



# The effect of OBA subsidies combined with sanitation marketing (SanMark) on latrine uptake among rural populations in Cambodia

Hanh Nguyen | 12 July 2016

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EAST MEETS WEST / THRIVE NETWORKS  
WORLD BANK WATER AND SANITATION PROGRAM



# What is the proper role of subsidy in the delivery of improved sanitation to the poor?

Smartly designed subsidy programs demonstrably increase sanitation uptake among the poor in both experimental and scaled field programs

- Experiment: In Bangladesh, subsidies to the majority of the landless poor increased latrine ownership among subsidized households (+22.0 pp) and their unsubsidized neighbors (+8.5 pp). Guiteras *et al*, 2015. *Science* 348(6237): 903–906
- Implemented program: In Vietnam and Cambodia, Thrive / EMW's output-based aid (OBA) subsidy program delivered as much as 5,000 – 6,000 latrines/month to the poor, with impressive leverage ratios on the donor dollar

# Bringing evidence to a debate on hypothesized market-distorting effects of sanitation subsidies

- Do subsidies pose risks to demand for latrines in geographically close markets and among the better-off population segments for whom subsidies are not available?
- In areas where a sanitation marketing (SanMark) approach is employed to foster local supply chains and demand for sanitation goods and services, does the introduction of time-limited poor-targeted consumer rebates dampen sales of latrines to other income groups?

# This is a quasi-experimental, matched case-control research project in rural Cambodia

## Why Cambodia?

- As of 2015, 60% of rural Cambodians practiced open defecation (OD)<sup>1</sup>
- OD has been linked with child growth faltering in Cambodia<sup>2</sup> and elsewhere
- Multiple SanMark programs in place (iDE, WaterSHED)

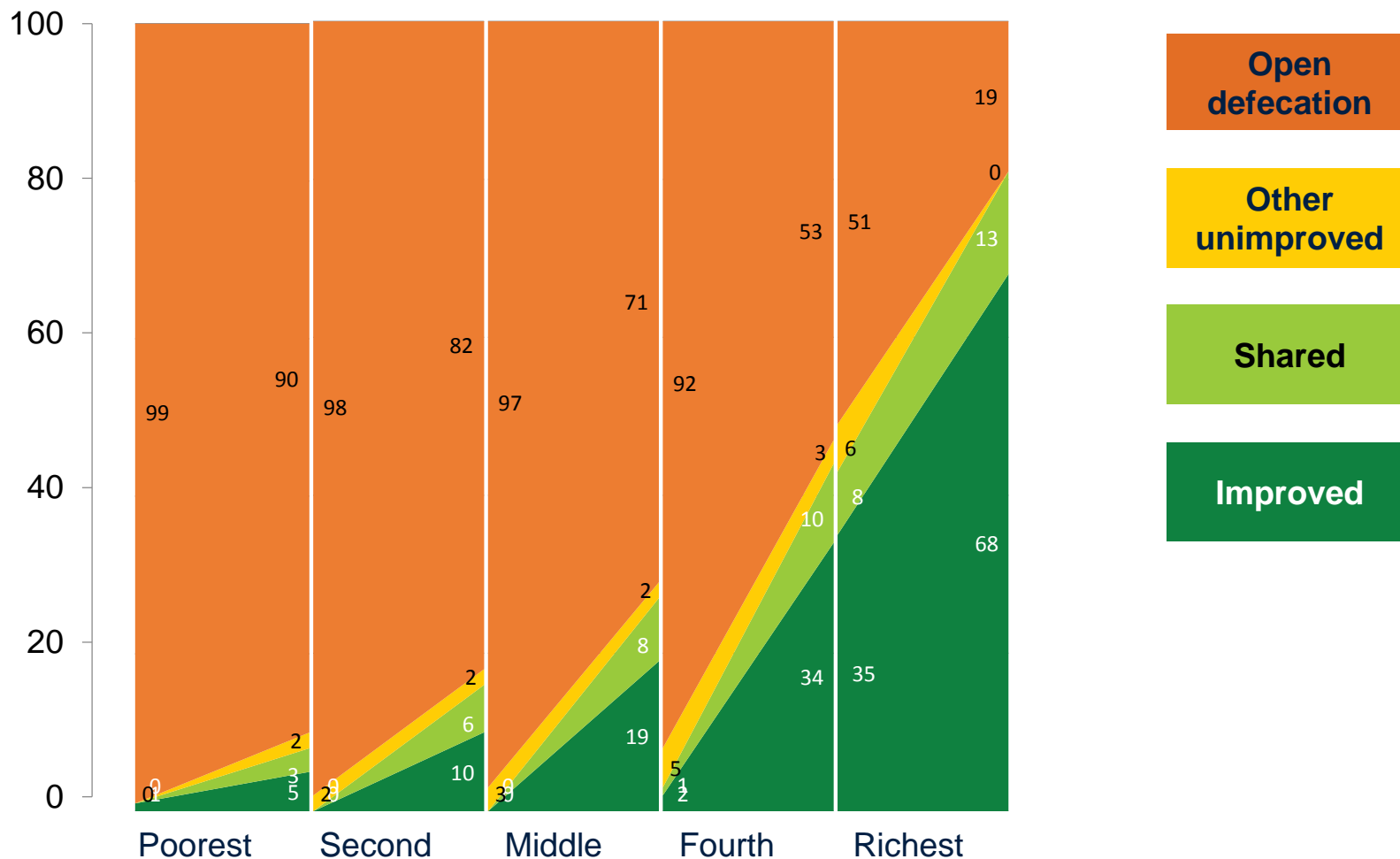
1. UNICEF-WHO JMP. 2015. **Progress on Sanitation and Drinking Water – 2015 update and MDG assessment.**

