

## Community-Led Total Sanitation in Rural Areas

# An Approach that Works

Sanitation programs have, for some time now, incorporated the need to raise awareness and emphasize the benefits of toilet usage. This has been most effectively undertaken by empowered communities motivated to take collective action, with the local governments and other agencies performing a facilitating role.



At the heart of this approach lies a paradigm shift to collective behavior change in creating open defecation-free environments.

## Executive Summary

Sanitation remains one of the biggest development challenges in all developing countries. Improving sanitation is the key to achieving the health-related Millennium Development Goals (MDGs) of reducing child mortality and combating disease. However, these outcomes will remain pressing and persistent concerns for many nations even as they approach the goal of halving the number of the world's poor by 2015, which in turn will have considerable bearing on the progress of attaining this goal by itself. A focus on appropriate outcome-oriented approaches to rural sanitation is critical, given that a majority of poor households continue to live in rural areas.

Conventional approaches in South Asia have attempted to tackle the issue of poor sanitation by trying to improve coverage and access with financial support for constructing toilets. However, for many years it has been evident that providing subsidies for construction of individual toilets alone does not necessarily translate into usage. Behavior change is a key ingredient for this to occur. Sanitation programs have, for some time now, incorporated the need to raise awareness and emphasize the benefits of toilet usage. Even this marketing of sanitation, in order to create individual demand (often combined with subsidies linked to toilet construction by households) has not necessarily resulted in significant progress in securing the desired outcomes from sanitation programs in the region.

It is in this background that the significant results demonstrated by a recent approach adopted in South Asia have drawn attention. At the heart of this approach is a shift away from the provision of subsidy-led toilets for individual households and emphasizing not merely behavior change by individuals in general but of an entire collective, to achieve 'open defecation-free' villages. The objective is to reduce incidence of diseases related to poor sanitation and manage the public risks—posed by the failure to safely confine the excreta of some individuals—at the community level. This has been most effectively undertaken by empowered communities motivated to take collective action, with the government and other agencies performing at best a facilitating role. There is a growing recognition that this evolving approach, often referred to as Community-Led Total Sanitation (CLTS), offers tremendous potential not only for achieving, but even for surpassing, the relevant MDG targets set for 2015.

## Why is Rural Sanitation a Concern in South Asia?

Despite significant progress in Bangladesh, and some improvement in India in recent years, sanitation coverage in the rural areas of South Asia continues to be a matter of concern. It was estimated in 2003 that approximately 653 million people (76 percent of the total population of the region) still lack access to adequate sanitation.<sup>1</sup>

The practice of open defecation by the majority of people in this region is one of the most serious environmental threats to public health. Open defecation and the failure to confine excreta safely are primary factors that contribute to the spread of disease and infection through the bacteriological contamination of water sources and the transmission of pathogens through the fecal-oral route. Improved hygiene practices by entire communities, including the use of sanitary toilets, can effectively break this cycle of disease transmission. Policy intervention to help achieve this objective could reduce the disease burden by as much as 50 percent.<sup>2</sup>

<sup>1</sup> Joint Management Programme 2004.

<sup>2</sup> Planning Commission of India, Mid-Term Appraisal of the Tenth Plan, 2005.



Preferred usage of subsidized toilets.

### What has Been the Approach So Far?

Traditionally, sanitation programs in the region have focused on providing toilets, usually on a subsidized basis, rather than on motivating their usage. Evidence now overwhelmingly points to the fact that providing subsidized toilets does not necessarily lead to enhanced usage or ensure behavior change for all the households or the entire community. The focus mostly remains on construction of toilets in rural areas either directly by the government or by providing a high level of subsidy to beneficiaries. In

India, till recently, the national government provided financial assistance to identified poor (below poverty line) families for constructing toilets of a specified design. In addition to this assistance, many state and provincial governments across the South Asia region had introduced their own schemes of providing subsidy, often covering an even wider segment of the population. For example, in Bangladesh, early initiatives in sanitation focused on the distribution of fully-subsidized sanitation hardware.

