

Comprehending practitioners' assessments of community-led total sanitation

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Summary

Around 2.3 billion people in developing countries still lack access to improved sanitation facilities and almost one billion practice open defecation (OD). The Community-Led Total Sanitation (CLTS) has recently become a particularly popular approach used in more than 60 countries. CLTS is a behavior-change approach that aims to ignite community action and make OD socially unacceptable without providing any external financial or material support to individual households. CLTS is sometimes perceived as a revolutionary approach that has proven to be highly cost-effective in abolishing OD. However, it has been criticized for its use of unethical practices and questioned with respect to the sustainability of its outcomes and the limited health benefits it can generate. Based on semi-structured interviews with development workers experienced in the implementation of CLTS in 14 different countries, this paper seeks to examine practical views on the issues surrounding this approach. We found that despite acknowledging some of the controversies and the possibly limited sustainability of results, CLTS is generally considered an effective and satisfactory tool for improving sanitation conditions. Practitioners first of all accentuate the normative importance of the elimination of OD attained through CLTS without weighting on (the absence of) evidence on the longer term effects or impacts on health. However, a need for various modifications of CLTS according to local social and natural environments was strongly expressed, including changes that go against the core principles of CLTS like no subsidies and no technical assistance principles.

Key words: sustainable development goals, community based intervention, community health promotion, global health, health behaviour

INTRODUCTION

In 2015, an estimated 68 percent of the world population had access to improved sanitation facilities meaning approximately 2.3 billion people did not. Of these people, 892 million practised OD (WHO/UNICEF, 2017). A great deal of work thus remains to achieve the Sustainable Development Goal (SDG) of ensuring access to adequate sanitation for all by 2030 (UN, 2015). Sanitation targets in global strategic frameworks have

catalysed sanitation programs across the world. A recent meta-analysis nevertheless documented only modest impacts of sanitation interventions on latrine access and use (Garn *et al.*, 2016), though it was argued that a high dependence of sanitation on contextual conditions makes the aggregate inferences difficult (Novotný *et al.*, 2018).

The once predominant focus on the supply of sanitation infrastructure (esp. toilet construction) has been increasingly supplemented and sometimes replaced by

interventions concerned with creating demand and facilitating change in sanitation behavior (Chambers, 2009; Peal *et al.*, 2010). Community-led total sanitation (CLTS), addressed in this article, has recently become a prominent approach to change sanitation behaviour. Since its first implementation in Bangladesh in 1999–2000 (Chambers and Kar, 2008), the CLTS movement has spread around the world and has already been used in approximately 60 countries, some of which have integrated it as part of a national sanitation policy (IDS, 2017a).

The CLTS represents an attempt to replace earlier top-down interventions based on the provision of subsidized sanitation facilities and also a departure from approaches to change sanitation behaviour through one-way education about health risks. It uses a set of participatory facilitation tools to ignite community-wide behaviour change with the goal to eliminate OD in an entire community. The CLTS brings community dynamics into the center and targets both positive and negative social drivers such as the perception of social norms, social learning, social capital, trust and mutual collaboration, social sanctions and social surveillance based on recognition that sanitation (linked to health) is a common good (e.g. Mosler *et al.*, 2018). As shown by Sigler *et al.* (2015), the CLTS can't be linked to a single behaviour change theory but its various components combine inputs from multiple behaviour change models such as the Transtheoretical Model, Social Cognitive Theory and Health Belief Model that primarily describe individual-driven behaviour. Understanding to mechanisms operating behind the CLTS interventions is thus an uneasy task.

The CLTS quickly gained a reputation for being an inexpensive, simple and effective strategy for the elimination of open defecation (OD). However, recent research indicated that, similar to its potential to improve human health (Pickering *et al.*, 2015), the sustainability of outcomes achieved through CLTS is debatable, especially when used as a standalone approach (Crockett *et al.*, 2017). Moreover, CLTS has significantly been criticized due to the use of unethical practices such as shaming, stigmatizing and punishing community members (Bartram *et al.*, 2012; Engel and Susilo, 2014; Galvin, 2015) and yet another concern addressed a risk of its acontextual and mechanistic applications (Bardosh, 2015). It has also been argued that manipulating emotions can be destructive for a community from a social justice perspective (Morales and Harris, 2014) and that the primary focus on social pressure can adversely affect the potential for upward shifts through the sanitation ladder under certain conditions (Novotný *et al.*, 2017).