2. Vyas et al. 2013. Scaling up rural sanitation: investing in the next generation –growing tall and smart with toilets. World Bank: UNDP-Water and Sanitation Program.

### **Research Objective – understand interactions btw OBA subsidy and SanMark**

Examine differences in latrine uptake across different income levels in villages exposed to an OBA subsidy (rebate or discount), SanMark alone, or both combined

# Why targeted OBA subsidy to the poor in Cambodia?



Trends in sanitation coverage (%) by rural wealth quintile from 1995 to 2012 (Source: WHO/UNICEF JMP, 2015)

# Background on the interventions

## **SANITATION MARKETING (SANMARK)**

Nurturing of existing sanitation product and service supply chains

- Marketing support - the “4P mix”: product, price, place, and promotion
- Village-level sales agents are linked with local sanitation business owners on a commission basis
- Support on product design (affordable, aspirational, upgradeable – like the EZ latrine offset pit design from iDE)

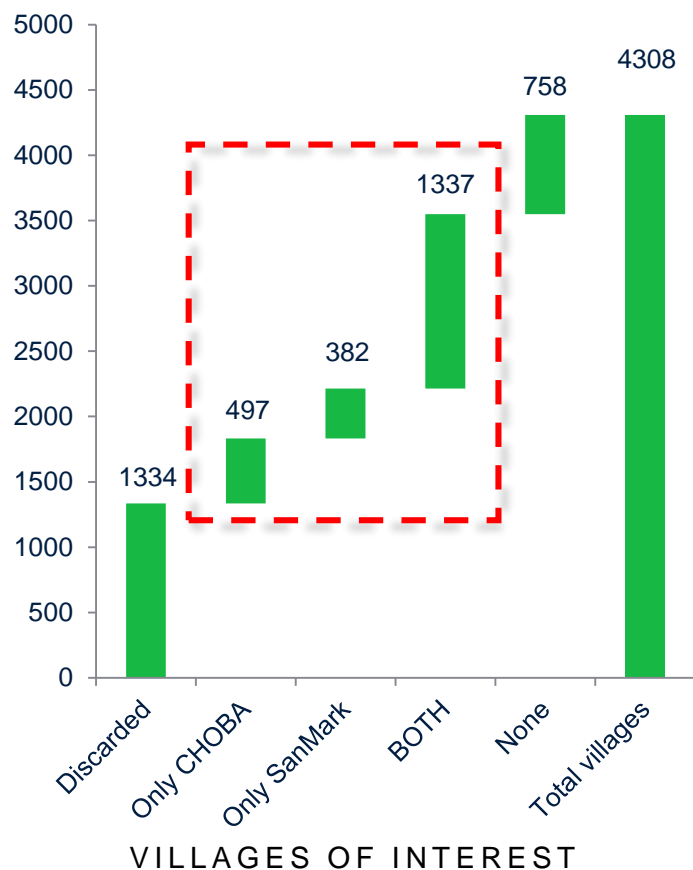
## **TARGETED OBA SUBSIDY (CHOBA)**

Multi-level results-based incentives targeting poor HHs

- CLTS “light” for demand creation
- Local mobilizers earn performance-based payments after each verified installation by a low-income household
- Low-income households benefit from a small (\$18) subsidy (either an upfront discount or a post-installation rebate)

# Sampling and matching

In 6 provinces a total of 4308 villages exist, of which 2216 were suitable for sampling (villages with top-down, broad subsidy programs were discarded)



In order to employ randomization, groups must be similar across key variables. They weren't, so we had to minimize bias via propensity-score matching (on 40 variables).

ORIGINAL 2216 VILLAGES, AT BASELINE

Indicator	OBA subsidy	SanMark	Both
latrine coverage	34%	46%	32%
Poverty rate	22%	24%	28%

120 VILLAGES, POST-MATCHING, AT BASELINE

Indicator	OBA subsidy	SanMark	Both
latrine coverage	26%	26%	26%
Poverty rate	24%	24%	24%



