

*East African Medical Journal Vol: 93 No. 10 (Supplement) October 2016*

#### ASSESSMENT OF COMMUNITY LED TOTAL SANITATION UPTAKE IN RURAL KENYA

K. N. Ogendo, Bsc, MPH, Living goods Nairobi, Kenya, Ministry of Health, Environmental Health Division, Kenya, A. B. Kihara, MBChB, MMed, R. J. Kosgei, MBChB, MMed, MSc, PGDRM, Department of Obstetric and Gynaecology, College of Health Sciences, University of Nairobi, P.O.Box 19676-00202, Nairobi, Kenya, H. Tweya, BSc, MSc, PhD, Lighthouse Trust, Lilongwe Malawi, The International Union Against Tuberculosis and Lung Disease, Paris, France, W. Kizito, BSc, MSc Médecins Sans Frontières (MSF), Brussels, Belgium, B. Murkomen, Bsc, MPH, Environmental Health Division, Kenya and Omondi Ogutu, MBChB, MMed, PGDRM, Department of Obstetric and Gynaecology, College of Health Sciences, University of Nairobi, P.O.Box 19676-00202, Nairobi, Kenya.

## ASSESSMENT OF COMMUNITY LED TOTAL SANITATION UPTAKE IN RURAL KENYA

K. N. OGENDO, A. B. KIHARA, R. J. KOSGEL, H. TWEYA, W. KIZITO,  
B. MURKOMEN and OMONDI OGUTU

### ABSTRACT

**Background:** Community Led Total Sanitation (CLTS) is an innovative community led drive to set up pit latrines in rural Kenya with an aim of promoting sustainable sanitation through behaviour change. It's a behaviour change approach based on social capital that triggers households to build pit latrines without subsidy. The Ministry of Health introduced the CLTS campaign in 2007 and the first road map to ODF ended in 2013. Since the commencement of the CLTS Programme in, there is little documentation on assessment of its uptake from triggering to the certification of open defecation free villages.

**Objective:** To assess the magnitude of Community Led Total Sanitation (CLTS) triggering to certification of Open Defecation free (ODF) villages in rural Kenya.

**Design:** A retrospective descriptive study.

**Setting:** The 47 counties in Kenya. Kenya is projected to have a population of 46 million people with the majority as rural populace. The study unit were Villages across the 47 counties from the data generated in the CLTS monitoring and evaluation dataset.

**Results:** The number of triggered villages (11641) compared to those that reached certification stage (3131) reduced significantly. Busia County achieved the 100% target for triggering. There was a significant decline of the proportions per county in the process of claiming, verifying and certifying ODF villages however Busia, Siaya and Vihiga were leading across the counties. The proportion of CLTS facilitators and CLTS certified villages per county were incongruent.

**Conclusion:** There was low uptake of CLTS from the triggering phase to the certification phase due to plausible factors such as inadequate monitoring of the CLTS process, inadequate funding of CLTS programmemeing and conflicting work demands on the CLTS facilitators leading to reduced momentum as observed in Uganda.

### INTRODUCTION

Globally about 15 % (1.1 billion) of the population practice open defecation, and another 2.4 billion have unimproved sanitation, a known risk factor for the transmission of pathogens, mainly by pollution of water bodies, that cause diarrhoeal diseases such as cholera, typhoid and dysentery(1). Globally, 1.7 billion cases of diarrhoea occur annually, and 800,000 children under the age of five die from diarrhoeal related complications (2). Open defecation is prevalent (65%) in rural areas and it is practiced more in Indonesia (54 million people), Pakistan (41 million people), Nigeria (39 million) and Ethiopia

(34million) (1). For this reason, The Millennium Development and Sustainable Development goals lay emphasis on environmental sustainability, sanitation and hygiene (3).