A recent systematic review proved that the empirical evidence on CLTS effectiveness is weak (Venkataramanan *et al.*, 2018). Scholarly literature about CLTS mainly consists of grey literature, critical commentaries by academic experts and what continues to be a limited number of rigorous empirical assessments. Less analytical literature has been published about how the implementation of CLTS is evaluated by the practitioners responsible for its implementation at a grassroots level. We managed to identify just two such studies; one focused specifically on the role of external technical support (Papafilippou *et al.*, 2011) and the other on the behavior-change techniques used in CLTS (Sigler *et al.*, 2015).

After a brief overview of the debates and evidence surrounding the use of CLTS, the main objective of the present article is to examine the assessments of CLTS by development practitioners. The analysis is based on qualitative evidence obtained through semi-structured interviews with 19 practitioners experienced in the implementation of CLTS across 14 different countries. The interviews were structured to address CLTS issues discussed in previous literature such as contextual modalities and reasons for implementation, complementary tools and strategies, perceived strengths and constraints, CLTS controversies and overall assessments of the approach. The survey was undertaken as a part of a wider research project to inform our subsequent work on a CLTS evidence synthesis about the practitioners' perspective.

THE CLTS APPROACH AND DEBATES SO FAR

The implementation of CLTS consist primarily of triggering, which should lead to the realization of the harmful impacts of OD in a community and to initiating collective action towards an open defecation free (ODF) environment. But with similar importance, pre- and post-triggering activities are core parts of CLTS. Pre-triggering involves the selection of a community, gaining understanding of the local context, establishing a relationship with local leaders and identifying possible risks and challenges. Post-triggering refers to the various activities focused on enabling and encouraging the construction of latrines, and a participatory monitoring of progress, including the verification and certification of the community ODF status, subsequent monitoring to sustain the status and possibly even boost communities' progression up the sanitation ladder (Chambers and Kar, 2008). CLTS has been constantly evolving (Chambers, 2009) and contextual modifications are encouraged (Chambers and Kar, 2008). Besides local adaptations, large-scale modifications of CLTS when

integrated into national sanitation policies can also be found, such as in the Indonesian national strategy Sanitasi Total Berbasis Masyarakat (STBM) or the Ethiopian Community-Led Total Sanitation and Hygiene (CLTSH) (IDS, 2017a; IDS, 2017b). Although it thus might be difficult to find CLTS implementation in a 'pure' form, its main salient assumptions and features can be summarized as follows:

- Community-level action: Sanitation is comprehended as a collective asset and the focus on the community level enables the power of social factors such as social conformity, social networks and collective action driven by mutual collaboration, solidarity and surveillance to be harnessed.
- Focus on perceived social norms: Introducing a new social norm around the unacceptability of OD is considered a key pre-requisite for changing sanitation behavior and achieving the ODF status of a community.
- Participatory persuasion: Participatory facilitation towards self-assessment and community's own decisions rather than direct persuasion through information promotion is thought to catalyze collective action.
- Use of both positive and negative emotions: Positive and negative emotions and social motivations are expected to be more effective in creating demand for community action and behavior change than didactic education.
- No subsidies: Self-construction of latrines from locally available materials rather than externally provided or subsidized latrines is thought to be important for inducing a sense of ownership and eliminating the belief that the government or NGOs are responsible for sanitation.

