Community Based Total Sanitation (STBM): "*Innovation in Total Sanitation Approach When Basic Sanitation is Insufficient Answer for Diarrhea Reduction*"

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Abstract

More than 129 million people in Indonesia do not have access to an improved latrine. Only 30% of population washing their hand before eating and only 35% households managing solid waste. The consequence is over 150,000 children die annually due to diarrhoea, making it the leading cause of infant mortality in Indonesia.

When most of organizations encouraging people to stop open defecation practices, WHO revealed that diarrhoea cases cannot be reduced only by that single approach. WHO's research in Indonesia recognized that diarrhoea can be optimally reduced up to 94% by combining hand-washing with soap, drinking water treatment, and waste management approaches.

Based on that research, Plan Indonesia adopts Community-Based Total Sanitation (STBM) project. STBM is implemented through five pillars activities, which are: (1)open-defecation free campaign, (2)hand washing with soap, (3)household drinking water treatment, (4)solid waste management, and (5)wastewater management.

The implementation of STBM is to represent a new paradigm: sanitation is to be approached through a behaviour-change lens, focus upon generating bottom-up demand for hygiene facilities, as opposed to a top-down, service-provision, and subsidy model.

Through STBM it is expected that the number of diarrhoea cases will be reduced up to 90%.One instance in one of the project areas, the number of Diarrhoea in 2009 was 300 cases meanwhile in 2010 the number was decreased to 100 cases. Plan Indonesia is working with Local Government to financially and technically lead the implementation of STBM. Therefore Local Government will continue the STBM approach once Plan Indonesia finishes implementing its project.

(Keywords: Rural Sanitation, Total Sanitation, Indonesia)

Introduction

With a growing population, and an increasingly short timeframe to achieve Millennium Development Goal which seeks to halve the number of those without access to basic sanitation and water supply by 2015, there has been a national government acknowledgment that financial subsidies for sanitation failed to achieve the necessary scale of toilet coverage, or sustained toilet use and behaviour change. National government, as a state duty bearer, realizing this issue then formulating grand strategy to solve it was the turning point of water, sanitation and hygiene development in Indonesia.

In 2008 the Ministry of Health therefore formulated a new national sanitation policy, entitled 'Community-Based Total Sanitation' (known in Indonesia as '**STBM' - *Sanitasi Total Berbasis Masyarakat***). The strategy consists of five key pillars:

1. Stop open defecation using the CLTS approach
2. Hand-washing with soap
3. Safe Water Treatment and Safe Storage
4. Household solid waste treatment

5. Household waste water treatment

The purpose of this paper is two-fold; to take stock and reflect upon the process of STBM implementation in partnership with government, and also to draw out some of the key lessons learned and enabling factors that have made the STBM implementation possible. This paper seeks to provide readers with practical information and learning that can add to the growing knowledge bank of information on the topic of CLTS – the main approach of STBM.

The paper has adopted a strengths-based approach, whereby research analysis and reflections have focused upon the strengths and enabling factors which have facilitated the implementation of STBM at scale. This research has been compiled using multiple methods, including internal and external document reviews, staff discussions and quantitative analysis of project results to date.

This paper has been compiled by Plan Indonesia staff and does not represent the views and opinions of all project stakeholders. The research has offered an opportunity for Plan Indonesia staff to reflect upon the project process and outcomes to date, it does not therefore represent a comprehensive, independent and thorough analysis of STBM Implementation in Indonesia.

Key Issues and Challenges

The need to invest in improved sanitation and support the achievement of universal toilet coverage in Indonesia is compelling. More than 129 million people or 53% of the total population do not have access to an improved latrine[1]. The consequent health impact of poor sanitation is evidenced by 2007 Ministry of Health data recording that over 100,000 children die each year in Indonesia due to diarrhea[2], making it the leading cause of infant mortality and the third leading cause of overall morbidity population-wide. It's also proven that nearly 99% rural community boiled water before drinking it, however it is found that 47.5% boiled drinking water still containing *E. Coli*[3]. The financial burden associated with poor basic sanitation has also been revealed by a World Bank study, concluding that the potential annual economic impact for Indonesia is approximately US$6.3 billion, representing 2.3% of Indonesia's GDP[4].

