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wsp water and sanitation program

Module 1: Guidance Notes

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Training of Trainers' Manual on

Community-driven Total Sanitation

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WSP Mission
To help the poor gain sustained access to water and sanitation services.

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Using this Manual for Capacity Building

Who is this Manual for?

Resource agencies engaged in training potential master trainers to facilitate and scale up community-driven total sanitation.

What does this Manual Contain?

This Training Manual comprises three interlinked Modules, the details of which are as follows:

Module No.	Title	Objective	Content
1	Guidance Notes	Facilitate understanding of key concepts of community-driven total sanitation.	▪ A set of nine Guidance Notes covering topics such as facilitating participatory training, principles and practices of community-driven total sanitation, sanitation technologies, hygiene practices, and monitoring.
2	Trainers' Notes	Provides curriculums and guidance to trainers on how to facilitate a five-day Training of Trainers' Program on community-driven total sanitation.	▪ Curriculums and session plans. ▪ Training resources, e.g., handouts, presentations. ▪ Trainer's tips.
3	Reference Materials (on CD)	Provides key reference materials to facilitate learning.	▪ Research articles/reports. ▪ Web resources. ▪ Films.

How to use this Manual to Deliver an Effective Training Program?

- Read through Module 1: Guidance Notes carefully to see that you understand the principles and practices of community-driven total sanitation.
- Next, read through Module 2: Trainers' Notes and familiarize yourself with the plan, objective and expected outcome of each session and unit.
- Practice activities until you feel comfortable.
- Consult Module 3: Reference Materials on CD at any point to fill knowledge gaps and deepen your understanding.
- Ensure that prerequisites for the training (e.g., resource persons, materials, logistics) are in place.

List of Abbreviations

BPL	below poverty line
CRSP	Central Rural Sanitation Program
DALY	disability adjusted life years
GoI	Government of India
GP	*Gram Panchayat*
HP	Himachal Pradesh
IEC	information, education, communication
NGO	nongovernmental organization
NGP	*Nirmal Gram Puraskar*
ODF	open defecation free
PHAST	Participatory Hygiene and Sanitation Transformation Manual
PM&E	participatory monitoring and evaluation
PRI	*Panchayati Raj* Institution
PS	*Panchayat Samiti*
SHG	self-help group
TSC	Total Sanitation Campaign
VIP	ventilated improved pit
WSP	Water and Sanitation Program
ZP	*Zilla Parishad*

Contents

Module 1: GUIDANCE NOTES

Training of Trainers' Manual on Community-driven Total Sanitation

GUIDANCE NOTE 1

Introduction to Participatory Training

Key Messages

- Participatory training builds on the knowledge and experiences of participants, which is more conducive to adult learning than conventional training methodologies.
- Effective facilitators help participants to discover their own capacities, instead of directing or dominating the learning process.
- In a participatory training, new information appears continuously. Therefore, the training design must remain flexible to accommodate the expressed learning needs of the participants.

Conventional vs. Participatory Training

Training should be viewed as a learning process which involves the creation and acquisition of knowledge, awareness and skills. In the following table, the main differences between conventional and participatory training methodologies are summarized.

Elements	Conventional Training	Participatory Training
Learner's Role	▪ Follow instructions. ▪ Passive participation. ▪ Receive information. ▪ Little responsibility for learning process.	▪ Offer ideas based on experience. ▪ Active participation (ask questions, make mistakes as part of the training process). ▪ Share ideas and experiences. ▪ Take ownership of learning process.
Trainer's Role	▪ Is an authority figure. ▪ Ignores learner's knowledge and experiences.	▪ Is a facilitator. ▪ Respects participants' knowledge and experiences.
Training Content	▪ Trainer-controlled. ▪ Little choice provided on topics.	▪ Learner-centered. ▪ Based on participants' training needs.
Method Focus	▪ One way flow of facts/information from trainer to learner.	▪ Two-way communication building on knowledge and experiences of participants and trainer.

Source: Adapted from CEDPA (1995).

