> Only 14% of the population has access to

improved sanitation, with 7% basic and 7% limited service levels, while 8% of the population has basic household hygiene services.<sup>iv</sup>

World Vision Ethiopia introduced the WBC initiative at the end of 2017 to address these challenges. The WBC is a one stop center for production and sales of WASH products and services to communities, schools, and healthcare facilities at an affordable price. Products include latrine slabs, handwashing facilities, soap, and spare parts for water systems, among other products. Services such as the repair and change of broken taps, laying pipes for water line extensions, and shower services also are provided by the centers. The WBC intervention set out to make acceptable WASH products and services available and affordable to people in World Vision program areas. Our evaluation sought to answer to what degree distance, awareness, marketing, or financing were the biggest gaps to increased WASH product and service uptake.

## Methodology

World Vision conducted a survey of 1,584 households selected from all households within 5 kilometers of six WBCs to understand their impact on local communities. We had enumerators ask about household demographics and WASH characteristics along with awareness of WBCs, purchase of products, and opinions about the WBCs. Enumerators randomly gave households vouchers for 10%, 30%, or 50% discounts on improved slabs and handwashing facilities modelled after water pots commonly used in the context to understand consumer demand. The study also included Sanitation-Related Quality of Life (SanQoL) questions to estimate the impact of improved sanitation on quality of life and to inform the most relevant marketing messages.<sup>v</sup>

## Key Findings

### Coverage and Awareness

Overall coverage rates of sanitation and hygiene were low, but higher among those who had heard of the WBCs. While 81% of respondents had a toilet, only 11% had an improved toilet. Though only 12% had established a place for

handwashing, almost all of those had soap and water present at the place of handwashing.

About one-third of respondents had heard of WBCs, and of those who had heard of them, half had made a purchase at one. There was no difference in awareness or purchase behavior by distance from the WBC, indicating that assuming at least a 5 kilometer catchment is justified in planning for their implementation.

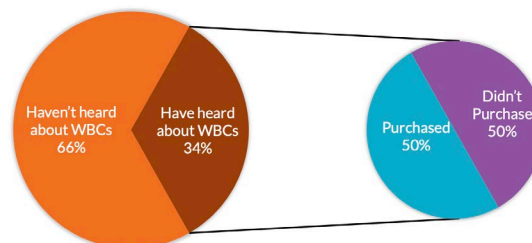


Figure 1: Awareness and purchase behavior of people within 5 kilometers of WBCs

Those who had heard of WBCs were more likely to have a toilet (94% versus 75%,  $p < 0.001$ ) and to have an improved toilet (22% vs. 9%,  $p < 0.001$ ).

## Marketing and Price

Redemption rates for vouchers indicate that there is latent demand, and that financing can improve uptake, though longer-term tracking is needed to understand the potential coverage implications. Vouchers for 10%, 30%, and 50% discounts on the price of a locally designed handwashing station priced at US\$2.50 led to redemption rates of 3.2%, 5.9%, and 7.4% respectively (mean household income of respondents: US\$40 per month).

Likewise, for sanitation, 10%, 30%, and 50% vouchers for improved slabs that cost USD\$12.50 led to redemption rates of 2.7%, 4.7%, and 5.0%

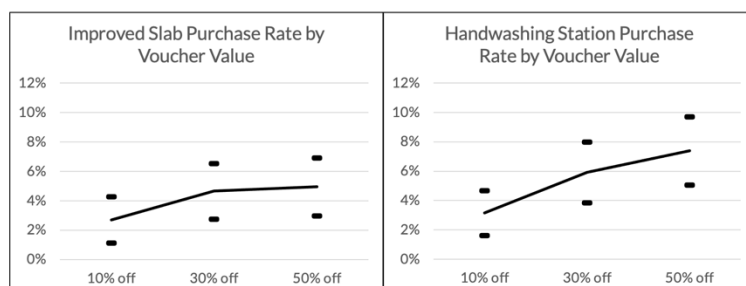


Figure 2: Voucher redemption rates and 95% confidence intervals for improved slabs and handwashing stations

respectively. The vouchers for 10% were designed to assess the latent demand and impact of increasing awareness of product availability, while larger voucher amounts helped to assess the added benefit of reducing product costs or increasing the availability of financing.