### Box 1: What are the Outcomes of Hardware-Driven Programs?

The Government of Andhra Pradesh has, over the past few years (post-2001), committed considerable funds to a statewide sanitation program providing subsidies for the construction of toilets in rural areas (under the program, each household is given approximately US\$ 16 and 100 kg rice coupons). Substantial coverage has been achieved under the program, and some 2.95 million household toilets have been constructed during this period. However, random concurrent evaluation shows that an estimated 50 percent of these subsidized toilets remain unused or are being used for purposes other than sanitation. Similarly, in Maharashtra, 1.6 million subsidized toilets were constructed during 1997-2000 but concurrent evaluation by the government puts usage at around 47 percent. In the small state of Himachal Pradesh, over 0.3 million toilets have been built through a subsidy-driven program in the 1990s, but random evaluation in 2003 showed usage of less than 30 percent.

Sources: WSP-supported Rural Water Supply and Sanitation Sector Assessment Study in Andhra Pradesh, 2004; Unpublished reports/official statements from the Government of Maharashtra; WSP-supported study on Rapid Assessment of Rural Sanitation in Himachal Pradesh, 2003-04.

The reason why people defecate in the open is not necessarily due to lack of toilets.

## Key Issues

### Does Subsidized Construction of Toilets Lead to Usage?

While investment in toilet construction through the provision of generous subsidies for hardware to households has, to some extent, increased the reported coverage of sanitation in the region, subsidy-driven programs do not generate motivation for use of the facility. Indeed, subsidized toilets are often not used or lie abandoned, or are being put to alternative uses.

Recent studies of statewide sector assessments in India show that most people continue to defecate in the open not due to a lack of access to toilets but primarily because they see no reason to change their behavior because awareness of associated health risks is limited or ignored. In fact, usage of toilets is highest where households recognize the need for toilets and therefore, construct them on their own.<sup>3</sup>

### Can Health Outcomes be Achieved if Only Some Households Use Toilets?

It has been observed that even where higher access and usage of sanitation facilities by several households has been reported, improved public health outcomes have not necessarily been achieved. This is because even if some people still continue to practice open defecation, the surroundings are not free from fecal contamination. Public health outcomes can be achieved only when the entire community adopts improved sanitation behavior, the area is 100 percent open defecation-free, and excreta is safely and hygienically confined. This is possible only when the collective is made aware of the negative effects of poor sanitation, sensitized about the fecal-oral transmission route, understands the link between sanitation and health, abandons the traditional practice of open defecation for ever, and every member of the community has access to, and uses a, sanitary toilet ensuring safe disposal of fecal matter.

### What are the Limitations of the Generally Practiced Approach to Behavior Change?

The general practice is to focus on inducing behavior change in

Table 1: Individual Sanitation Practices Affect the Entire Community

Category	Users of toilet (%)	Prevalence of diarrhea (%)
Open defecation—prevalent villages	29	38
Almost open defecation-free villages	95	26
Open defecation-free villages	100	7

The table shows that rural households in Himachal Pradesh with limited toilet coverage reported a high diarrhea recall (up to 38 percent). Even villages with close to 100 percent household toilet coverage showed a significantly high recall of diarrhea incidence. Only villages declared to be open defecation-free, with 100 percent toilet usage, reported a significant drop in diarrhea recall to 7 percent.

In effect, even if a small segment of the population continues to practice open defecation, the risk of bacteriological contamination and disease transmission may continue to be high.

Source: Formative research by WSP-Knowledge Links for IEC Manual in Himachal Pradesh, 2005.

<sup>3</sup> Rapid Assessment of Rural Sanitation in Himachal Pradesh (WSP) in 2003-04 and Andhra Pradesh RWSS Sector Assessment (WSP), 2004.

individual households (often along with hardware support) with the idea that these efforts would gradually include the entire community. However, this approach does not recognize the fact that till the entire community adopts the required behavior change, there would be no real benefit from improved sanitation.