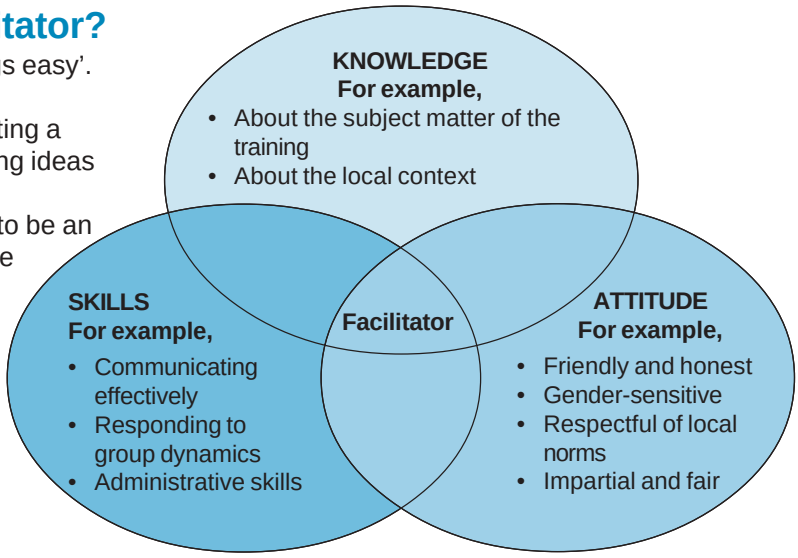
Why use Participatory Training?

Conventional training is not a very effective methodology for training adults as it ignores the integral role that adults play in their own learning process. Adult learning is based on principles and conditions that are different from the formal set of learning principles. The key principles of adult learning are summarized below along with their implications for training in the form of a 'facilitator's checklist'.

Principles of Adult Learning	Facilitator's Checklist
Adults are voluntary learners and will perform best when they have decided to attend a training session for a particular reason.	▪ Do you know why participants are attending? ▪ Has the selection of participants followed the checklist outlined in Attachment 1 of the Trainer's Notes?
Adults learn best when the context of the training is relevant to their own lives and experiences.	▪ Have participants been asked to share their expectations and what they hope to achieve by the end of the training program? ▪ Do you have a system for guiding participants whose expectations are not well matched to yours or the group's?
Adults have experience and can help each other learn through an atmosphere of sharing.	▪ What prior knowledge may trainees have about the subject matter of training? ▪ Will your training methods build upon and use the ideas and skills of participants?
Adults learn best when they are actively involved.	▪ Does the training include regular opportunities for feedback, reinforcement and practice?

What makes a Good Facilitator?

Facilitation literally means to 'make things easy'. In a participatory workshop, the role of a facilitator is to make things easy by creating a learning environment conducive to sharing ideas and experiences. To create this learning environment, a facilitator does not have to be an expert but needs to develop a broad base in three main areas: knowledge, attitude and skills. Some examples in each of these areas are given in the figure.



As with other walks of life, in facilitation too, practice is the key to success. The most effective facilitators work hard to prepare for trainings and are always learning and improving their skills.

Designing a Participatory Training Program

Here are seven basic steps for designing a participatory training program. These steps are not listed in any particular order and many steps may be repeated more than once. It is important to remember that since this is a participatory training, new information will appear continuously. Therefore, the training design must remain flexible to accommodate the expressed learning needs of the participants.

1. **Get support and commitment**
   Before any training program can be started, support is needed, including staff, budget and logistics. Also required, during and after the program, is commitments from key decision makers to achieve the objectives of the training.

2. **Identify learning needs**
   This entails finding an answer to the question: why should this training program be conducted? A wide range of sources can be tapped to answer this question, e.g., learners themselves, others who know the learners, job requirements, and so on. Knowing learning needs accurately and precisely is crucial to determining the quality and effectiveness of the training program.

3. **Interpreting training objectives**
   Training objectives should be based on the identified learning needs and resources available to meet those needs. Some factors to be considered when setting training objectives are: potential and limits of training, background of the learners, needed competency or skills, and available resources (financial, administrative and logistical).

4. **Select resource person(s)**
   Select an overall coordinator to provide support for all aspects of program implementation, from initiating the design to evaluating participants' feedback. Training can be made more effective by working with another facilitator as it helps to share tasks and responsibilities during the training, e.g., explaining theory, setting up equipment, facilitating groupwork, assessing participants' energy levels and so on. Additional resource persons can also be invited as experts on specific topics.

