

Sanitation: A Strategic Approach

PATH’s current efforts to improve sanitation in low-resource settings

INTRODUCTION

More than 2.6 billion people—39 percent of the world’s population—do not have access to improved sanitation. As a consequence, they have increased exposure to diseases such as diarrhea, cholera, dysentery, typhoid, and hepatitis A. Exposure to fecal contamination puts people in contact with millions of harmful viruses and bacteria and thousands of parasites, which is why more than 4,000 children die every day from lack of access to safe water and basic sanitation facilities. Beyond these critical health risks, unsafe practices like open defecation have been linked to issues such as reduced school attendance—especially for female students—with dramatic effects on personal health and development.¹

Despite the ongoing efforts of many governmental and nongovernmental stakeholders, large gaps in access to sanitation remain, resulting in this continuing health burden concentrated in low-income communities. PATH strives to address both access and sustainability in sanitation in four

key areas: market approaches, technology and products, financing, and an overall sanitation framework with focus on the end-user.

MARKET ASSESSMENTS

PATH believes that sustainable sanitation solutions begin with a thorough understanding of the sanitation value chain, that is, the key entities involved in the delivery of sanitation products and the services at the household- or community-toilet level (Figure 1). Assessing gaps across the entire value chain serves as an effective and strategic planning tool that focuses research and development, enterprise innovation, and product design to drive initiatives forward with our partners and create stronger linkages among value chain actors in each country of focus.

In 2011, PATH conducted a market evaluation of sanitation in Kenya and found specific gaps in the country’s value chain, including lack of appropriate products, limits to capacity-building for local entrepreneurs, and the need for

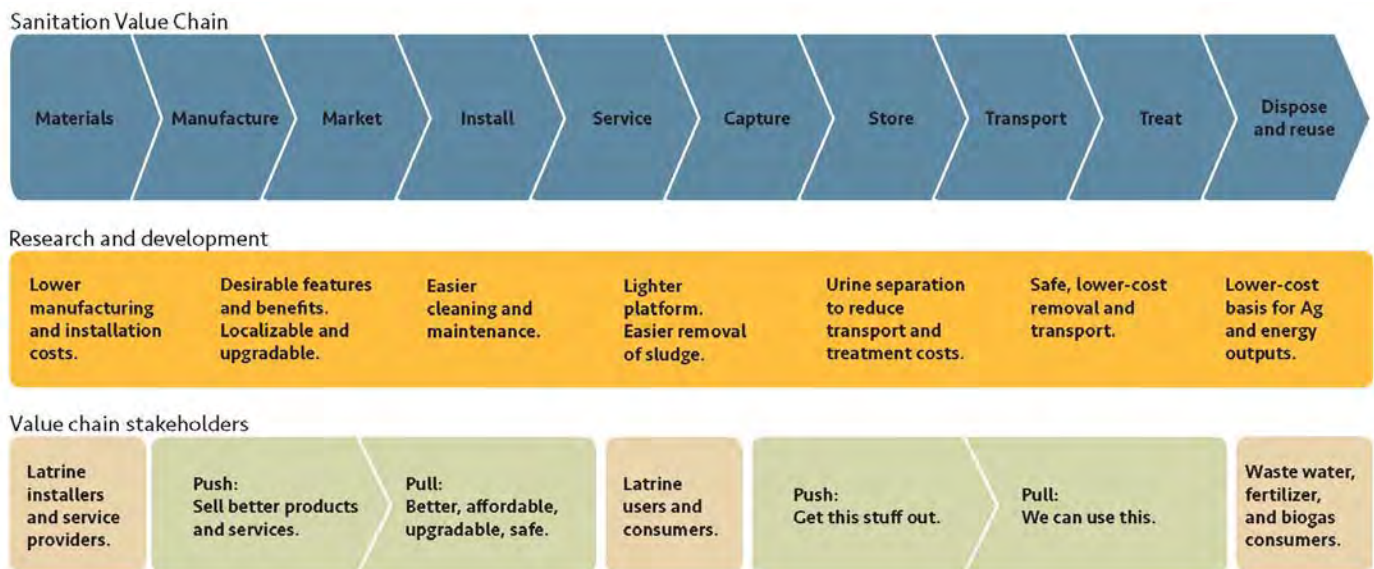


Figure 1. The sanitation value chain.

financing options for both service providers and consumers. PATH is able to use the results of this type of value chain analysis in Kenya and other locations to provide comprehensive suggestions for strengthening sanitation products, services, markets, and both consumer and enterprise financing.

TECHNOLOGY AND PRODUCTS

PATH's central goal is to ensure that sanitation technologies are available to vulnerable populations at the bottom of the pyramid.ⁱⁱ Although a number of sanitation technologies exist, few are properly adapted for this specific user and the new business models being developed to serve the market. Based on technology assessments and inventories in Cambodia and Kenya, PATH is adapting effective technologies into products—such as latrine platform interfaces—that are well suited for consumers and enterprising providers that need high quality, desirable, and cost-effective products and sustainable business models.

We continue to characterize user needs through in-depth interviews, focus group discussions, and direct observations intended to define product specifications and performance objectives that address behavioral, technical, and market factors related to the use of sanitation technologies.

FINANCING

Financing can be a reliable and sustainable option for providing low-income households with the resources to purchase their own sanitation products and services. In Cambodia PATH is implementing installment payment and loan programs that will increase access and improve affordability of these life-saving solutions. Financing plans for product and service providers are also key elements of sustainable change. PATH is working to enable suppliers with loans to improve their ability to expand delivery of sanitation products and services to low-income households. These loans provide working capital and allow providers to build inventory and purchase capital equipment, each key elements to running a successful business.



Photo: PATH

SANITATION FRAMEWORK: BEYOND TECHNOLOGY

A user-centered focus requires looking beyond markets, technology, and financing as discrete elements of development. PATH built upon established theoryⁱⁱⁱ to create a framework of domains that represents the roles and spheres of influence at all levels of the decision-making process. We consider critical social, cultural, financial, legal, and power relationships to understand the complexities and interactions of these domains. In doing so, we know better how to ensure demand for and acceptance of improved sanitation solutions. This process identifies gaps that need to be filled to best serve the most vulnerable to ensure that all family members practice hygienic sanitation consistently and properly.

In India and South Africa, PATH is conducting case studies on the intersection of two topics that are often considered separately: 1) the components of sanitation systems and waste management and 2) local sanitation and menstrual hygiene beliefs, practices, and needs. These studies identify the role of women's needs in urban planning, highlighting the important considerations decision-makers in those domains must make to successfully engage with one another to achieve positive health impacts.

Taken together, we believe our contributions will address major limitations to making safer sanitation available for low-income populations in developing countries.

1. United Nations Children's Fund (UNICEF). Water and Sanitation page. UNICEF Website. Available at: <http://www.unicefusa.org/work/water/>. Accessed on February 29, 2012.

2. Base or bottom of the pyramid refers to the 4 billion people who make up the lower two-thirds of the economic pyramid.

3. International Water Association. *Sanitation 21: Simple Approaches to Complex Sanitation. A Draft Framework for Analysis*. London: IWA Task Force; 2005.



PATH is an international nonprofit organization that transforms global health through innovation. We take an entrepreneurial approach to developing and delivering high-impact, low-cost solutions, from lifesaving vaccines and devices to collaborative programs with communities. Through our work in more than 70 countries, PATH and our partners empower people to achieve their full potential.

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