30th WEDC International Conference, Vientiane, Lao PDR, 2004

PEOPLE-CENTRED APPROACHES TO WATER AND ENVIRONMENTAL SANITATION

An end to Open Defecation: Process, Cost, Motivation and Sustainability

T.R. Noor and S. Ashrafee, Bangladesh

Since 2000, Village Education Resource Centre (VERC) and WaterAid Bangladesh (WAB) have in partnership been pioneering a Community Led Total Sanitation Approach (CLTS), leading to an end to open defecation in over 100 villages in Bangladesh and not exclusively reliant on addressing traditional indicators such as latrine coverage and hygiene behaviour change. To explore the process, cost, motivational and sustainability factors which could support a wider application of this approach, a study was initiated through collaboration between Sophie Allan, a Master's student at the London School of Hygiene and Tropical Medicine, and Tawheed Reza Noor of WAB. WAB and VERC then undertook additional research activities including investigation of local government perceptions. Findings highlighted the extremely low cost of the latrines built, the importance placed upon prestige and practical need over health, the self-determined progression of households up the sanitation ladder and the enthusiastic support of local government officials.

Scenario

Lack of access to safe water and sanitation is a prime problem of Bangladesh. Sanitation activities in rural Bangladesh (then East Pakistan) were first initiated by the ruling Government with WHO support during the 1950s, whilst involvement of NGOs in the sanitation sector began in the 1970s [Government of Bangladesh (GoB) + United Nations Children's Fund (UNICEF), 2001].

In 1991, a 10 year national sanitation strategy was formulated and the country-wide sanitation program moved into a much higher gear. In 2000, according to World Health Organization (WHO), UNICEF and Water Supply and Sanitation Collaborative Council (WSSCC) Global Assessments of Water Supply and Sanitation - the urban, rural and total sanitation coverage were 82%, 44% and 53%, respectively. In 2003 a countrywide survey of 21.08 million households, of the existing sanitation situation was undertaken by the GoB [GoB 2003]. The results showed that only 32% of households use sanitary latrines, 25% use unhygienic latrines and 43% use no latrine. It is reported that access to effective sanitation (latrine) in rural Bangladesh is only 15 percent [Kamal Kar, 2003].

Side by side with Government efforts, many other sector actors have been playing vital roles. Amongst them, WaterAid Bangladesh, an international NGO, has been supporting a community led total sanitation approach with its partner organization Village Education Resource Centre (VERC) since early 2000. The community people under this programme have completely stopped open defecation in over 100 villages throughout Bangladesh, without provision of any subsidy.

The processes and motivational factors leading to an end to open defecation, and indicators of sustainability, were investigated through a collaborative study between Sophie Allan, a Masters student at the London School of Hygiene and Tropical Medicine, and Tawheed Reza Noor of WAB. The findings of this study have been reported independently, in partial fulfilment of Ms Allan's Masters Degree. WAB and VERC then undertook additional research activities including investigation of local government perceptions of the approach.

Objectives

- To document the process at the field level based on community perception
- To investigate the cost of household latrines
- To investigate the motivational forces for behaviour change
- To explore community level perception of sustainability in older and newer villages
- To identify indicators of sustainability
- To determine local government perceptions and support mechanisms

Methodology

The study spread over 7 months starting from June 2003. In addition to secondary documents review, the study included systematic fieldwork during July and August.

Both qualitative and quantitative methods were used in this study. Qualitative methods included rapport building, village transect, direct observations, focus group discussions (FGDs) with mothers and children, group discussions with villagers and WATSAN Committee members. The study also included a 20% household level survey. Semi-structured interviews

were a common vehicle throughout the study.

Study village selection

As one of the study objectives involved a comparison of "older" project villages (announced an end to open defecation in 2001) with "newer" ones (announced an end to open defecation in 2003), two separate districts were chosen: Rajshahi district which has mainly old and mid-range villages and Naogaon district which has mainly newer project villages.

For Shuvodanga Union in Rajshahi the team made a list of the 'older' villages and randomly selected two, namely Roypara and Dighipara. For selecting newer villages, the same strategy was applied and for Kusumba union the two villages selected were Middlepara and Southpara. The project operates at para (sub-village) level as paras were considered as appropriate units of study.

Key findings

Process

The main strength of this program is the process itself. Increased local commitment and participation in improving the current water, sanitation and hygiene behavior situation plays the vital role in CLTS approach.