Community Led Total Sanitation (CLTS), is an innovative community led drive to set up pit latrines in rural Kenya, with an aim of reducing open defecation, thereby promoting sustainable sanitation through behaviour change. This behaviour change approach is based on social capital that triggers households to build latrines without subsidy (4). Success in community based behaviour change has been demonstrated in Bangladesh where its inception occurred, and has been adopted in about 66 other

countries (5). The roll out of this Programme is usually cascaded in a sequential process in order to achieve open defecation free (ODF) villages. It involves firstly the training of CLTS facilitators who in turn train communities to own their health issues through community dialogue. The unit of implementation is usually a village where the facilitator triggers shame and disgust, by taking transects walks with the villagers in the community. The facilitation team dramatically links faecal contamination of water to diarrhoea diseases through simple simulations that includes faecal weight calculation per household Vis a Vis money spent on treating diarrhoea diseases by the community. The mental paradigm shift leads to putting up pit latrines by the villagers where ODF claims are made by the community as the next milestone, and thirdly verification of of pit latrine set up in the village by the area Pubic Health Officer. The process ends with certification by stakeholders and ultimately the village is declared ODF. Poor sanitation is strongly correlated to a countries economic status. Studies on open defecation prevalence focus on indices that highlight the financial status of countries with regards to Ethekwini Declaration of 2008 denoting 0.5 %of GDP (1, 5).

The Ministry of Health introduced the CLTS campaign in 2007 and the first road map to ODF ended in 2013. Since the commencement of the CLTS programme in Kenya, there is little documentation on assessment of its uptake from triggering to the certification of open defecation free villages. This operational research study describes an assessment of Community Led Total Sanitation (CLTS) triggering to certification of Open Defecation free (ODF) villages in rural Kenya in 2014. Specifically, this study describes the proportion of villages that are CLTS triggered, claimed to be ODF, verified and certified as ODF villages. Finally, it compares the proportions of CLTS facilitators Vis a Vis certified villages.

## MATERIALS AND METHODS

*Study Design:* This was a descriptive ecological study that utilised routinely collected CLTS County pooled data in 2014.

*Setting:* The study was done in Kenya a country made up of 47 semi-autonomous counties and located on the eastern part of Africa. Kenya has a population of 46 million people as projected with the majority residing in the rural areas

*Data Management and Analysis:* The outcome variables were proportions of villages triggered, claimed, verified and certified by county. Data were abstracted into an Excel database from the CLTS data sets obtained from all the 47 Counties in Kenya.

Pooled county data were presented in proportions, and the proportions of certified ODFs per county were compared with the number of human resource, collaborative partnerships and budget allocated for CLTS.

*Ethics Approval:* Ethics approval was granted by the Institutional Research Ethics Committee (IREC) of Moi University/ Moi Teaching and Referral Hospital, Eldoret, Kenya and the Ethics Review Board of Médecins sans Frontières, Geneva, Switzerland, on behalf of SORT IT. Permission was obtained from the Ministry of Health, Kenya. Since this was an ecological study, consent was not necessary.

## RESULTS

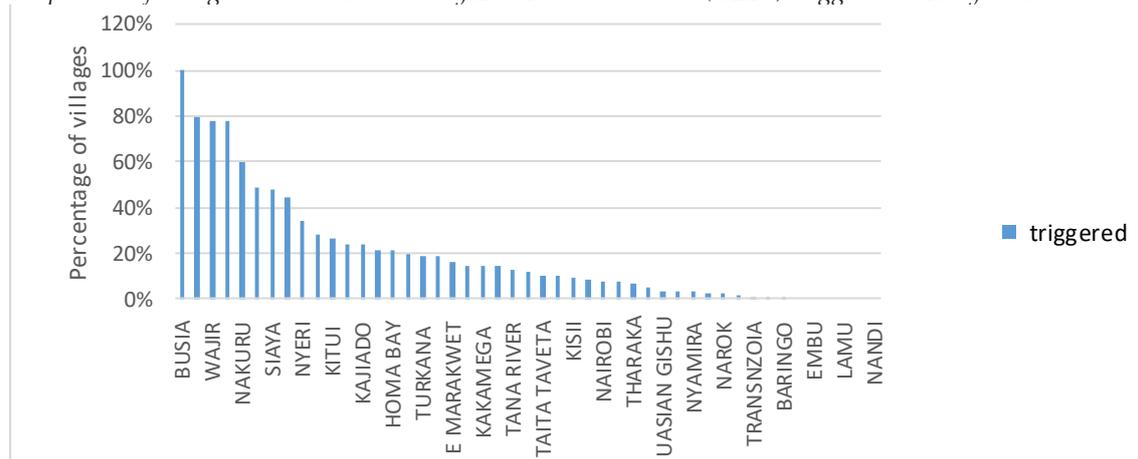
Pooled results from all the 47 Counties are presented. Figure 1, describes the triggering to certification process. Of the 62,195 villages in the 47 Counties, 19% were triggered, 10% were claimed ODF, 8% were verified ODF and only 5% were certificated ODF.