Despite the popularity of CLTS in practice, there is still very limited research evidence on how successful it is with respect to sustained changes in sanitation conditions and on its potential to improve human health (Venkataramanan *et al.*, 2018). On the one hand, CLTS is known to be cost-effective and relatively successful in increasing sanitation coverage within a short period of time (e.g. Mehta and Movik, 2011; Pickering *et al.*, 2015). On the other hand, this is often achieved by means of low quality and non-durable sanitation facilities (Papafilippou *et al.*, 2011; Pickering *et al.*, 2015; Crocker *et al.*, 2016; Novotný *et al.*, 2017b). There are concerns that CLTS has a limited effect on the health of targeted communities particularly as, due to the construction of inadequate latrines, the rise in sanitation coverage and elimination of OD does not guarantee

lower disease transmission and improved health (Galvin, 2015; Pickering *et al.*, 2015). This is further reinforced by the inadequate monitoring of CLTS performance and inflated statistics on the CLTS achievements (USAID, 2018). As such, one of the topics discussed in our interviews was the practitioners' assessment of the quality and sustainability of sanitation changes achieved through CLTS.

Ethical controversies around CLTS represent an important issue. These controversies are concerned with the denial of fair treatment and protection under the law to people practicing OD, excessive shaming, social stigmatizing, the denial of resources needed for livelihood (Bartram *et al.*, 2012; Sigler *et al.*, 2015) and a return to colonial practice, where any deviation from western standards is perceived as disgusting and backwards (Engel and Susilo, 2014). As Bartram *et al.* (2012) puts it, some of these controversies arise from a conflict between community good and personal rights. Even noble goals such as improving peoples' sanitation safety are problematic if used to justify the suppression of human rights. Sigler *et al.* (2015) indicates that practitioners are instructed to uphold human dignity as a priority during the implementation of CLTS, while one of the objectives of the present study has been to reevaluate this argument.

Sanitation involves complex human-environment interactions. Therefore, various adaptations of interventions to local conditions are typically necessary (Coffey *et al.*, 2014; Novotný *et al.*, 2018). Modifications to fit local context are also encouraged in the CLTS guidelines (Chambers and Kar, 2008) and elsewhere (Kariuki *et al.*, 2012). There are also concerns that the rising popularity of CLTS poses a risk of standardization, simplification and mechanistic application (Bardosh, 2015). Various modifications of CLTS can be undertaken including the combining of CLTS with other sanitation strategies such as sanitation marketing (Chambers and Kar, 2008; Chambers, 2009; Sigler *et al.*, 2015), which aims to establish sustainable sanitation market functioning without subsidies and offer affordable products for all income groups (Nabembezi and Nabunya, 2017). Integration with various other methods is also common. In the Indonesian and Ethiopian national sanitation strategies, the use of CLTS techniques has been integrated with the focus on hygiene promotion, handwashing, water treatment and other hygienic measures (IDS, 2017a; IDS, 2017b).

A major issue is whether and how CLTS can be combined with external material support or subsidies. Although it contradicts one of the main principles, it

was argued that external aid is often needed as it is unrealistic to expect that lacking resources can be generated based on community solidarity. Previous literature suggests that it is not therefore uncommon to provide aid during CLTS implementation in practice (Sigler *et al.*, 2015). In this context, Galvin (2015) or Papafilippou *et al.* (2011) invokes a pragmatic strategy of hybrid approaches strongly reflecting local context (e.g. lack of knowledge or infrastructural resources) even if it breaches the basic CLTS principle of not receiving external support. For example, in Bangladesh, behavior-change interventions alone did not improve the sanitation situation, but when combined with subsidies, sanitation coverage and OD increased and decreased, respectively (Guiteras *et al.*, 2015). An important goal of this research was to uncover which modifications under which circumstances were applied by the interviewed practitioners.

METHODS

The material utilized in this qualitative study comes from semi-structured interviews with practitioners experienced in the implementation of CLTS. To address diverse contexts, our intention was to cover as many countries as feasible rather than target a larger number of practitioners working in the same country. Altogether, 41 practitioners were contacted, mostly by email and invited to interview. Eventually, 19 practitioners from 6 different organizations (plus 2 freelancers) with experience across 14 different countries were interviewed (Table 1). Of the 19 interviews, 5 were conducted face to face, 13 were conducted via Skype and 1 informant opted to provide detailed written responses. An interview instrument was developed, tested and consulted with a CLTS expert prior to the survey. In addition to an introductory part, it consisted of 19 open questions separated into three sections: fact checking, CLTS implementation and contemplation. The focus was on the specific experiences, attitudes and opinions of the interviewees on projects where the CLTS approach was used. We decided to withdraw informants' names to avoid potential setbacks. Although the respective organizations are identifiable from the codes assigned to individual interviewees in Table 1, the statements presented in the Results Section represent personal opinions and cannot be taken as the official views of these organizations. The material was processed using MAXQDA 12 software. Responses were classified by codes and sub-codes and analysed according to common topics and areas where practitioners agreed or disagreed. The discussed topics were then compared with

theoretical background to explain underlining attitudes and opinions.