The attempt is to promote toilet usage by highlighting advantages such as convenience, privacy, and dignity. The

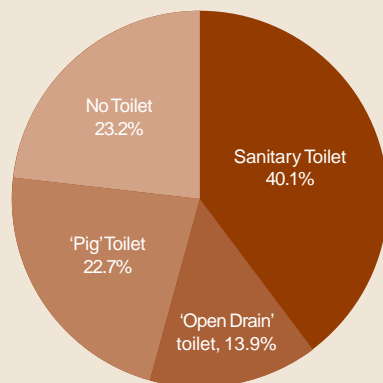
key message—the public health impact of sanitation—is subsumed within these concerns. This can lead to toilets being constructed and even being used by those who need them, but does not necessarily result in instilling sustained behavior change by all members in the entire community, which is what will lead to significant improvement in the environment and achieve the public health outcomes that are the fundamental objective of improved

sanitation. It may also result in the construction of unsanitary toilets that fail to confine excreta safely.

In order to negate the adverse consequences of poor sanitation and to secure the benefits envisaged from improved sanitation, it is imperative to ensure collective action motivated primarily by the need to change behavior. This change can only be sustained if collective action is the result of self-realization by the community of the adverse consequences of prevailing practices. Igniting self-realization in the community about the negative effects of open defecation along with the adoption of improved and hygienic practices that ensure a safe, sanitary, and open defecation-free environment is another critical element lacking in traditional approaches.

Rather than being driven by targets for the construction of toilets in individual households, as in traditional approaches, sanitation programs must shift their focus to measuring outcomes based on stimulation of effective demand in communities as a whole. The Community-Led Total Sanitation (CLTS) approach seeks to address the various lacunae in traditional approaches highlighted in the foregoing discussion.

**Figure 1: Increased Access May Not Translate into Improved Public Health Outcomes**



- Bacteriological loading of ground water in Goa is 1,000 times the permissible drinking water limit.
- Sample surveys indicate that 90 percent of the wells in Kerala are bacteriologically contaminated.

In India, the states of Goa and Kerala have the highest access to toilets (over 80 percent), which has been driven by the urbanized nature of these states and the lack of convenient space for open defecation. However, studies indicate that the bacteriological contamination of water in these two states remains high as a result of the continuance of poor sanitation practices and the use of inappropriate toilet designs or technology.

Source: RWSS Sector Assessment of Goa and Kerala (WSP), 2005.

## Pilots evoked interest among policy makers in South Asia to strengthen sanitation programs.

### What is Community-Led Total Sanitation?

Community-Led Total Sanitation (CLTS) is based on the principle of triggering collective behavior change. In this approach, communities are facilitated to take collective action to adopt safe and hygienic sanitation behavior and ensure that all households have access to safe sanitation facilities. This approach helps communities to understand and realize the negative effects of poor sanitation and empowers them to collectively find solutions to their sanitation situation. In the process, the community is sensitized of the consequences of poor sanitary practices, commits itself to finding own solutions, and finally is liberated from open defecation. This helps in creating a receptive environment for the adoption of improved practices in personal hygiene, safe handling of food and water as well as safe confinement and disposal of excreta and waste.

#### The CLTS Approach: The Beginnings

In Rajshahi district, Bangladesh, a unique community mobilization approach was piloted in 2001 by the

Village Education Resource Centre (VERC), a local nongovernmental organization (NGO) and partner of WaterAid Bangladesh, to achieve total sanitation coverage. The approach 'triggered' the community to achieve a total ban on open defecation within the village, without any external subsidy, and based entirely on community mobilization. Communities used their own resources, established action committees, developed innovative low-cost technologies, monitored progress, and ensured that all households adopted fixed-point safe and hygienic defecation practices. External agencies only facilitated the process.<sup>4</sup>

The Rajshahi initiative demonstrated a paradigm shift in promoting improved sanitation practices through a community-focused strategy. However, the approach to scaling up was modest and only a village-by-village upscale was attempted.

#### Widening the CLTS Base: Scaling up from Pilot to Program

The Rajshahi pilot evoked interest in India, leading to visits by policy makers from that country facilitated by Water and Sanitation Program-South Asia (WSP-SA). Representatives from the state government of Maharashtra were among these visitors. The



Community triggering process.

Government of Maharashtra had already launched the *Sant Gadge Baba Clean Village Campaign*, an innovative scheme to reward local governments, and was looking at ways to strengthen sanitation outcomes and take forward the program in the state.

