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Water, sanitation, and hygiene work and Safe Water Project overview

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Water, sanitation, and hygiene (WASH) needs

Global and human health

- 884 million to 2.6 billion people without access to safe water or sanitation, respectively.¹
- Children under age 5 most impacted; over 4,000 die per day.²

India disease burden

- Nearly a half million deaths per year.³
- Over 150,000 children under age 6 die.³
- 18% of all deaths of children ages 5 to 14.⁴
- Incalculable human and economic developmental costs.

Not a traditional public health issue

• Touches all lives every day.

New approaches—beyond infrastructure, wells, and latrines

- Community-led approaches.
- Market based—new low-income consumer market.

Sources:

^{1.} Access to safe drinking water improving; sanitation needs greater efforts [news release]. Geneva: World Health Organization; March 15, 2010

^{2.} Boschi-Pinto C, Velebit L, Shibuya K. Estimating child mortality due to diarrhoea in developing countries. Bulletin of the World Health Organization. 2008;86(9):657-736.

^{3.} National Commission on Macroeconomics and Health. *Background Papers: Burden of Disease in India*. New Delhi, India: Ministry of Health & Family Welfare; 2005. Available at: http://www.who.int/macrohealth/action/NCMH_Burden%200f%20disease (29%20Sep%202005).pdf

^{4.} Morris SK, Bassani DG, Awasthi S, Kumar R, Shet A, et al. Diarrhea, Pneumonia, and Infectious Disease Mortality in Children Aged 5 to 14 Years in India. PLoS ONE. 2011;6(5):e20119.

Overview of WASH-related work

- Prevent young children from dying or failing to thrive due to readily preventable diarrheal disease-related illnesses.
- We focus on the intersection of vulnerable people, technology, and public-private partnerships to catalyze appropriate solutions that are sustainable and scalable.
- Initial focus areas: market-basked approaches and user-centered product development.

Overview of PATH's WASHdd* work

*Water, air, sanitation, and hygiene to defeat diarrheal disease

Zinc & ORS

Fermented-starch ORS ORS/ORT corners National dd control policies

Water Treatment & Testing Test strips Aquatest and water testing Safe Water Project (SWP) Smart electrochlorination

SE200 & microfinance Health systems provision Sanitation & Hygiene Sanitation platform Sanitation supply chain Market assessments Menstrual management & sanitation systems

Indoor Air Quality TRAction Cookstoves



Household solutions for families

To what extent can **market-based approaches** help accelerate widespread adoption and sustained use of household water treatment and safe storage (HWTS) products by **low-income populations** over time?



The public-private spectrum

Where is the sweet spot for achieving *impact, scale,* and *sustainability*?



User access based on need

Weaknesses

Less innovation, responsiveness, efficiency

Strengths

Innovation, responsiveness, efficiency, sustainability

Weaknesses

User access based on demand and ability to pay



Addressing the gaps in HWTS provision



Adapted from Michael Porter's Value Chain Model and Value Chain Group's Value Reference Model. In Competitive Advantage: Creating and Sustaining Superior Performance. New York, NY: The Free Press; 1985. Page 9

Mapping channel opportunity* by region

Promising Moderate

Low priority

Channel	India	Vietnam	Kenya	Cambodia
Microfinance Institutions (MFIs)	~20M and growing, base-of-pyramid (BOP) focus	Fragmented and small	Limited to income- generation loans	31% population has MFI, many NGO
Self-Help Groups (SHG)	35M, BOP focus, limited commercial ability	NA	Strong partnerships between NGO and SHG	Limited
Nongovernmental Organizations (NGOs)	Fragmented, limited commercial ability	Fragmented, limited commercial ability	Aggregate target consumers	Strong water expertise
Retail	Some organized semi- rural, fragmented rural	Wide reach but fragmented	Wide reach but fragmented	Wide reach but fragmented
Direct Sales	Strategy for market leaders	Rural sales ladies successful pilots	Basket-of-goods (BOG) model uses local vendors	Good pilot success
Pharmacies	Wide reach but fragmented	Wide reach and good distribution	Wide reach but fragmented	Wide reach but fragmented
Health Clinics Public-Private Partnership (PPP)	Fragmented, rural service is less effective than urban	Good reach (government and private)	Possible to distribute durable products	Fragmented, public clinics not option

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* Note: Some pilots utilize multiple channels simultaneously.



What do we mean by "low income"?





HWTS: Old/new consumer product



Photo credits: JMC Canney Science.com; ESP Water Products, Outback™ water purification system; and Aquaovo

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HWTS products: Proven health impact

- 35% to 39% diarrheal disease reduction.
- Ensures safe storage.
- Both durables and fast-moving consumer goods (FMCGs).
- Cost: US\$7 to \$100 per year.









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Rates of scale in new product categories



Source: Golder PN, Tellis GJ. Will it ever fly? Modeling the takeoff of really new consumer durables. *Marketing Science* (1986–1998). 1997;16(3):256–270.



Cell phone: A product category at global scale



Photo credit: www.3giphoneinfo.com/mobile-phone-plan-comparison



Learning from the overnight success of the cell phone



Photo credits: Time Photographic History of Mobile Phones www.time.com/time/photogallery/0,29307,1636836_1389493,00.html











Innovative products PLUS infrastructure, channels, maturity, competition, choice, and ubiquity.



Developing-country access achieved



Cell phone success required:

- Infrastructure.
- Regulated business and technical environment.
- Distribution channels.
- Economies of scale.
- Platform technologies
 (e.g., GSM, displays, etc.)
- Competition and choice.



Photo credit: www.3giphoneinfo.com/mobile-phone-plan-comparison



Thank you to all our SWP partners!