RESULTS

Motivations and goals behind CLTS use

The main reasons for applying CLTS were positive experiences and results from previous projects (ETPPIN, KENPI, UGDPI, CAMUN, MLWPI, PAKWA, ZMSNV). MYNUN and MARUN reported that their organizations heard about satisfactory results of CLTS, contacted Kamal Kar and then started their own projects. Official state's policy (ETPPIN, KENPI, ETIWA, IDSPI) and official organization's policy (ANGPIN, HAITUN, ETIWA, IDSPI, MARUN) were also mentioned. General motivations for improving sanitation (HAITUN, UGDPI, ETIWA, IDSPI, MYNUN, MARUN, MLWPI, ZMSNV) such as to lower mortality and morbidity (ANGPIN) with extra attention to child survival (ETPPIN, KENPI, ANGUN, MYNUN, MARUN) or women's health and safety (ANGUN and ETPPIN) were often reported as the major motivations and goals behind CLTS use. Surprisingly, none of the interviewees referred to the cost-effectiveness of CLTS or the relative ease of its implementation.

Combination with other approaches and modifications of CLTS

CLTS was most frequently combined with Sanitation Marketing (SM), as affirmed by KENPI, ETPPIN, ETPUN, ETIWA, CAMUN, IDSPI, MYNUN, MLWPI, PAKWA and ZMSNV. Participatory Hygiene and Sanitation Transformation (PHAST) was also, but less often, mentioned in this context (ANGUN, CAMUN and MLWPI). CLTS was combined with microcredits in just one case (PAKWA). Interviewed practitioners also admitted combining CLTS with rewards and punishments. Rewards in the form of subsidies disbursed after the latrines were constructed (INDCLTS) and water supply schemes for the village or hygienic facilities for local schools (PAKWA). Forms of punishments were decided by the community itself (ETPUN, ETPFRL2) or the traditional leaders, who can, for example, impose a fine. This was confirmed by IDSPI: *'When member of the community still open defecate, they give punishment, by the traditional leaders, like a fine!'* Eight practitioners revealed usage of either direct subsidies or external technical assistance. UGDPI used subsidies for latrine construction in harsh natural conditions and lobbied for government-built public toilets, while CAMSNV provided subsidies for the poorest households. In Haiti,

Table 1: Background characteristics of interviewees

Practitioner's country and organization	Code	Work and project description
1. Cambodia, SNV	CAMSNV	General work on sanitation program involving CLTS
2. Angola, People in Need	ANGPIN	Participation on large scale CLTS project implemented in four provinces and targeting population of 90 000
3. Angola, UNICEF	ANGUN	Participation on an umbrella sanitation project implemented in 10 provinces and targeting population of 1 242 850
4. Ethiopia, UNICEF	ETPUN	Policy work and general support for CLTS projects
5. Ethiopia, Freelance I	ETPFRL	General support for CLTS projects
6. Ethiopia, Freelance II	ETPFRL2	General support for CLTS projects
7. East Timor, WaterAid	ETIWA	Participation on smaller scale CLTS project targeting population of 3000–4000
8. Pakistan, WaterAid	PAKWA	Participation on long-term sanitation project in Punjab targeting population of 300 000
9. Cambodia, UNICEF	CAMUN	General support for multiple sanitation projects targeting population of 410 187
10. Kenya, Plan International	KENPI	Participation on long-term sanitation project implemented in Homa Bay, Kwale, and Kilifi counties and Mathare informal settlements, targeting population of 600 000
11. Malawi, Plan International	MLWPI	Participation on long-term sanitation project implemented in six districts and targeting population of 1 000 000
12. Zambia, SNV	ZMSNV	Participation on long-term country-level sanitation project
13. Indonesia, Plan International	IDSPI	Participation on long-term sanitation project targeting population of 135 000
14. Uganda, Plan International	UGDPI	Participation on small-scale sanitation project implemented in Tororo district and targeting population of 41 300
15. Myanmar, UNICEF	MYNUN	Participation on short-term sanitation project implemented in four townships and targeting population of 200 000
16. Mauritania, UNICEF	MARUN	Participation on long-term whole country sanitation program targeting population of 1 632 895
17. Ethiopia, People in Need	ETPPIN	Participation on sanitation project in Wolayita Zone in the Ethiopian Southern Nations, Nationalities and Peoples' Region
18. India, CLTS Foundation	INDCLTS	Policy work and general support for CLTS
19. Haiti, UNICEF	HAITUN	Participation on short-term sanitation project implemented in Belle-Anse Arrondissement and targeting population of 50 000