Based on the visits to Bangladesh and dissemination of lessons in workshops, Maharashtra formulated a strategy to end open defecation in the state. It was recognized that replicating the Rajshahi model in totality would have limitations for scale up. Accountable institutions would need to be involved to provide the necessary support mechanisms to sustain the change process for long-term benefits. The key features of the Maharashtra approach were to bring local governments to the fore, provide fiscal support to the poor through the

<sup>4</sup> This process has been documented in *Jal Manthan*, 5 and 7, (2002), available online at [www.wsp.org](http://www.wsp.org). Also Dr Kamal Kar, 2003, 'Subsidy or Self Respect', Institute of Development Studies, University of Sussex, United Kingdom.

collective *post facto* achievement of an open defecation-free environment, and link the state reward scheme to collective outcomes to ensure credible and transparent monitoring and evaluation of outcomes. Program implementation was visualized in a campaign mode with a strong emphasis on information, education and communication activities, exposure visits to best performing villages, and handholding workshops to help in the dissemination of lessons and sharing of experiences.

The Bangladesh visits and Maharashtra initiative also assisted in revising the national sanitation guidelines in India and contributed in introducing the concept of the need to create open defecation-free villages. To support the development of open defecation-free villages, a national-level fiscal instrument, the *Nirmal Gram Puraskar* (NGP), was launched in 2004. This rewards local governments on achieving open defecation-free areas within their administrative jurisdiction (see Box 4). Similarly, Bangladesh learnt from India, especially from Maharashtra, the approach of involving local governments, incentives directed at communities, and rewards to local governments on post-achievement of open defecation-free areas.

### Box 2: Key Principles of the CLTS Approach: The Maharashtra Experience

Igniting behavior change and eliminating open defecation, not just building toilets.

Focusing on outcomes, not on hardware inputs.

- *Collective action*: Mobilizing the community rather than establishing household contacts.
- *Local choice*: Accommodating a variety of technological options and getting people to access affordable technologies.
- *Setting up appropriate institutional frameworks*: Giving local governments a central role in scaling up and sustainability.
- *Incentives*: Directing incentives to the community and rewarding outcomes, rather than subsidizing household toilets.
- *Market development*: Promoting the availability of sanitary materials and allowing private suppliers to respond to the demand.

### Box 3: Involving Local Government in Scale up

The 'public good' dimension of sanitation requires government intervention given its reach and mandate, ideally at the local level. In CLTS, local governments play a vital role in facilitating the mobilization of communities for collective action. They also help to develop local action plans including planning mobilization strategies, thinking of low cost technology options, providing incentives, developing the supply market, monitoring the implementation process, and achieving sanitation outcomes. Local governments are well positioned to ensure long-term benefits and sustained collective behavior change through local monitoring processes. While nongovernmental organizations' (NGOs) initiatives have been successful in demonstrating the CLTS approach, experience shows that the involvement of the local government legitimizes local action and accelerates scaling up. An NGO's actions are strategically utilized by local governments for mobilizing communities.

## Providing fiscal incentives demonstrates a substantial shift in sanitation financing.

### Box 4: India: Scaling up Sanitation Nationwide Through *Nirmal Gram Puraskar*

The *Nirmal Gram Puraskar* (meaning ‘Clean Village Prize’) was introduced by the Government of India in 2004. The scheme offers cash rewards to local governments that achieve 100 percent sanitation (that is, that are open defecation-free *and* have also tackled the issues of liquid and solid waste). Providing fiscal incentives demonstrates a substantive shift in intergovernmental fiscal transfers—from financing sanitary inputs, such as household toilets, to an approach that emphasizes demand creation and rewards communities for collectively achieving sanitary outcomes. By providing incentives to community efforts to meet collective gains in sanitation, the scheme helps to raise the status of the village, create peer pressure among neighboring villages, and foster competition among all tiers of governance within and across states.

The response to the scheme has been tremendous. In February 2005, for instance, 38 *gram panchayats* (the lowest tier of elected rural local government) received the *Nirmal Gram Puraskar* and in February 2006 this number went up to 760 *gram panchayats* and 9 block *panchayats* (an intermediate tier of elected rural local government).

