

Sustainable Total Sanitation – Nigeria: Final Research Report

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Preface

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The impact evaluation was conducted in collaboration with Indepth Precision Consult (IPC), based in Abuja, Nigeria. All respondents agreed to participate in the surveys, and were assured of the confidentiality of any identifying information gathered. The University College London Ethics Review Board and the National Health Research Ethics Committee of Nigeria have approved this study (Project ID Number 2168-009).

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Executive summary

This report presents the final results of the impact evaluation of two of WaterAid Nigeria's main interventions within the programme 'Sustainable Total Sanitation Nigeria – implementation, learning, research, and influence on practice and policy' (STS Nigeria project for short). The impact evaluation was conducted in the states of Ekiti and Enugu. The two interventions under evaluation are Community-Led Total Sanitation (CLTS) and Sanitation Marketing (SanMark). Both interventions aim at increasing the level of improved toilet ownership and its sustained usage, with the final goal of eliminating community-wide open defecation (OD).

This study aims to contribute to a small but growing literature on experimental evaluations of CLTS and SanMark interventions. Our study contributes to the literature by providing evidence from two large-scale roll-outs of said interventions on their impact, studying possible interactions between them, and measuring outcomes over the course of 3 years. The Nigerian context is particularly suited for this, not least due to the large sanitation gap prevailing in the country. The 2014 National Nutrition and Health Survey revealed that just 29% of households in Enugu and 46% of households in Ekiti had access to improved sanitation. This resulted in rates of OD of 51% and 44% respectively, according to the same survey.

The research study was designed as a cluster-randomised controlled trial (RCT) in which communities were assigned to receive either CLTS, a component of SanMark, both of the interventions or neither. This design allowed the research team to compare sanitation outcomes at the household level, and to understand whether the interventions had successfully increased toilet ownership and reduced the prevalence of OD. Individual businesses were also randomly allocated to the SanMark intervention to study the determinants of technology adoption at the business level.

This report presents the final findings of this impact evaluation, which included a series of outputs documenting baseline and intermediate findings. The evaluation spanned 4 years, from 2014 to 2018. CLTS was rolled out during the first half of 2015. SanMark was implemented more gradually, introducing different sub-components consecutively rather than all at the same time, from late 2016 to late 2017. The most recent data presented in this report were collected between October and December 2017.

Our analysis reveals no impacts of CLTS on toilet ownership and OD on average. However, when looking at the poorest half of the studied communities (defined based on an asset wealth index), we find that CLTS had strong and sustained impacts on toilet ownership and OD. In the last survey wave, conducted almost 3 years after the start of CLTS activities, households in poor treated clusters were 10 percentage points (pp) more likely to own a functioning toilet (of any kind), 7pp more likely to own an improved toilet, and 9–10pp less likely to report that the main respondent or any member of the household performs OD, than households in non-treated areas. No effects are detected among richer communities, which results in the lack of impacts over the whole sample. In terms of the margins of CLTS impact, we find that reductions in OD follow closely the improvements observed in toilet construction. In other words, reductions in OD are of a similar magnitude to increases in toilet ownership, and no reductions in OD are detected among households who already had toilets when the intervention began. This finding is likely to be primarily driven by high toilet usage rates, which seem to be specific to Nigeria.

We find no significant impacts of the SanMark intervention on ownership of toilets of any kind. Impacts on ownership of WET models in particular could not be estimated since only 13 households in our sample owned them. This is also true for areas exposed to both CLTS and SanMark activities, which, by the end of 2017, exhibit toilet ownership and OD rates statistically indistinguishable from those observed in similar areas that were not exposed to either intervention. Difficulties in successfully introducing the SanMark intervention and the relatively short implementation period of SanMark before the endline took place are likely to be important drivers of the lack of observed impact at the time of the endline survey.

The key findings are summarised in more detail in the table below.