some regions received subsidies for latrine construction which later hindered pure CLTS in other regions (HAITUN). ETPPIN, ETPUN, KEPIN and ANGPIN offered some sort of technical assistance mostly consisting of the provision of tools (e.g. shovels) and assistance in designing the latrines in a sustainable way. In Pakistan, demonstration latrines were built, as described by PAKWA: '*... and these demolatrines are built in the households which are selected by those communities and they are the poorest of the poor among the poor, either female headed or someone with disability. And in every village, we built one or two*'.

Some adjustments to CLTS in a given social, cultural, or natural context were reported by all but one of the informants (ANGPIN), though some of these

modifications referred to what is described in the CLTS guidelines. For example, ETWA and UGDPI labelled the use of SM as a modification. HAITUN had to modify CLTS tools as they appeared to be too shocking for local communities. MLWPI added more follow up visits to the three standard visits if needed. MARUN highlighted CLTS implementation in urban and peri-urban regions as a successful modification. MYANUN used CLTS to promote the use of toilets rather than their construction as poor households usually cannot afford to build them. According to this view, CLTS itself doesn't solve this problem so MYANUN combines it with SM. UGDPI also described continuing in the community cooperation initiated by CLTS. They realized that demand for water increases after inducing sanitation change through

CLTS, so they try to focus on water access as part of the follow up activities. A large portion of Angola's population consists of nomadic tribes, so ANGUN provided them with GPS devices, thus the tribes can keep a log of their camps and avoid places where there could be faeces in the open. In other regions, ANGUN uncovered how linking the outbreaks of cholera to latrine usage during a triggering session can help generate demand for better sanitation: *'When CLTS was introduced in Cunene region, it was flat CLTS. And locals thought it doesn't concern them. But when they started to get sick with cholera, they started to pay attention: 'We eat faeces? Explain that!' And when we explained what was going and they said stop, we need to do something, or we drop dead'*. IDSPI described adjustments to the Indonesian national strategy (STBM) as a principal modification of CLTS.

The social aspects of CLTS in terms of how communities are approached during CLTS were reported comparatively less often among the modifications. ETPPIN offered long-term cooperation and support to those community members who were interested in sanitation promotion. ETWA persuaded local governments to officially commit to achieving ODF and to closely monitor the progress of villages in their constituency. ZMSNV deliberately skipped communities where the chief smelled of alcohol. IDSPI utilized the influence of priests in catholic communities to achieve behavioural change. ZMSNV reported traditional leaders being able to legally enforce ODF and generally letting community actors modify CLTS according to their knowledge of their community. PAKWA described a whole sector modification through regular meetings where sanitation actors share their ideas and experiences. CAMUN said they did not use some of the more controversial techniques of CLTS such as an 'Army of Scorpions', which is when groups of children are responsible for sounding an alarm whenever they see someone practising OD (Chambers and Kar, 2008).