In this process, components like community mobilization, goo site visits, 'goo' calculation, participatory situation analysis and CBO formation made people readily inspired to turn around and respond positively. As a result of this, motivated and ignited people of the area start stopping century long open defecation habit. Shifting from open defecation to latrine use becomes the common picture in the program areas. Side by side, people also get going with other hygiene practices. Quality facilitation from VERC backed by WAB made all these unbelievable work possible.

For accelerating this process, spread effects also played a very strong role. Neighbouring villages had a very quick response while villagers came to understand what changes being made in an adjacent village, which has been announced as a 100% open defecation free area. It took only 6 months, rather than 17 months in announcing those neighbouring villages as totally open defecation free area.

Latrine cost

The minimum cost of latrine found in the study villages was 0.16 GBP (around 15 taka). Note: (1GBP ~ Tk94)
The model consists of a bent piece of tin set over a mud pit. Though very cheap, the latrine is user-safe and hygienic.

Motivational Factors

Motivational factors identified in the study were categorized into 9 themes including prestige (status, being modern, social pressure), practical (life improvements, time & money saving), well-being (religious-purdah), psychological (menstrual management), aesthetic (odour, flies, appearance), health (diseases, safety), process (goo- calculation, slogans, rallies), amusement (increased space and time for games) and external (visits of expatriate in the model village) factors.

Table 1. Latrine Costs

	Med cost GBP	Min cost GBP	Max cost GBP
Older Villages			
Roypara	2.98	0.16	8.51
Dighipara	4.26	0.64	106.38
Newer Villages			
Middlepara	6.12	0.16	265.96
Southpara	0.64	0.16	58.51

Table 2: Group-wise Motivational Factors in Latrine Adoptions

Motivational Factors	C	M	V
Prestige Factors	■	■	▒
Practical Factors	▒	■	■
Well-being Factors		■	▒
Psychological Factors		■	
Aesthetic Factors		▒	▒
Process Factors	■		■
Entertainment Factors	▒		
Health Factors	▒	▒	■
External Factors			

Note C, M and V imply children group, mothers group and villagers group, respectively. Dark box implies frequently mentioned; light box implies sometimes mentioned and left up diagonal box implies hardly mentioned

The study finds motivational factors vary from group to group (see table 2). Such as Children Group frequently mentioned process factors and prestige factor as their main motivations for using latrines whereas mothers' groups identified the prestige factors, well-being factors and practical factors.

Increased space due to latrine use made children able to play. Sometimes they reported that this (amusement factors) also worked as a driving force in stopping open defecation.

Other than health factors, common villagers identified practical factors (faeces free paddy fields and bamboo gardens and fuel collection not restrained due to faeces) , process factors, and external factors as the strongest motivations for using latrines.

Signals of sustainability

The sustainability is one of the most important tasks in the process. However, due to community voice and choice in the decision-making process, along with their higher contribution, the Water, Sanitation and Hygiene Promotion Program of VERC became much more sustainable than in the past.

The study team witnessed some indications of sustainable behavioural changes taking place in the community during fieldwork. Community people, irrespective of age, sex and socio-economic status, are involved in the process. Community people acknowledge that they are heading towards a healthy environment. While talking with children, they pledged to build their latrines when they grow up. Children promised not to go back to open defecation ever. The whole process itself signals sustainable progress.

To gauge whether movement up this "sanitation ladder" is occurring, villagers were asked, during the household survey, whether they had ever had to, or had chosen to, replace their latrine for any reason (e.g. because the latrine was destroyed by flooding, had filled up etc). If the latrine had been replaced, the participant was asked whether the replacement latrine was more or less expensive than the previous one. The assumption was made that a more expensive latrine was synonymous with (and therefore a good proxy for) an improved latrine, indicating progression up the sanitation ladder (Allan, 2003). The results are shown in table 3 and figure 1.

Table 3 suggests people did not go back to open defecation while their pits have been filled up.

Table 3. Actions taken once pit is full

	Roy para	Dighi para	Middle para
	%	%	%
Pit filled up	25	47	50
Full pit emptied	50	29	20
Full pit replaced	50	71	80
Return to open defecation	0	0	0

In figure 1, a trend of latrine models chosen during replacement is shown. It is clear from figure 1 that community people are moving up in the sanitation ladder. The figure shows in older villages people who replaced latrines due to any reason chose more expensive models (100% in roypara and 75% in dighipara).