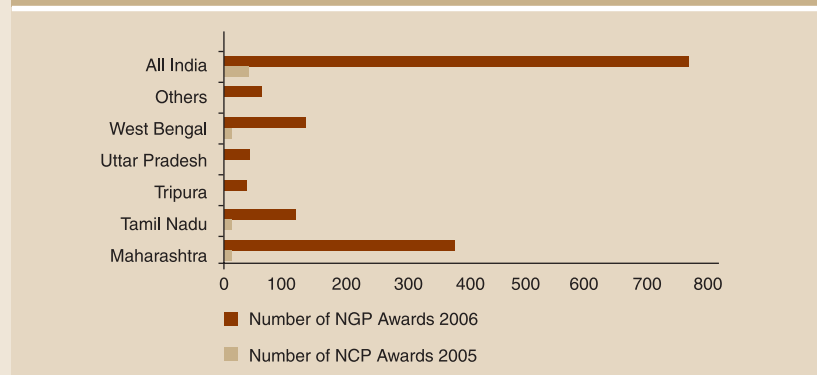


**Children's brigade in action:** No more open defecation, stop polluting water!

## The Spread of the CLTS Approach in Maharashtra and Beyond

The Government of Maharashtra introduced the CLTS approach in two pilot districts in 2002 and encouraged other districts to learn from these experiences. In 2005, the state formally decided to scale up its efforts across the state. The success of combining local government participation and community-led initiatives is evident from the results of rapid scale up. From a situation of constructing 1.6 million toilets with state government support and not having a single

### State Performance for *Nirmal Gram Puraskar*: 2005 and 2006



Source: Rajiv Gandhi National Drinking Water Mission, Department of Drinking Water, Government of India, March 2006.



open defecation-free village in 2002, Maharashtra had reached more than 3,800 open defecation-free villages by the middle of 2006. The state now has over 5 million households living in open defecation-free villages, and based on the current growth rate, the state government is set to achieve an open defecation-free environment by 2008 for its entire rural population of more than 50 million.

Other Indian state governments have begun to exhibit an interest in the approach. Himachal Pradesh has formally adopted a strategy to pursue the CLTS approach, and Madhya Pradesh and Haryana are set to follow. Within South Asia, there are efforts in Pakistan and Nepal to take up the approach, while CLTS has been introduced as a national program in Indonesia and Cambodia.

## Accelerating Sanitation Coverage in Bangladesh

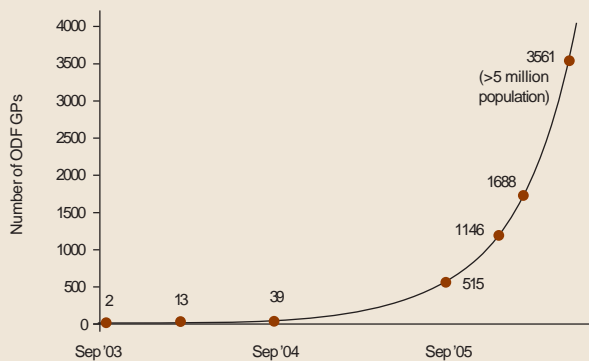
Based on the home-grown approach of CLTS in Bangladesh, the Maharashtra experience of the effectiveness of involving local government, as well as the introduction of a national reward scheme in India, the Government of Bangladesh formulated a national strategy to accelerate sanitation promotion by local government involvement and facilitate the process of scale up.

In 2004, the Government of Bangladesh made a marked shift in policy by allocating 20 percent of the annual development budget to local governments for the promotion of

sanitation. The national government also instituted a reward for open defecation-free union *parishads* (elected rural local government bodies). Over the past two years, 10 percent of union *parishads* in the country have achieved open defecation-free status. CLTS has been able to address the challenge of eradicating open defecation in Bangladesh, with over 70 million people adopting safe sanitary practices in just over five years.