TTS District, in Eastern Indonesia, faces all of these challenges. Open defecation is common with only 40% of the population having access to latrines. A mere 11% of the population regularly washes their hands with soap and only 32% of people have sufficient potable water.[5] While in TTU District, Ministry of Health recorded that 36% of local population has the access to improved clean water, and only 51% has access to basic sanitation facilities. As a consequence, diarrhea becomes the main disease that threats people living in these two districts, particularly children. There is no guarantee that people of TTU and TTS District are living in clean and health environment.

The challenges in the WASH sector are obvious for TTU & TTS District. Knowledge about good hygiene practices is still low in most areas. Families often follow local traditions such as prioritizing the maintenance and infrastructure of cemeteries before basic water and sanitation

[1] WHO/UNICEF Joint Monitoring Programe, 2010
[2] Indonesia Health Minister Decree on STBM Policy hand book, 2008
[3] Indonesian Ministry of Health, Basic Human Service Study, 2006
[4] World Bank Water and Sanitation Program (WSP), Economic Impact of Sanitation in Southeast Asia, 2007
[5] Indonesian Ministry of Health, Basic Health Research / RISKESDAS, 2010

infrastructure. The local Government still does not consider the water sanitation sector a priority; their priorities still focus on activities such as road infrastructure.

Opportunities

WHO study in 2007 estimates that 94% of diarrheal cases are preventable through modifications to the environment, including interventions to increase the availability of clean water, and to improve sanitation and hygiene. A 2005 systematic review concluded that diarrheal episodes are reduced by 25% through improving water supply, 32% by improving sanitation, 45% through hand washing, and by 39% via household water treatment and safe storage. These facts also became the strong reason of why government will massively implement STBM, through various partner interventions.

Between 2003 and 2007 Plan Indonesia had supported Government of Indonesia by spent US$1.5 million on household toilet construction, yet only 15,000 toilets had been constructed (US$100 / toilet) benefitting a relatively small 45,000 people. On top of this, Plan Indonesia staff members observed many community members slipping back into the practice of open defecation, preferring this to toilet use. The sanitation approach had to change. The creation of a formal partnership with the national government and the adoption of CLTS in 2007 represented the change that was required for Plan Indonesia to achieve large-scale and sustained impact in its sanitation program.

Following a CLTS pilot period from 2007 – 2009, in which Plan Indonesia developed its own capacity and knowledge in the area of CLTS, Plan Indonesia embarked on a massive scale-up of its CLTS program in two districts, TTS and TTU. However, the CLTS approach is extended up to the implementation of STBM on those two districts. With benefitting from the triggered momentum resulted by CLTS approach, Plan Indonesia encourages community to adopt four other pillars of STBM through hygiene promotion campaign[6]. From this point, Plan Indonesia will declare the communities to adopt “total sanitation” if at a time they practice five pillars of STBM in a sustainable way.

The model that Plan Indonesia is using to implement its STBM program is quite new in Indonesia. Even though the policy had been issued by national government in 2008, not so many actors in the field are working on the policy, even after a year following the issuance. In 2009, Plan Indonesia tried pioneering its first STBM village in Lembata District, eastern Indonesia. The result of 19 villages adopting STBM was acknowledged by Ministry of Health as these villages were the first villages to adopt STBM national policy.