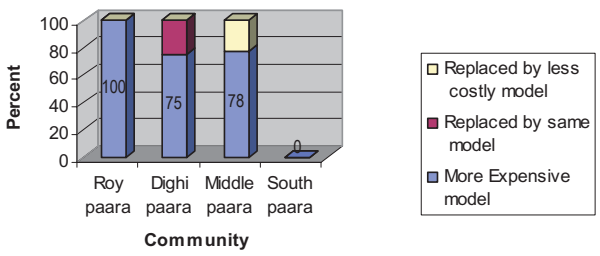

Figure 1. Latrine models chosed during replacement

Sharing latrines

Although the study areas declared as 100 percent open defecation free but it is not the case that each household owns a latrine; rather people are sharing latrines with others who do not have any.

Latrine sharing trend shows a gradual increase in coverage in the villages (see figure 2). In the older villages, overall 15 percent households are using other's latrines whereas in the newer villages around 40 percent households are still using latrines of other people. It gives us an idea about diminishing trend in latrine sharing. It reveals the fact that older villages are nearly at the full coverage in terms of latrine installation whereas newer villages need more time for full coverage. Other signals of sustainability spotted in the study are: area improved affordability, reliability, flexibility of the approach, community participation ensured, commitment, convenience, extra waste management, problems overcome, challenges taken, recognition, local talents and innovations, expanding market, local traders and catalysts.

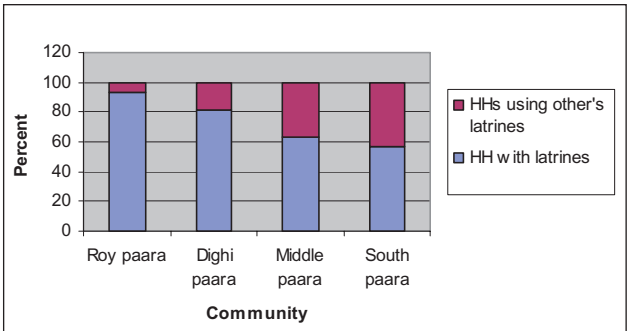

Figure 2. Latrine sharing pattern

Local Government involvement

Senior VERC staff believe that since each union parishad has a mandatory water and sanitation component, their involvement and support of the 100% sanitation approach should be viewed as an important sustainability indicator. VERC are confident that the GoB will support the 100% sanitation approach: "…key people are already convinced that the approach can be replicated and can be affordable…" [Hossain, Y. (VERC), 2003, personal communication], and as such are advocating it at national policy level in conjunction with donor agencies.

Local Government's perceptions on CLTS approach

The study team came to identify a very positive tie up taking place between community based organization (Watsan committee) and local government representatives.

Local Union Parisad Chairmen and Members are well aware of the approach and they appreciate VERC's facilitation in the area. For stopping open defecation, they witnessed active participation of community people. According to them integrated work is needed if the whole union is to be covered. All sector actors to be brought in on the same platform. Cooperation from different political parties, educational institutions and social institutions are also needed for ensuring implementation. They believe if people were get habituated with this type of activities then the efforts would be sustained.

Learning points

- The approach has a powerful demonstration effect
- Community people are themselves capable enough to make the area 100% open defecation free
- 100% sanitation can be achieved without subsidy and through social mobilization
- Minimum costs of a latrine ranges from 0.16 to 0.64 GBP as maximum use of local materials and community designed models are being implemented
- Motivational factors vary from group to group but place prestige and practical factors above health
- Motivated people hardly ever go back to open defecation, instead they take on the responsibility to replace or upgrade their latrine
- There is enthusiastic support from local government which may be converted into practical support for sustainability
- The approach is sustainable if the community people owns it
- The involvement of local government is an important factor in making the approach sustainable

References

Government of Bangladesh and UNICEF (2001) Environmental Sanitation, Hygiene and Water Supply in Rural Areas of Bangladesh – Inception Report.

WHO, UNICEF, WSSCC (2000) Global Water Supply and Sanitation Assessment

GoB (2003) Bangladesh Country Paper on Sanitation, SACOSAN 21-23 Oct 2003

Kar, Kamal (2003) Subsidy or Self-respect? Participatory Total Community Sanitation in Bangladesh; IDS Working Paper

Allan, Sophie (2003) LSHTM, The WaterAid Bangladesh-VERC Sanitation Approach: Cost, Motivation and Sustainability

Acknowledgements

Jane Crowder
Tapan Kumar Saha
Rahima Khatun
Forman Ali

Contact address

Tawheed Reza Noor
Programme Co-ordinator
- Research, Learning and Documentation Team
WaterAid Bangladesh
House 123A, Road 4
Banani, Dhaka, 1213

Sonia Ashrafee
Programme Officer
– Research Learning and Documentation Team
WaterAid Bangladesh
House 123A, Road 4
Banani, Dhaka, 1213