# Income strata

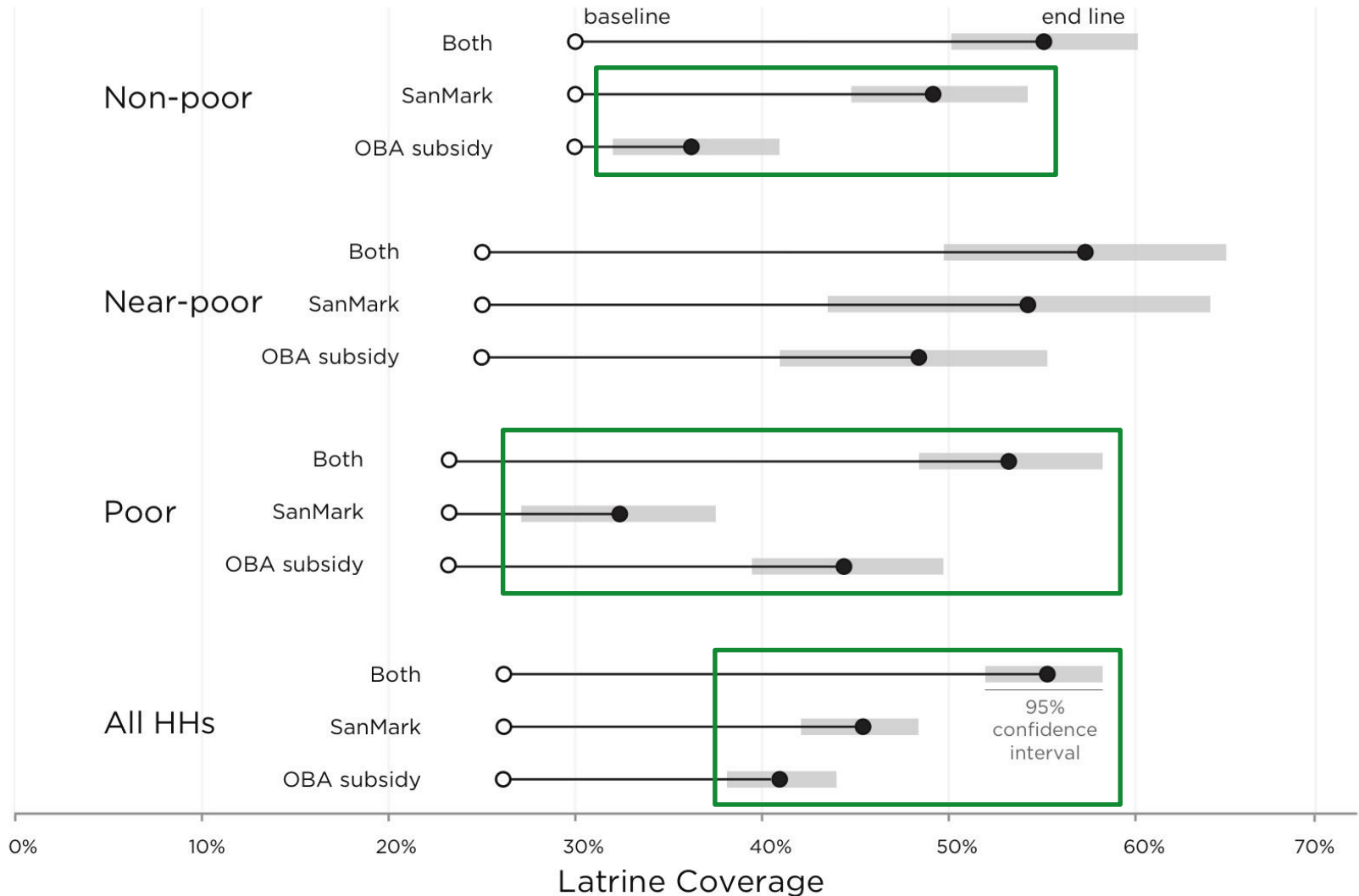
## POVERTY CATEGORIES

Income Group	Proportion of total
Poor (ID Poor 1 & 2)	26%
Near-poor (ID Poor 3)	19%
Non-poor	55%

In response to World Bank objective of “shared prosperity,” EMW supplemented the official government poverty classification (ID Poor 1 and 2) with a third category in order to capture the poorest 40% of the population.



# Main Results (n = 1,965 households)



# Positive and negative spillover?

- In the journal *Science*, Guiteras *et al* already observed positive spillover (the availability of subsidy to eligible households resulting in increased adoption among the non-eligible).
- Our results show positive spillover among the full sampled population - the pro-poor OBA subsidy added to Sanmark increased overall coverage
- We found no negative spillover – the pro-poor OBA subsidy did not reduce demand among the non-poor in Sanmark villages.



# Conclusions

- There is no evidence that consumer rebates offered in villages where sanitation marketing is implemented create disincentives among the non-poor for the adoption of latrines
- Villages that implemented OBA subsidies for the poor AND sanitation marketing interventions showed higher latrine coverage among all income groups when compared to villages that implemented only one program
- OBA subsidies and sanitation marketing must be understood to be complementary interventions, as they target different income strata, and their additive effects among the overall population is dramatic

# Acknowledgements

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Many thanks to WaterSHED and iDE for sharing data from their SanMark programs

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The logo for the Bill & Melinda Gates Foundation, featuring the text "BILL & MELINDA GATES foundation" in a serif font, with "GATES foundation" in a smaller, italicized font, all set against a dark red square background.

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