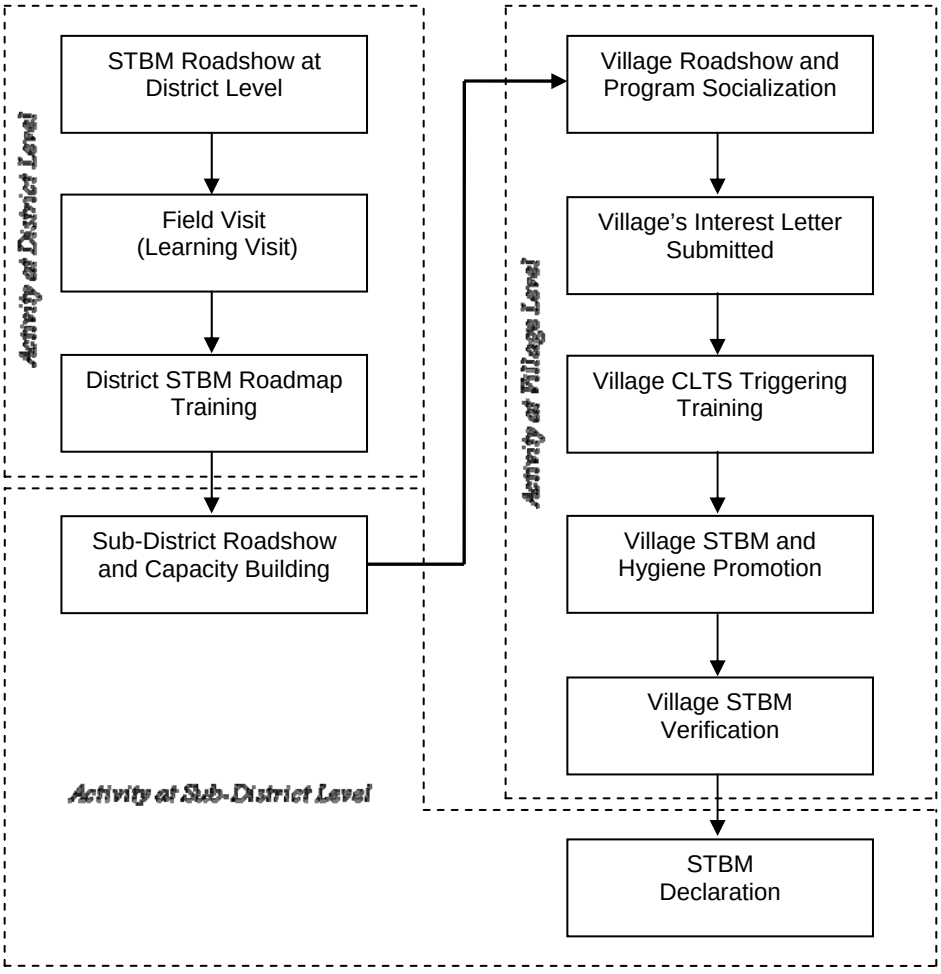
To date, Plan Indonesia has invested considerable time and funding into the process of district and sub-district government capacity-building in the STBM policy. These two actors are the primary duty bearers at district and sub-district level. While at the national level there is a high degree of skill and understanding about what this policy actually means (including a pool of STBM master trainers), at the district level there is a great need to invest in intensive awareness-raising in order to strengthen duty bearers commitment and approaches in sanitation

[6] In the field implementation, all successes in STBM are started with CLTS approach as the first pillar of STBM. Once communities have been triggered, the spirit of changing behavior within community is kept to be sustained by village facilitators. At this point the facilitators will do hygiene promotion to encourage people to adopt the other four pillars of STBM. Soon after, or parallel with the latrine construction, community will fulfill their need to practice hand washing with soap, safe water treatment and storage, solid waste management and waste water management.

development, from a standard subsidy approach, to the STBM approach. To date, Plan Indonesia has decided to work in partnership with district governments. In each of the districts where Plan now works it has signed a Memorandum of Understanding with the government to formalize the commitment to work together on STBM: a partnership between Plan Indonesia and the duty bearers.

The flow diagram below (Figure 1) details the main steps that Plan Indonesia has undertaken so far in order to raise district and sub-district government capacity and commitment towards the STBM policy, this is followed by detail explanations of key activities in each process. To measure the success of this capacity-building over the short-term, Plan Indonesia monitors the work of each sub-district government officials and the use of their district budget funds.

Figure 1: The steps taken to conduct full STBM project



Soon after sub-district roadshow has been conducted, Plan Indonesia staff and sub-district's STBM team start implementing STBM approach at the village level. It is started by CLTS triggering first. However, CLTS triggering is not commence in a village until the sub-district's STBM team have received a village acceptance letter from the village head, which formally commits the village to working towards total sanitation status. This level of formality helps to ensure that commitments from the village are taken seriously by villagers themselves and by

sub-district's STBM team. It also enables sub-district government staff to identify those communities that are particularly enthusiastic about STBM, which again helps the project to work in the 'easier' communities first, as well as then promote these STBM villages to other village heads in the sub-district who may be less convinced about the STBM approach.