Only, one County (Busia) achieved the 100% target for CLTS triggering in 2014, while some Counties did not get any triggering (Figure 2).

Across all counties, there is a significant decline in the number of certified villages compared to claimed and verified villages (Figure 3).

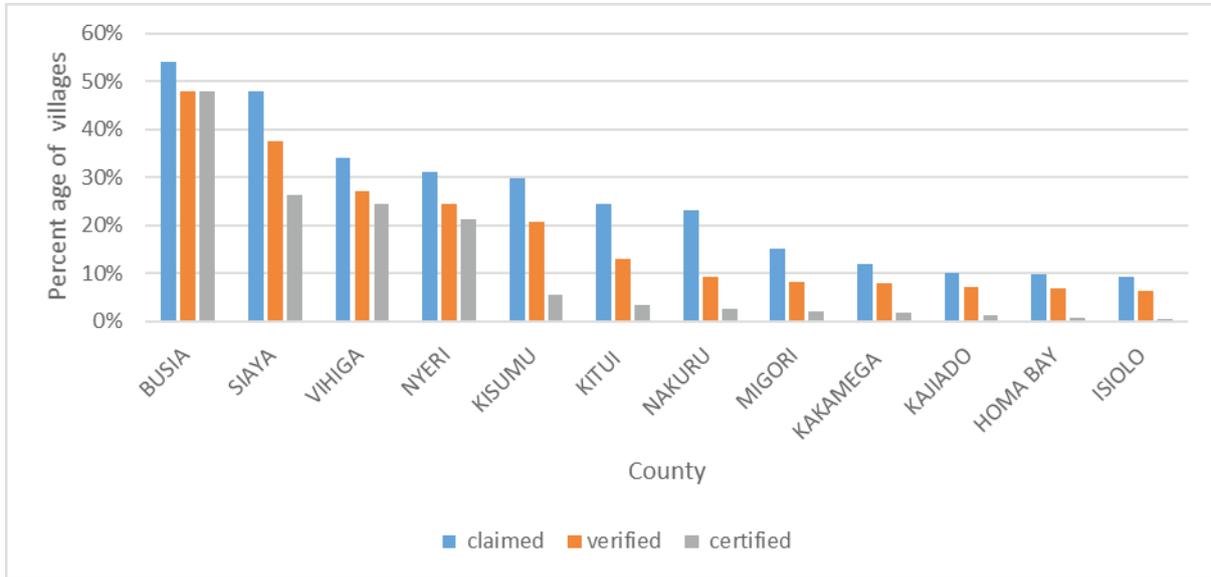
**Figure 2**

Proportion of villages that are Community Led Total Sanitation (CLTS) triggered in Kenyan Counties



**Figure 3**

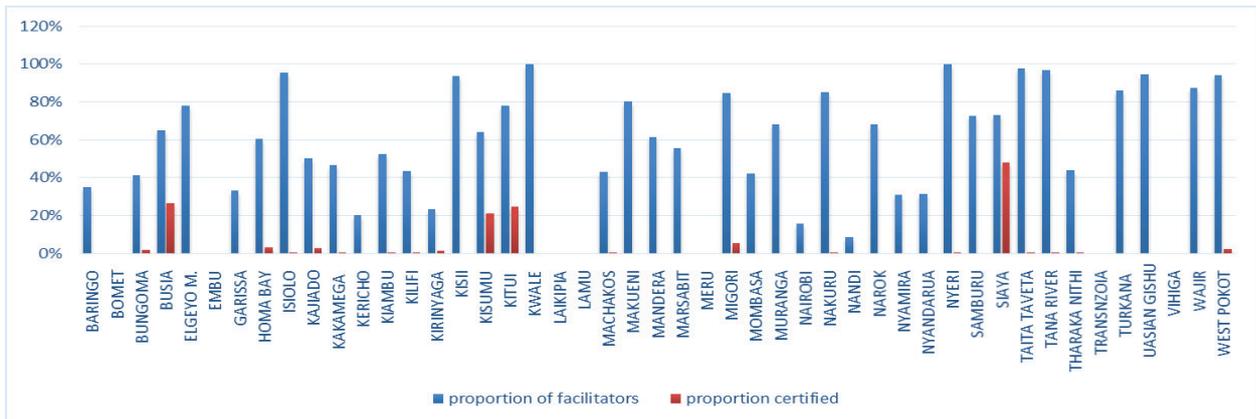
*Proportion of claimed, verified and certified Claimed Open Defecation Free (ODF) villages in Kenyan Counties, 2014*



There was no relationship noted between trained CLTS facilitators and certified villages (Figure 4).

