National Civil Society Organizations Forum

Topic: Sanitation Technology Options

Title: ***Changing sanitation practices using the model village approach: A case of Kikandwa in Mukono district***

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Abstract

The Appropriate Technology Centre for water and sanitation is the research arm for the Ministry of Water and Environment. It undertakes action research, development and promotions of appropriate technologies in water and sanitation. Using the model village approach, ATC is studying adaptation potential and challenges of the different water, hygiene and sanitation technologies. With the guidance of the local government, Kikandwa village in Mukono district was selected for establishment as a model village. A number of hygiene and sanitation demos have been constructed. Hardware training and software activities have been conducted to promote sustainability, effective operation and maintenance and also mobilize for technology emulation by other community members. Monitoring and documentation is continuous. People in Kikandwa and the neighbouring villages have already shown the will and potential to replicate the technologies within however, poverty is still a challenge. ATC intervention has so far led to an increase in toilet coverage in Kikandwa village. The response from the community shows that the model village approach to research is promising.

Introduction

Poor hygiene and sanitation have had far reaching impacts on Uganda as a country. Approximately 23,000 people including 19,700 children under five, die each year from preventable diarrhea (WSP, 2012). Such death rates can be reduced greatly by improving hygiene and sanitation practices which would also impact on the quality of water. Open defecation is practiced by over 3.2 million people according to recent statistics from Water and Sanitation Program and the use of unviable latrine options if eliminated, can save Uganda a lot in terms of human and economic resources. Substantial work has been done on rural sanitation and hygiene but a lot more is still needed. The impact of prior interventions has been crippled by the biting poverty, poor technological options and cost factor causing people's failure to replicate options and adopt environmentally unsustainable approaches. There is thus need for a change of approach and it is against this background that Appropriate Technology Centre (ATC) uses the model village concept; a pro-poor approach i.e. promoting low cost sustainable sanitation options involving stakeholders at all stages of innovation and at the same time studying adaptation experiences.

Description of the Case Study – Approach

The ATC is conducting research on WASH technologies using the model village concept. Kikandwa village is located 22km east of Kampala, with capacity of 231 households is being used as a model village where the different WASH technologies are constructed and studied in real life use. At the project start, 14% of the village population did not have toilets; over half of the population wasn't practicing hand washing at critical times and access to clean water was a real challenge to some parts of the village. The entire village relied on three mainly boreholes for water supply (Bamutaze & Mutenyo, 2011).

Construction of demos

A village meeting was convened to select beneficiaries for the demo constructed. The following criteria were provided to guide selection of beneficiaries;

1. Willingness to contribute (Material, manpower, cash, etc)
2. Someone who will allow others to come to his/her premise and learn about the technology
3. A permanent resident and in possession of the land where the demo is to be installed
4. Willingness and ability to teach others how the technology works
5. Readiness to use the new technology immediately
6. Someone ready to maintain the technology as per the recommended guidelines

Over 26 people meeting the set criterion showed interest to have the demos constructed in their respective homes. The

community members present in the meeting screened for the three households that benefited from the first set of demos and the lucky ones were; Namwandu Miidu (a widow), Kironde Yunus and Elisa Miiro. Their households either had a problem of termites that destroyed the pit latrine or high water table that led to frequent collapse of latrines.

Before construction of the demos, ATC sensitized the community members about the different sanitation options including UDDT, aberloo, VIP and fossa alterna. Besides, a UDDT had earlier been constructed as a demo at the chairperson's home. All the three households chosen, preferred the fossa aterna toilets. Reasons for their preference were; i) the potential to yield manure for their gardens ii) the fact that the toilet usage does not differ so much from the traditional pit latrine. Thus, the three sanitation facilities constructed were mainly fossa alterna based on people's preference. In the process of construction community members expressed concerns about the inconveniences and cost of demolishing the superstructure when one vault of the toilet is full and rebuilding. This triggered discussions that materialized into technology development. Though the members were trained on construction techniques, operation and maintenance, one beneficiary interviewed indicated that she expects ATC to intervene when that time comes and help with dismantling and reconstruction of the superstructure to the alternative vault provided. Her argument was that being a widow and does not earn, she does not have financial resources to pay masons to do the job. This was an indicator that constructing a demolishable toilet super structure was not a viable option. In the consequent demos, ATC revisited the superstructure options to enhance compatibility; i.e., the third demo constructed at Miiro's home, the two pits were housed in the same permanent superstructure and the consequent demos were constructed with mobile super structures that can easily be fitted from one vault to another.