Training is a critical and large component of the STBM implementation process. Trainers from national level and provincial deliver STBM training to village facilitators. These facilitators often come from the Puskesmas (local health center) which has the advantage of being an existing, permanent body, and therefore the role of facilitator fits naturally into their pre-existing job function. Achieving a near equal gender balance is considered a very important factor in the selection of village facilitators, given the need for these facilitators to appeal to the entire community as they seek to pressure and convince all segments of society about the need to build their own latrine, from mothers, fathers, teenagers, children, widows and the elderly.

Once village facilitators have been thoroughly trained in the STBM approach (workshop and field-based training), they return to their community and identify natural leaders who can assist in triggering the village to become ODF then move to other pillars of STBM. Triggering households to build their own latrine is the lynchpin of the CLTS process, it is where the zeal, drive and commitment to become ODF is realized in a community. Meanwhile during the post triggering phase, village facilitators and sub-district's STBM team are tasked with maintaining the momentum for latrine construction and continuing hygiene promotion thus community will practice handwashing with soap, safe drinking water treatment, solid waste management and waste water management.

It is the sub-district's STBM team that regularly visits the villages in order to monitor progress and provide occasional assistance on those households who fail to fulfill their commitments. Throughout this process of achieving total sanitation status, Plan Indonesia staffs fulfill a supportive backseat role, with duty bearers, facilitators and community members being the key drivers of change, thereby ensuring that activities are locally led and owned. These photos below provide insight into the implementation of 5 pillars STBM.

Figure 2: The result of STBM implementation at community level

Pillar 1: *the result of CLTS triggering is community committed to stop open defecation and build their own latrine.*
Pillar 2: *Head of District and Plan Indonesia staff watching kid at Handwashing station. Such a child-friendly facility is called "tippy tap".*
Pillar 3: *Safe drinking water storage at household level.*
Pillar 4: *Simple solid waste management method at household level. Some organic wastes are buried on the backyard.*

A great deal of importance is placed upon 'STBM declaration', in part to provide status to those communities that have become total sanitation. The declaration takes place at sub-district level where number of villages celebrating their achievement on STBM implementation. This declaration puts a little bit advocacy factor of 'showing off' to other villages that yet to achieve total sanitation status. Hearing some villages declare their success, other villages will be motivated to speed up their STBM process. Funded by Plan Indonesia, but organized by duty bearers, these STBM declaration may include a speech from the sub-district and or district head, the uncovering of a village sign declaring that total status has been achieve, the exchange of a certificate or award from the district head to the village head, various media activities (local radio and newspaper) and community-wide celebrations. Such events require considerable planning and organization, a step which should not be under-estimated in terms of the time and resources required, yet the investment is particularly worthwhile if it serves to convince yet to be declared total sanitation communities of the need to push ahead.

The Impact: Diarrhoea Reduction

The progress to date of STBM implementation in several places is not merely measured by the number of facilities independently built by the communities. From health perspective we should see the differences resulted from the presence of those facilities amidst communities, which is the reduction of diarrhoea diseases. In three districts where STBM is being implemented the

diarrhoea reduction is occurring consistently. Although the reduction trend is yet to be happen in the long term period (so far we have only 2 years trend), at least we start seeing the indication that STBM bring positive impact on the diarrhoea reduction as illustrated on the graphs below.

Figure 2: the number of diarrhea cases from 2009 to 2011 in Lembata District (Source: Lembata District Health Agency)