This study has some important policy implications. First, it highlights the role of community characteristics in mediating the effectiveness of community-level sanitation interventions such as CLTS. Second, and related to the first point, researchers and policymakers in the sanitation sector should strive to better understand the key constraints preventing toilet ownership in each context before choosing suitable policy alternatives, which in turn should ideally be monitored and evaluated. CLTS had strong effects in communities with low average wealth, and no impact at all in the richer half of communities in our sample. In other words, half of the households in our sample experienced no detectable improvements in the outcomes measured in this study. This is likely related to the type of constraints and preferences of households in each type of community, and the community dynamics that CLTS aims to affect, which can vary by level of community wealth. Furthermore, our results suggest that while CLTS might have adjusted the expectations of households about the cost-benefit ratio of a good enough toilet in poor communities, the vast majority of non-toilet-owning households still report being financially constrained, and other policy alternatives may need to be considered to improve outcomes on this aspect. Better targeting of sanitation policies such as CLTS and SanMark should take into account the fact that there are not silver bullets and that these approaches may not be appropriate in all contexts.

Key findings and policy lessons

Reducing OD is intimately tied to increasing toilet ownership in Nigeria

- In Nigeria, almost 100% of the households who own toilets use them.
- Reductions in OD are only achieved through increased ownership of functioning toilets.
- At the time of study completion, by the end of 2017, 48% of the households in our sample did not own a functioning toilet (55% in poor communities).

CLTS improved sanitation and reduced OD in poor communities

- CLTS increased the ownership of functioning toilets by 10 percentage points (pp) and the ownership of improved toilets by 7pp in the poorest half of study communities.
- In these poor communities, CLTS decreased OD by 9–10pp.
- These impacts are sustained over time and detectable almost 3 years after CLTS triggering meetings took place.
- Households in these poor communities are poor by Nigerian standards. Half of them belong to the poorest 20% of the country.
- Evidence suggests that CLTS directed these households towards cheaper, more affordable toilet models, or that it corrected their perceptions of construction costs downwards.
- Community-level wealth is a stronger predictor of CLTS impacts than other community characteristics such as baseline toilet ownership, social capital and religious fragmentation, and household-level wealth.

CLTS had no impact in rich communities

- No CLTS impacts are observed among the richest half of the communities, which explains why there is no effect on average over the whole sample.
- Households in these richer communities are not all rich, but the communities exhibit a distribution of wealth moderately representative of the wider Nigerian context: that is they are evenly distributed over the five countrywide wealth quintiles. However, even though there are some poor households in these richer communities, the results suggest that CLTS would not lead to significant impacts in these communities. CLTS seems to unfold its potential to a measurable degree only in communities that have average wealth levels similar to the first quintile of the countrywide Nigerian wealth distribution.

Households with no toilets report financial constraints as the main barrier to toilet ownership

- The vast majority of households with no toilet report that the main reason they do not invest in a toilet is financial constraints (toilets being too expensive or not affordable).
- This is true in both poor and rich communities within this study.

SanMark WET products are increasingly being sold by businesses, but sales remain low, leading to low

- One out of six businesses approached to participate in SanMark is selling WET products on a monthly basis.

WET ownership among households

- Total sales were of the order of 400 units at the end of 2017. Less than 1% of households in our sample owned WET products by December 2017.
- Monthly sales of WET products peaked 4–5 months after the roll-out of market-level activities and door-to-door (D2D) sales agents.
- SanMark and control businesses perform similarly in terms of revenues, costs and innovation.
- WET products are recognised by potential users as more affordable and attractive.
- Financial constraints are the main limiting factor behind investment in WET products.

Door-to-door sales agents are important

- Sales agents appear to play an important role in facilitating WET sales, being involved in every second WET product sale.
- They are primarily involved in the sale of WET products to households who previously did not own private sanitation facilities of any kind and to households with unimproved toilets that want to upgrade their facilities.

Lessons for policy

- Targeting CLTS interventions based on community characteristics (in particular their relative wealth status) can increase policy impacts.
- CLTS increased toilet ownership among households in poor areas without actually removing financial constraints, but these constraints remain important for households with no toilet.
- SanMark is still a young intervention, and it is difficult to assess its effectiveness at addressing the sanitation gap at this stage. Policymakers should monitor and continue to evaluate the cost-effectiveness of this intervention further before considering a SanMark scale-up.
- Policymakers should consider alternative policies that address financial constraints in both poor and richer areas, such as targeted subsidies or credit lines. These policies could complement the efforts of both CLTS and SanMark by alleviating households' main constraints.
- In poorer areas, a combination of CLTS with targeted subsidies or credit might prove effective.