CLTS’ Contributions to Ending Open Defecation

Results of a WASHPaLS Desk Review
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What is WASHPaLS?

- **Water, Sanitation, & Hygiene Partnerships for Learning and Sustainability.** 5-year (2016–2021) research and technical assistance project
- **Goal:** Enhance global learning and adoption of the evidence-based programmatic foundations needed to achieve the SDGs and strengthen USAID’s WASH programming at the country level
The WASHPaLS Research Design Summary

**Goal**

Achieve universal sanitation and hygiene

**Key Questions**

- When and how are sanitation approaches effective and sustainable?
- What does it cost?
- How to repeat success at scale?

**Outputs**

- CLTS Desk Review → Field research on CLTS
- Market-based Sanitation (MBS) Desk Review → Field research on MBS
- Play Spaces Desk Review → Field research on Clean Play Spaces
POLL #1:
attendee connections to CLTS
CLTS has been widely embraced as a strategy to end open defecation in rural areas

- Can CLTS lead to ODF nations?
- What is known about CLTS performance?
- What are the most important knowledge gaps?
Desk Review Data Sources

WASHPALS Master Library via snowballing (to be made public)
~3,000 records, ~1,000 peer-reviewed

Articles containing “CLTS” in the search string
~450 records, ~90 peer-reviewed

Articles supporting this review
~130 records, ~40 peer-reviewed

Supplemented with
23 Key Informant Interviews
• 10 countries
• Govt officials (national and district)
• Multilateral donors
• Researchers
• NGO implementers
What is community-led total sanitation?

**Common denominators**
- Focuses on grassroots, collective action via a public “triggering” event
- Employs emotional drivers centered on disgust
- Breaks with previous government full-subsidy programs

**Variable aspects**
- Elements of triggering that are included or emphasized (including the use of shaming)
- Intensity and duration of follow-up visits
- “Open defecation-free” (ODF) definitions
- Verification and certification processes
- CLTS+ (supply side activities, subsidies or financing)
Can CLTS contribute to nationwide ODF achievement? Maybe.

Estimates from WHO/UNICEF JMP source data
Availability and reliability of CLTS performance data are uneven

“Ten out of 12 review countries struggled to provide current CLTS progress data.”

• **What parameters are tracked?**
  Village OD (as a %, or binary ODF vs OD)? Private toilet ownership? # of ODF villages?

• **When, and at what frequency?**
  Baseline (pre-triggering)? Follow-up?

• **By whom?**
  Facilitator him/herself? Local health officials? A third party verifier?

• **Where and how are data stored?**
  Centrally? Dispersed? And are they complete?
We may be able to infer OD from toilet coverage

Arnold, 2009, with permission
POLL #2: attendee opinions of CLTS performance
ODF “conversion rates” vary widely...

“Conversion rate”
(Villages declared ODF / villages triggered)

Slippage varies widely

ODF declaration as Baseline

Open Defecation (%)

0 25 50 75 100


Sierra Leone (Moyamba)
Sierra Leone (Port Loko)
Kenya (aggregated, refers to access to functioning latrine)
Kenya (Homa Bay)
Kenya (Kilifi)
Uganda (Tororo)
Ethiopia (Shebedino)
Ethiopia (Jemma)

Tyndale-Biscoe et al 2013
Singh & Balfour 2015

Tyndale-Biscoe et al 2013
Singh & Balfour 2015
Some promising signs of sustainability have been observed

Baseline is pre-triggering (Crocker et al. 2017)

![Graph showing Open Defecation (%) for Ghana and Ethiopia over years 2013, 2014, and 2015. The graph indicates a decrease in open defecation, with a particular focus on the Upper West region in Ghana and Oromia in Ethiopia. The data shows a comparison between regions with and without natural leader training ("NL").]
Does CLTS improve community health, or specifically, child health? Maybe.