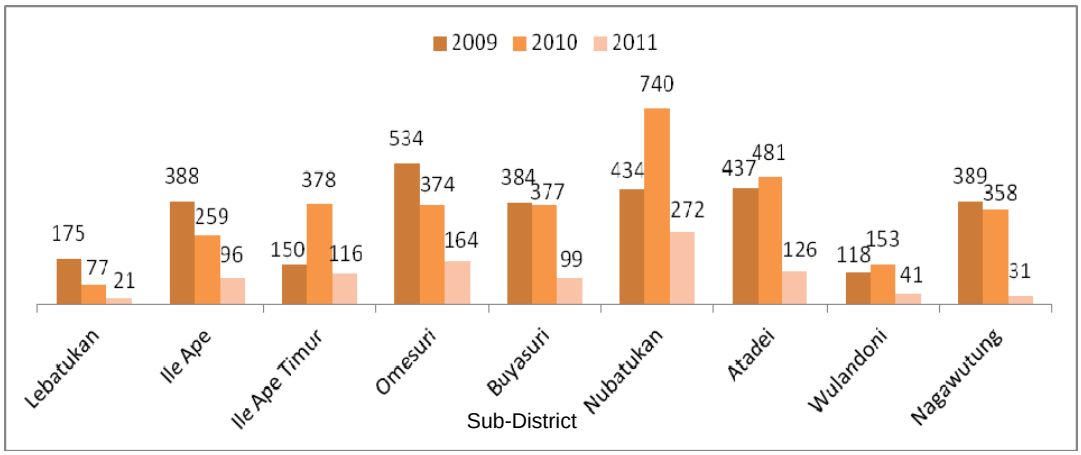
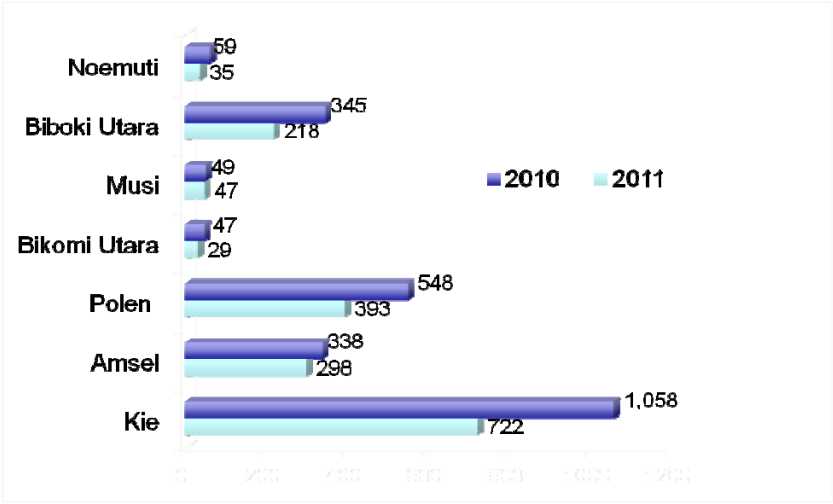


Figure 3: the number of diarrhea cases from 2010 to 2011 in TTS and TTU District (Source: TTS and TTU District Health Agency)



The fruitful result shown by figures above indicates that significant reduction of diarrhoea disease is going on in Lembata, TTS and TTU District. In Nagawutung Sub-District and Nubatukan Sub-District where the most significant diarrhoea reduction occurs (Figure 1), the decline of diarrhea from the year of 2010 to 2011 reaches up to 91% and 63%, respectively. In other districts named TTS and TTU where STBM is also implemented, the diarrhoea reduction is also happening. Within one year period from 2011-2012 the diarrhoea in TTS and TTU District is reduced around 27% and 34%, respectively. These data talks as the evidence-based result that STBM has succeeded in giving positive impact to reduce diarrhoea. While most of conventional sanitation projects in Indonesia are insufficiently providing information on whether they result the diarrhoea reduction –instead of keep updating the number of latrine built by

communities—Plan Indonesia shows that STBM has became the suitable method to gain the ideal impact of any sanitation-related projects: the diarrhea cases reduction.

Conclusion

The implementation of STBM is to represent a new paradigm: sanitation is to be approached through a behaviour-change lens, focus upon generating bottom-up demand for hygiene facilities, as opposed to a top-down, service-provision, and subsidy model. For Plan Indonesia this STBM project has been aided by a supportive enabling environment, in which government engagement and partnership has formed the foundation of the program approach. Nevertheless, the start-up investment of time and finances in order to generate momentum and pro-active support amongst district and sub-district government officials cannot be underestimated. While the full impact and success of this STBM project is yet to be fully seen, there are promising signals that such an approach provides a replicable model for achieving 90% diarrhoea reduction across an entire district, thereby offering hope that the government of Indonesia and its people can all enjoy the benefits of a healthy and hygienic environment.

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