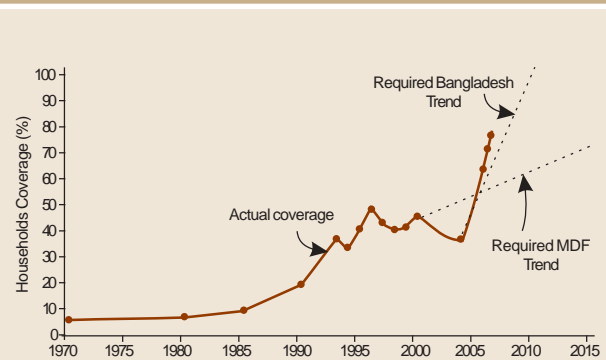
The scale up of this community-based approach and the involvement of local governments have resulted in a phenomenal growth in sanitation coverage. With over 70 percent coverage now, the Millennium Development Goal target for sanitation in Bangladesh has already been achieved and the country is ahead of its target to achieve 100 percent sanitation coverage by 2010.

Figure 2: Growth in Open Defecation-free Gram Panchayats



Source: Government of Maharashtra, March 2006.

Figure 3: Sanitation Coverage in Bangladesh



Source: Bangladesh Bureau of Statistics, UNICEF National Sanitation Secretariat. Prepared by Shafiul Azam Ahmed, WSP-SA.

## Communities and local governments are the key stakeholders in Community-Led Total Sanitation.

### How Does CLTS Address Critical Elements in Implementing a Sanitation Program?



Although CLTS is showing remarkable results on the ground, there is skepticism about whether this approach can address various elements critical in implementing sanitation programs. Issues of building awareness on a mass scale, affordability by poor people, appropriate technology for difficult hydro-geological and topographical situations (availability of water, high water tables, hard rock terrain, and so on), supply chain arrangements, and availability of necessary skills in rural areas have all been central in devising sanitation strategies over the years. The question often posed is: How can CLTS, with its emphasis largely on igniting collective behavior change through interpersonal communication, address these concerns?

The question is based on an inadequate appreciation of CLTS as it has evolved since it was first piloted. The CLTS approach takes into account these core issues. It

advocates that these issues are best tackled not through a prescriptive top-down approach but by relevant institutions undertaking appropriate roles. CLTS requires communities and local government on the one hand and higher tiers of government or external agencies on the other to assume different roles in the implementation of a sanitation program. Communities and local government are the key stakeholders in CLTS. Once the need for the collective to change its behavior is realized and established, the collective are facilitated to find ways to resolve any problems posed by affordability, technology, physical environment, and the like. The higher tiers of government are expected to design policy and render implementation support in a manner that facilitates and does not dilute the process of self-realization by the community and its desire to undertake collective action to become open defecation-free. Policy and strategies are expected to create an enabling

environment for CLTS to succeed in matters like channeling fiscal support for inducing collective behavior change for improved sanitation and rewarding outcomes. In addition, higher tiers of government or external agencies also have a role in implementation. They are expected to play a facilitating role that assists in both mobilizing communities and stimulating demand for awakening collective action as well as enabling the community to make informed choices on issues like assisting the poor, choosing between technologies, arranging supplies, and related matters.

**Supporting collective behavior change at scale:** It is generally perceived that as CLTS requires effective and in-depth facilitation to enable communities to work together, this approach can only be effective (a) where government programs are committed to support capacity development; and (b) where committed NGOs are available. In the absence of committed NGOs, there may not be adequate capacity to mobilize communities. However, these gaps are to be filled by creating a cadre of skilled and committed trainers (by drawing on committed personnel even from within the government system as well as drawing on resources from civil society, engaging para-professionals, and so on) to ignite behavior change and mobilize communities. Various support groups can be identified and

involved as motivators to facilitate community mobilization and assist in demand stimulation. For example, in Rewa district in the Indian state of Madhya Pradesh, the district administration created a band of 600 motivators to fan out to all the villages in the district, by designing appropriate training modules and imparting training through master trainers. Similarly, in Bangladesh, the decentralized total sanitation project creates an army of trained local level motivators and sets up area level task forces for community action.

**Addressing the needs of poor people:** The CLTS approach requires that every household in the community, including those of poor people, should participate in this movement. Implicit in this is a recognition of the need for the community to deal with issues of affordability and the concerns of the poor households. Information on low-cost technology options and their application on how these can be implemented allow each socioeconomic group to choose a toilet based on its affordability. These tools facilitate the community's approach on these issues.