There are not many high-quality studies
- Evaluating a WASH program employing CLTS (among other measures) in Tamil Nadu, Arnold et al. (2009) did not detect impacts on diarrhea or child growth faltering
- Pickering et al. (2015) did not detect diarrhea impacts but did detect improvements in linear growth and stunting prevalence in a well-executed, “heavy touch” CLTS program in Mali. Importantly, the new toilets built under that program were generally un-improved, but still durable and well-maintained

The community-oriented approach of CLTS and its focus on OD elimination have a logical basis in the evolving science.
- There is some evidence of herd protection against growth faltering resulting from community-wide increases in coverage (Harris et al 2017, Fuller et al 2016) in very small, rural, sparsely populated settings in Mali and Ecuador, respectively.
What is known about CLTS performance?

**Open defecation**
Not always measured, but controlled studies find small reductions (0-14 percentage points).

**Latrine coverage**
Controlled studies find lower increases (0-30 p.p.) than uncontrolled studies (15-88 p.p.).

**Latrine quality**
In many cases latrines built are unimproved and not durable.

**Sustainability**
Household slippage rates vary between 0 and 39 p.p. in controlled studies.

**Equity**
The evidence is mixed as to how well CLTS reaches the poorest.

**Health**
Almost no effect on child diarrhea, but some observed decreases in worm infection and stunting.
CLTS doesn’t work everywhere, for everyone, or all the time

**Enabling Environment**
- No prior history of subsidies
- Access to material supply chains and labor
- High commitment at the local, regional, and national levels

**Village**
- Small, remote, cohesive, strong leadership
- High baseline OD, adequate water supply
- Environment not facilitating OD, good soil conditions

**Program**
- Triggering activities
- Intensity of follow-up
- Implementing institution
- Natural leaders
- Traditional leaders

**Household**
- Wealth
- Female-headed
Who executes CLTS (and how) can matter significantly

Cameron & Shah (2017) compare CLTS programs led by “resource agencies” (RA) vs local government (LG) institutions.

- Engagement with local counterparts. RAs were more likely to consult with village health and office staff than LGs.
- Community participation. RAs were able to secure greater awareness and attendance of CLTS-related events than their government counterparts.
- Visit frequency. Villages exposed to RA-led CLTS were visited 47% more than those exposed to LG-led CLTS.

Crocker et al (2016 and 2017) examined two implementation modalities:

- Training of natural leaders significantly improved performance in one region of Ghana. But in Ethiopia, first indications that HEWs outperformed teachers were superceded by follow-up surveying a year later.
Social cohesion may be quite important

Actual measurement of social cohesion is rare in sanitation programming, but Cameron & Shah (2017) constructed a household survey-based “social capital” index measure consisting of questions on:

- participation and networks
- trust and cohesion, and
- crime and corruption.

They determined not only that villages with high initial social capital scores saw greater OD reductions from CLTS than others, but also that villages with low initial social capital scores were actually damaged by CLTS, insofar as CLTS resulted in OD changes measurably worse than in control villages that were not triggered.
CLTS costs vary, and appear comparable with such other interventions as SanMark and OBA subsidies.
Where do we go from here?
Next steps for WASHPaLS CLTS research: Targeted subsidies

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**MOTIVATION**
- The affordability constraint needs to be addressed to bring universal and durable gains

**HYPOTHESES**
- Carefully timed and targeted subsidies can help improve CLTS outcomes
- There is a “sweet spot” in terms of subsidy size and fraction of the population targeted

**RESEARCH DESIGN**
- Quasi-experimental or experimental, combined with qualitative as needed

**PROSPECTIVE COUNTRIES**
- Ghana, Malawi, Uganda, and Senegal
Next steps for WASHPaLS CLTS research: The “Performance Envelope”

**MOTIVATION**
- Robust evidence would help strategize the roll-out of CLTS programs to areas where it will work

**HYPOTHESIS**
- Enabling factors are not equally important
- The CLTS performance space can be defined with a small number of actionable indicators

**COMBINED RESEARCH APPROACH:**
- Statistical analysis of secondary data
- Qualitative data collection

**WE ARE LOOKING FOR DATA:**
- Three countries
- East Africa, West Africa, Asia
Let’s discuss