**Figure 4**

*Proportions of trained Community Led Total Sanitation (CLTS) facilitators and CLTS certified villages in Kenyan Counties*



## DISCUSSION

The main finding of this study is that, the proportion certified ODF villages is small compared to the triggered villages. There were some counties that did not receive any triggering. Across all counties that got triggered, there was a declining pattern in proportion from triggered, claimed, verified and certified ODF villages. In addition, there was no relationship noted between proportions of trained CLTS facilitators and certified ODF villages.

The low uptake of certified ODF villages could be attributed to the success of CLTS programmes which depend on behaviour change, which would require a long period of time to appreciate the impact (4). Similarly, the lack of relationship between proportions of trained CLTS facilitators and certified ODF villages can also be explained by the behaviour change theory that requires time to be appreciated. Behavioural change activities that work best to end open defecation in a suitable manner are still being studied(6). A possible explanation for lack of triggering in some counties, could be low prioritisation of sanitation by county governments and lack of funding for CLTS programme.

The main limitation of this study is the use of aggregated data and a short period of evaluation of programme outcomes. Despite these limitations, the study findings has the strength of being representative of the whole country and STROBE guidelines were used to ensure the quality of reporting(7).

From a policy perspective, there is a need to evaluate sustainable behavioural change activities that work best to end open defecation in Kenyan villages.

## CONCLUSION

The study has shown that there is low uptake of CLTS in the Counties with only 5% of the villages certified owing to loss of momentum. There is need to leverage more resources on monitoring and supportive supervision of CLTS. This will enhance sustainable Open Defecation Free villages, behaviour change and ultimately reduced diseases.

## FUNDING/ ACKNOWLEDGEMENT STATEMENT

This research was conducted through the Structured Operational Research and Training Initiative (SORT IT), a global partnership led by UNICEF/UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR) based at the World Health Organization. The model is based on a course developed jointly by the International Union Against Tuberculosis and Lung Disease (The Union) and Médecins sans Frontières (MSFOCB). The specific SORT IT Programme which resulted in this publication was led by the Department of Obstetrics and Gynaecology, University of Nairobi and the Kenya Ministry of Health Department of Disease Prevention and Control.

## REFERENCES

1. (WSP-Africa) A. 11th African Union Summit "Meeting the Millennium Development Goals on Water and Sanitation" The eThekweni Declaration and AfricaSan Action Plan 2014 [Available from: <http://www.wsp.org/sites/wsp.org/files/publications/eThekweniAfricaSan.pdf>].
2. Pruss-Ustun, A., Bartram, J., Clasen, T., Colford, J.M. Jr., Cumming, O., Curtis, V., *et al.* Burden of disease from inadequate water, sanitation and hygiene in low- and middle-income settings: a retrospective analysis of data from 145 countries. *Trop. Med. Int. Health.* 2014;**19**:894-905.
3. UNDP. Sustainable Development Goals (SDGs) 2015 [cited 2016 26th August]. Available from: <http://www.undp.org/content/undp/en/home/sdgoverview/post-2015-development-agenda.html>.
4. Chambers, R. Going to Scale with Community-Led Total Sanitation: Reflections on Experience, Issues and Ways Forward: Institute of Development Studies 2009.
5. Galan, D.I., Kim, S.S., Graham, J.P. Exploring changes in open defecation prevalence in sub-Saharan Africa based on national level indices. *BMC Public Health.* 2013;**13**:527.
6. Sigler, R., Mahmoudi, L., Graham, J.P. Analysis of behavioural change techniques in community-led total sanitation programmes. *Health. Promot. Int.* 2015;**30**:16-28.
7. Von Elm, E., Altman, D.G., Egger, M., Pocock, S.J., Gotsche, P.C., Vandenbroucke, J.P., *et al.* The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *Lancet.* 2007;**370**:1453-1457.