Communities get together to cross-subsidize the poor households and make microfinancing arrangements, or local governments come forward to support the participation of poorer households so that the collective objective of creating an open

defecation-free environment is achieved. In villages in Bangladesh and Maharashtra, poor households have been supported to achieve the collective goal of creating an open defecation-free environment in a variety of ways. In practice, richer households have provided financial assistance to poorer households, self-help groups have provided microfinance for the purchase of sanitaryware, panchayats have provided interest-free loans, and panchayats and landed families have made land contributions. With the stimulation of demand and the internalization of improved sanitary habits, low-income communities are even exercising a choice in favor of more expensive design options and graduating up the sanitation ladder.

**Overcoming physical constraints:** CLTS has demonstrated that scarcity of water, adverse hydro-geological conditions or topographical terrain are not insurmountable obstacles to securing a collective resolve to change behavior. Once ignited to achieve an open defecation-free environment, communities find local solutions to address the situation. For example, in drought-prone villages in Ahmednagar district in Maharashtra, drought mitigation and management systems have been developed to ensure that the minimal needs of water for sanitation are not compromised and there have been no reported instances of people going back to open defecation.

**Creating a supply chain:** Key to the success of this approach is the establishment of an effective system to meet demand for the range of technologies that may be appropriate for the local household profile. In Bangladesh, a range of low-cost technologies and sanitary products have been developed with local innovation, and private entrepreneurs are making inroads in marketing their products and meeting consumer demand. In Maharashtra, there are examples of local governments facilitating the availability of material close to villages and encouraging private entrepreneurs to set up retail outlets.

**Ensuring sustained behavior change:** The CLTS approach facilitates peer monitoring at the local level to ensure that villages remain open defecation-free. A sense of pride and recognition is created within the community when their village is officially declared open defecation-free. Rewards from the national government and from competitions among best performing villages have conferred a higher status to open defecation-free communities. The recognition has brought a sense of pride in their achievement and a desire to protect that status, resulting in a close monitoring of household behavior by communities. Self realization, peer pressure, and recognition come together to play an important role in sustaining behavior change.

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WSP Field Notes describe and analyze projects and activities in water and sanitation that provide lessons for sector leaders, administrators, and individuals tackling the water and sanitation challenges in urban and rural areas. The criteria for selection of stories included in this series are large-scale impact, demonstrable sustainability, good cost recovery, replicable conditions, and leadership.

## The Way Ahead

With the formulation of appropriate guidelines, demand-responsive strategies, and inclusion of fiscal incentives, the foundation has been laid for achieving overall sanitation goals in countries such as India and Bangladesh. Policy decisions by central and state governments on adopting outcome-focused approaches are a positive step towards scaling up and sustaining behavior change for meeting sanitation outcomes. However, policy makers need to be continuously informed to ensure that policies and strategies remain on track.

The logic of focusing on behavior change of an entire collective, if the public health objective that underlies the search for improved sanitation is to

be secured, is easy to grasp. The CLTS approach has demonstrated the ability to best meet this objective but the principles that underlie its successful implementation are not as easily accepted. The legacy of traditional approaches and thinking constantly weigh down CLTS. Subsidies and motivation linked to toilets for individual households compromise this approach and the achievement of collective behavior change is still not widely appreciated. The fact that even outcome-based rewards can trigger toilet construction targets, unless adequate safeguards are in place, is not always realized. Analytical studies of the situation on the ground, workshops to disseminate and share findings as well as exposure visits to dispel skepticism and build acceptance of what is possible are all still essential for the successful implementation and spread of CLTS even in its home ground in South Asia.

However, enough ground has been covered and success demonstrated to be able to send out a strong message about the promise that CLTS holds. Devising appropriate institutional frameworks by keeping the local government at centre-stage, formulation of effective information, education and communication strategies, providing of technology know-how and choices, ensuring monitoring mechanisms and developing the capacity of a cadre of motivators to trigger mindset change in different settings could go a long way in meeting the health- and sanitation-related Millennium Development Goals.

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