Challenges faced during CLTS implementation

The following categories of challenges were reported: socio-political, socio-cultural, environmental, unsuitability of certain CLTS tools and obstacles related to clashes with other interventions (particularly those based on subsidies). Some development practitioners described disputes with government representatives over the means of implementing CLTS (ETPPIN, KENPI, ANGPIN, MARUN). Efforts to achieve formal government targets rather than genuine demand for improving sanitation resonated in the responses obtained from

IDSPI experienced with the implementation of CLTS in Indonesia. He explained that after the official verification of the STBM status (i.e. an analogy to ODF status), communities usually lack the motivation to continue in their efforts to improve sanitation conditions and sustain sanitation change. Facilitators working with ETPPIN lied about monitoring results to make the project appear more successful and, arguably, to achieve formal targets. ETPUN's local construction workers lacked knowledge of latrine construction and refused to build them. ETPFRL2 said local health workers responsible for co-operation in CLTS implementation were severely underpaid. ANGPIN noted that CLTS is highly demanding in terms of human resources and there is often not enough people for follow up. According to ETWA, cooperation is very difficult in East Timor because of numerous ongoing humanitarian and development projects. MYNUN encountered issues while implementing CLTS in large communities. ANGUN, ETPUN and ETPFRL reported problems with uncooperative communities. CAMSNV and INDCLTS reported a lack of solidarity, cooperation and community effort between community members, which implies a key obstacle for the CLTS approach. Only one informant (IDSPI) mentioned low participation of women and people with disabilities as an obstacle. KENPI and UGDPI both talked about problems related to CLTS implementation in urban regions. They tried working with tenants but because of high mobility and short-term lease, they were unable to successfully complete an intervention. UGDPI and ANGUN reported culturally determined perceptions of faeces. In Angola, faeces are taboo, and it is complicated to even start a conversation about them. In Uganda, however, they are not considered dangerous at all.

Regarding environmental challenges, rain and flooding was designated by ANGUN, MLWPI and ZMSNV as major constraints because they destroy many latrines. ETPUN and MYNUN referred to rain in connection with the agricultural season as an obstacle for CLTS, as community members were pre-occupied with agricultural work. UGDPI, HAITUN and MYNUN mentioned difficulties with latrine construction in desert and rocky environments and in marshy regions with high water tables. KENPI witnessed constructed latrines destroyed by termites.

Practitioners working in Ethiopia (ETPUN, ETPPIN, ETPFRL2) described latrines designed by communities as totally unsustainable. CLTS techniques were also found problematic in Haiti because people demanded concrete latrines and found some of the tools too shocking which eventually hindered the achievement of ODF status (HAITUN). ZMSNV has negative experience

with demonstrative use of human faeces during triggering. Six practitioners mentioned that communities were expecting subsidies during CLTS interventions because of their experiences from other programs (HAITUN, IDSPI, MLWPI, ZMSNV, ETWA, INDCLTS). However, INDCLTS might be potentially biased since her organization actively promotes pure CLTS as an alternative to government subsidy programs.

Ethical controversies around CLTS

Although ethical questions surrounding the use of CLTS represent a major critique of this approach in academic literature, these issues were mentioned relatively less often during our interviews with development practitioners. This is not to say that informants were ignorant of these concerns. Eight of them mentioned that CLTS interventions can lead to the abuse of disadvantaged community members and amplification of social inequalities, especially if these concerns are not addressed during the training of facilitators and preparation. ANGPIN, INDCLTS, HAITUN, MYNUN and ZMSNV reflected on ethical questions related to shaming people during CLTS sessions. They did not dismiss these practices but were in strong agreement that they must be done sensitively and in a correct manner. KENPI and UGDPI realized problems with shaming, too, but simultaneously considered the focus on these emotions as highly effective. ANGUN, MLWPI and ETWA view knowledge of the local context, appropriate CLTS adaptations and leaving the decisions in the hands of communities as crucial for abuse prevention. IDSPI, PAKWA, CAMUN and MARUN had no such issues with CLTS or as IDSPI put it: *'I think we can use public shaming occasionally, it is a good shock therapy for them'*. Direct criticism came only from ETPPIN who did not defend CLTS in any way and criticized the politicization of sanitation in Ethiopia: *'We came to officially ODF regions, which weren't really ODF. But the government had achieved its goals, right?'*