Catalyse replication and sustainability

To ensure continuity and enhance replication, ATC works around lowering the cost of the toilets by promoting use of locally available materials and avoiding unnecessary expenditure. We also fully involve sub-county, community development officers and community health workers so as to empower and enhance their scope and mandate to supervise, mobilise and ensure positive change in community WASH practices. A mobilization committee with a mason, VHT, local leader and a community member was formed and trained in mobilization skills, construction and maintenance of the sanitation and hygiene facilities. They are mandated to supervise, promote and mobilize for uptake by other community members.

Software activities

Software activities such as learning journeys, sanitation marketing and home improvement campaigns are continuously carried out in the village to promote exposure of other village members to the available technology options and availing the beneficiaries opportunity to share their experiences, operation and maintenance approaches. Such exposure learning will also be organized for stakeholders and communities outside Kikandwa village.

Main Results and Lessons Learnt

Training and development

Masons, farmers and village members have trained in the construction techniques, operation and maintenance as well as usage of bi-products. Over 8 sanitation demos with tippy taps have been constructed and the entire community was inspired, sensitized and exposured to sustainable sanitation.

Open defecation

The practice has significantly reduced as toilet usage is increasing. This was evidenced during the door to door household visits which revealed that some of the people who did not have toilets at the time of ATC's first intervention have gone ahead to construct. John, one of the people who had no toilet by then felt embarrassed and wondered how information about sanitation status had become public. He gives this as the reason that gave him determination to immediately start construction of a toilet with any available material after the village meeting convened by ATC. He used locally available materials mainly mud and wattle, reeds, grass and banana fibre to construct his toilet.

John has become a sanitation ambassador in his village circles. He is a living example and actually encourages others to follow his suit. Several times he has had talks with Kiyondo who is believed to have a big family of over 8 people and has no latrine. John talked to Kiyondo about the importance of having a toilet and gave him advice on termite resistant logs to use and encouraged him to start off arguing that it is only a matter of determination. Though he hasn't gone constructed a toilet, Kiyondo promised to do so as soon as possible. Others community members like Mary and

Lubega have also followed john's example. ATC will conduct a midterm survey to establish how many additional new latrines have come on board since start of intervention.

Technology replication

Slowly community members have began to appreciate the technologies introduced. There is evidence of two households that have already prepared materials for construction of ecosan and one is planning to construct the fossa alterna. Besides, there is evidence of people from neighbouring villages visiting to learn about the technologies. As a result one person in the neighbouring Ndese village has constructed the UDDT using a mason trained by ATC and NETWAS.

Lessons learnt and way forward

The model village approach

The model village approach is a promising undertaking to research and promotion of appropriate water and sanitation technologies. With its uniqueness; it empowers the community, brings services closer to the people and provides the necessary data on adaptation and potential of the different technologies. The village people show eagerness to learn and identify with the innovations and also participate in construction of the facilities at will. The potential to replicate the technologies is already evident due to the fact that there are isolated cases already spotted having either replicated or prepared to start of toilet construction using similar technologies and masons trained by ATC.

Sanitation demos constructed

The fossa alterna latrines are popularly preferred in the village compared to other appropriate sanitation options because they are fairly low cost, have the potential to provide fertilizers yet their usage is not very different from the traditional pit latrines.

Part of the village lying in the high water table has no safe water source nearby. However, it is covered with pit latrines posing a danger of contaminating the underground water. This part of the village has a potential for shallow well development and self supply. But, there is need map and eliminate all the pit latrines in the area and in their place promoting sustainable latrine options to protect the underground water.

Conclusion

The will to take up appropriate technologies has been cultivated in the village but the challenges of financial constraints remain a hindering factor. Among its work, ATC researches on how to reduce the cost of appropriate sanitation technologies to enable communities appreciate and take up initiative to replicate them.

References

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Bamutaze, Asha & Mutenyo, Isaac (2011). Promotion of appropriate technologies in water and sanitation using the Village Model Concept: The Case of Kikandwa village, Mukono district'. RWSN: Kampala.