Despite low rates of uptake overall, the 10% vouchers represent coverage increases of about 25% due to what was essentially a household visit where the respondent was made aware of the product. Higher voucher amounts corresponded to 40%-50% increases, indicating the potential impact of financing. While the absolute increases did not approach the coverage levels desired by World Vision's universal service coverage targets, it is important to note that voucher redemptions in one month are not equivalent to the level of uptake that would result from promoting and providing access over the longer term.

## Quality of Life

Sanitation-Related Quality of Life (SanQoL) scores are designed to capture a user's perspective on the broad benefits of sanitation, including both health and non-health aspects. On a scale from 0 (lowest) to 1 (highest), the mean SanQoL score for improved toilets was 0.88 and for unimproved toilets was 0.74, compared to 0.33 for open defecation. This demonstrates that there is a meaningful increase in quality of life from having an improved toilet (0.88), closing about half the gap between unimproved sanitation (0.74) and the best level of sanitation theoretically possible (1.0). This also shows that despite the challenge of establishing infectious

disease impacts of improved sanitation, quality of life gains are clear, reducing the gap between unimproved sanitation and the theoretical maximum quality of life by half. Among the five attributes that make up the SanQoL score, health was rated as the most important, followed by shame, safety, and disgust, with privacy as the least important.

## Recommendations

**WASH Business Centers should carefully assess context, willingness to pay, and financing gaps**

It is clear from the operational data collected that WBCs can generate large numbers of sales. However, the gap between market prices and willingness to pay by the rural poor means careful attention should be paid to ensure a range of products at different price points and financing options. This includes loans and subsidies (either to individuals or enterprises) that need to be considered to make substantial gains toward universal WASH service coverage.

**Basic monitoring and enhanced performance tracking are essential to the growth of WASH Business Centers**

WBCs should be established because they are self-sufficient and able to adapt to the market. However, because they also are intended to serve the poorest of the poor, they should still have support and oversight once established. Basic sales monitoring may be useful for an organization's reporting purposes, but tracking sales by product type along with revenue, expenses, and profits at a more detailed level will allow WBCs to jointly maximize profitability and desired coverage increases. Tools adapted to WBCs based on USAID's Sanitation Enterprise Viability and Sustainability Toolkits<sup>vi</sup> are available as appendices to the WBC operational manual.

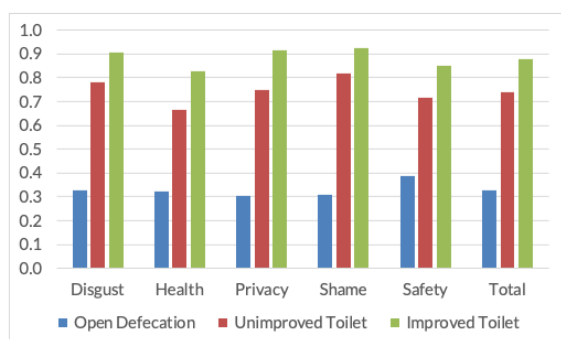


Figure 3: Sanitation-Related Quality of Life scores by toilet type

## Conclusion

WASH Business Centers have demonstrated impact through sales achieved and a combination of marketing and financing interventions may substantially increase their impact over time. Further longitudinal monitoring of WBCs is

essential to understand the upper limits of coverage levels achieved over time as households have longer to choose to make investments and financing activities enable those with the least purchasing power to achieve equitable gains.

## References

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- <sup>v</sup> Ross, I., Greco, G., Opondo, C., Adriano, Z., Nala, R., Brown, J., . . . Cumming, O. (2021). Measuring and valuing broader impacts in public health: Development of a sanitation-related quality of life instrument in Maputo, Mozambique. *Health Economics*.
- <sup>vi</sup> See <https://www.globalwaters.org/pages/sanitation-enterprise-viability-and-sustainability-toolkits>

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