General assessment of CLTS

Regardless of critique, practitioners reported that they are generally satisfied with CLTS as an approach and most of their objections are linked to the contextual specifics which they have to deal with. Overall satisfaction was explicitly expressed by ZMSNV, IDSPI, ETWA, ETPRFL, ANGPIN, UGDPI, HAITUN, CAMUN, MAURUN and MYNUN. The latter interviewee, for example, contemplated: *'I really like CLTS, we don't tell people what to do. They realize for themselves what is right'*. Another six practitioners, though also generally

satisfied with CLTS, specified various aspects where they would like to see improvement. ETPPIN emphasized a need for flexibility with respect to designing and implementing the approach. It means thinking constantly about possible upgrades and modifications but also the integration or selection of other approaches if they are more suited to a given context or if something does not work. KENPI deems it necessary to link CLTS to SM and develop CLTS+. CAMSNV considered CLTS the most powerful approach for behavioural change but simultaneously maintained that it cannot be overestimated and understood as an all-encompassing approach to attaining a sanitation safe environment. According to MLWPI, CLTS should never be used as a stand-alone approach. PAKWA thinks the CLTS approach is not developed enough for its massive application.

DISCUSSION AND CONCLUSIONS

CLTS is often considered a successful and effective sanitation promotion approach and interviewed practitioners generally agree with this assessment. After all, most of them achieved positive results with this approach, at least regarding the short-term targets set for the projects they referred to in their interviews. Previous experience with CLTS and the perception of its positive results (in terms of the above noted short-term goals) were also the most often reported factual reasons for using CLTS (together with situations when the use of CLTS was pre-determined by the design of programs and policies framing a project in question). However, we noted that the conception of 'positive results' didn't match the most often reported motivations for the use of CLTS in terms of the expected effects on human health. Although health effects are promoted as the primary goals, whether and to what extent CLTS can help improve health and lower mortality is still debatable (Pickering *et al.*, 2015; Freeman *et al.*, 2017; Sinharoy *et al.*, 2017). Indeed, a recent systematic review that addressed specifically the evidence on CLTS concluded that 'CLTS has been rolled out with minimal rigorous evidence on its effectiveness and impact on sanitation and health outcomes' (Venkataraman *et al.*, 2018, p. 026001-14). The interviews indicated that practitioners generally neither weigh in on their own evidence on actual health impacts nor on the limited and inconclusive evidence that exists in literature. They instead implicitly acknowledge the biological plausibility and general acceptance that improving sanitation is an important condition for improving human health due to the incidence of infectious diseases and lower mortality (Fewtrell *et al.*, 2005; Wolf *et al.*, 2014). This doesn't come as a surprise because causal links

between sanitation interventions and health is difficult to isolate (e.g. Schmidt, 2014). The focus on whether assumed pre-conditions for health improvements are in place should be sufficient motivation to invest in sanitation (e.g. Carter, 2017).

Perhaps more importantly, our research indicated that there is very limited if not no knowledge among practitioners about whether and how increases in sanitation coverage attained within a relatively short-term period of a project's life are sustained and followed by upward shifts in the sanitation ladder. This is a critical point, particularly regarding CLTS, which often results in poor and non-durable latrines by addressing motivations to end OD rather than to invest in the improvement of sanitation facilities (e.g. USAID, 2018). Some of the interviewees anticipated sustainability issues and expressed reservations towards CLTS, typically concerning its principle of no external aid during implementation. Overall, however, these contemplations only marginally resonated in the practitioners' assessments of the CLTS approach. This can be interpreted in the light of recent literature that increasingly calls for 'a routine incorporation of technical support in the post-triggering stage' (Venkataramanan *et al.*, 2018, p. 026001-13).

Interestingly, non-health goals such as gender relations, women specific issues, or school attendance were only marginally reflected in the reported motivations and targets, although they are emphasized in literature (Hirve *et al.*, 2015; Sclar *et al.*, 2017).

While the primary and secondary WASH barriers described in the famous F-diagram are well known, the findings above indicate that there is less understanding and awareness of the logical pathways between sanitation change and its expected health and non-health effects. More specifically, the route between sanitation interventions and sanitation conditions should be more carefully separated from the route between sanitation conditions and their health and non-health impacts. Similarly, the interpretation of evidence on each of these two parts of the logical model of sanitation should not be confused. Although this may be a general challenge for the trainings of WASH practitioners, we think that this understanding of a logic model of sanitation is particularly needed with respect to CLTS because it has become increasingly apparent that this approach targets only its initial part (i.e. the elimination of OD) but may be ineffective and even counterproductive in regards to further steps towards the desired health and non-health impacts of sanitation change. In general, understanding to processes operating behind the CLTS intervention has been limited, both theoretically and empirically, which exacerbates a risk of its mechanistic application.

Congruently with CLTS guidelines, we found high flexibility in the applications of this approach in practice. Our results suggest that practitioners are quite open to various modifications of prescribed techniques and their combination with related approaches such as SM or PHAST. We interpret this finding as a predominantly positive message because it has become increasingly clear that CLTS should not be used as a standalone approach to sanitation change (e.g. Crocker *et al.*, 2017). The reported use of CLTS together with SM also indirectly indicates efforts to address some of the sustainability challenges discussed above.

Among various departures from the main principles of CLTS, the use of subsidies represents a particularly debated issue (Papafiliippou *et al.*, 2011; Sigler *et al.*, 2015; Galvin, 2015). In our sample, several of the interviewees acknowledged the combination of CLTS with direct subsidies or technical assistance. At the same time, they reported generally good experiences with the use of targeted subsidies for disadvantaged households, thus providing sanitation to people whose needs would otherwise be overlooked (Hirve *et al.*, 2015). Subsidies and technical assistance were also considered to address the sustainability of latrine constructions, especially in harsh environmental conditions. Although the environmental challenges reported during interviews are generally applicable sanitation constraints, they may be particularly relevant with respect to the CLTS as they result in low quality, non-durable sanitation facilities. The opinion that people are not always able to construct adequate sanitation facilities by themselves, even if there is support from within their community, seems to be relatively prevalent. In such cases it seems difficult to defend the CLTS no-subsidy or external assistance principle. However, these circumstances should be carefully identified because, as also confirmed by our interviews, (earlier) subsidy-oriented sanitation interventions can shape a genuine demand for sanitation in a negative way. These findings agree with calls for a hybrid CLTS approach (Galvin, 2015) or with the empirical evidence of the better results of sanitation interventions that combine 'smart' subsidies with community mobilization (Guiteras *et al.*, 2015). Although sanctions and punishments are permitted according to the CLTS handbook (Chambers and Kar, 2008), they are often discussed in connection with possible human rights violation (Bartram *et al.*, 2012). These tools were reportedly used only in several of the projects referred to in our interviews. In fact, it seems to be very difficult to find an example of a CLTS application in its pure form.

Our survey identified various challenges and obstacles that practitioners faced in their applications of

CLTS. Although the majority of these constraints apply to other sanitation interventions too, some are particularly relevant with respect to CLTS design. For example, a lack of cooperation and inequality within targeted communities is a known barrier for the successful implementation of participatory community-led methodologies and another type of sanitation strategy may be more appropriate in such contexts. All of these comments and findings underline the key importance of understanding the local context, formative surveys and efforts to avoid a one-size-fits-all model of CLTS applications (Tilley *et al.*, 2014; Galvin, 2015; Bardosh, 2015).

Our research confirmed that practitioners are generally aware of potential ethical controversies around practices used in the CLTS approach. At the same time, however, the prevalent view can be labelled as a pragmatic one. The majority of informants defended CLTS and their own way of implementing this approach because they believe in its effectiveness. They mostly concentrated on the barriers and problems related to the practical feasibility of their project and didn't elaborate on ethical controversies in more detail.

As researchers, work on this study provided us with an opportunity to confront academic views and evidence on CLTS with the perspectives and understandings of development practitioners. This exercise uncovered at least two notable divergences. The first is a contrast between the predominantly positive assessments, popularity, and massive use of CLTS in practice and the so far very limited evidence of its results, particularly with respect to longer-term impacts. The second is a divergence between the content of academic critique of which a considerable part addresses ethical issues around CLTS implementation and rather pragmatic views of practitioners mainly concerned with various contextual specifics or about the lack of materials and skills hampering improvement in the sanitation situation within a community without external assistance.

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