5. **Select participants and size of group**
   Participants should be selected based on their interest and willingness to work on community-driven total sanitation. Care should be taken to ensure gender diversity and include people from different cultural, religious and locational backgrounds so as to prevent dominance of any one group. Group size should be based on best allocation of available resources.

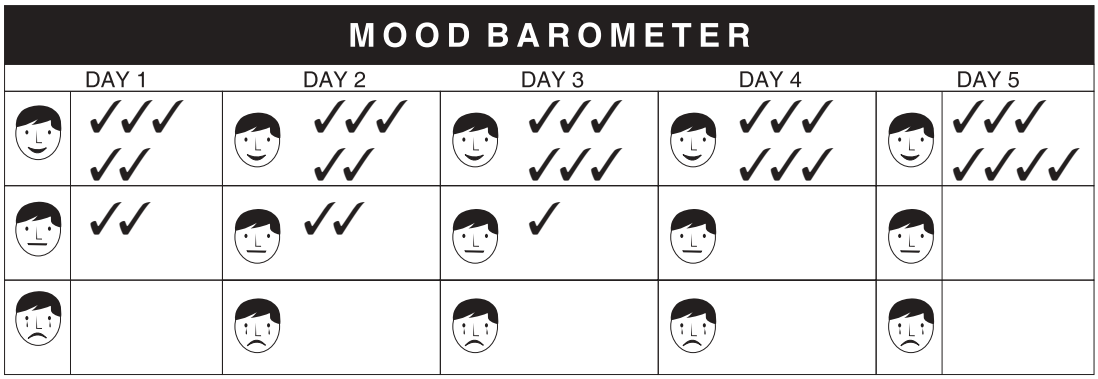
6. **Training content and methods**
   Choice of content and methods depends on identified training needs and objectives, level of the learners, size of the group and resources available. A timetable for activities should be agreed with the group as a whole. Further, identify a few icebreakers to energize the group if you find that enthusiasm is dipping at any point during the training.

7. **Monitoring and evaluation**
   Participatory program design means that two-way communication is necessary to feed information back into the design at every step.

Suggested Structure of the Training Program

A suggested structure for the training program is as follows:

- **Workshop opening and introductions:** welcome participants and enable them to get to know each other and the facilitators.
- **Logistics:** give information on boarding, lodging, venue facilities, travel arrangements and per diems, if any.
- **Setting norms:** set ground rules so everyone has a shared understanding of how to work together.
- **Expectations:** clarify participants' expectations from the workshop.
- **Objectives and schedule:** outline the objectives, content and timings of the workshop. Although shared with participants at the start of the workshop, schedules are often flexible and changed to meet their needs and interests.
- **Energizers:** helps participants to relax and lifts their energy and enthusiasm.
- **Presentations:** give information on a particular topic or share experiences.
- **Group work:** discussion in small groups makes the program lively and provides a quick overview of participants' views.
- **Fieldwork:** enable participants to learn by practicing new skills.
- **Recaps:** provide a summary (usually by participants at the start of each day) of what has been covered so far.
- **'Parking Lot':** a sheet for participants to 'park' i.e., stick or pin, issues that need to be covered but are not appropriate for that moment in the workshop.
- **Mood barometer:** a sheet with three moods (can be 'smiley faces' with three different expressions, ranging from happy to normal to sad) where participants tick what they feel describes their attitude best at the end of each day.
- **Action plan:** for participants to clarify what concrete steps they will take after the workshop to use the new skills and knowledge they have gained.
- **Workshop evaluation:** enables participants to address the strengths and weaknesses of the workshop.
- **Facilitator's debrief:** to discuss 'what worked' and 'what did not work' in the program and identify improvements for the future.



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- Wood S, Sawyer R and Simpson-Hubert M. 1998. PHAST Step-by-Step Guide: A Participatory Approach for the Control of Diarrheal Disease. Geneva: World Health Organization

* Not available in electronic format.

GUIDANCE NOTE 2

The Sanitation Challenge

Key Messages

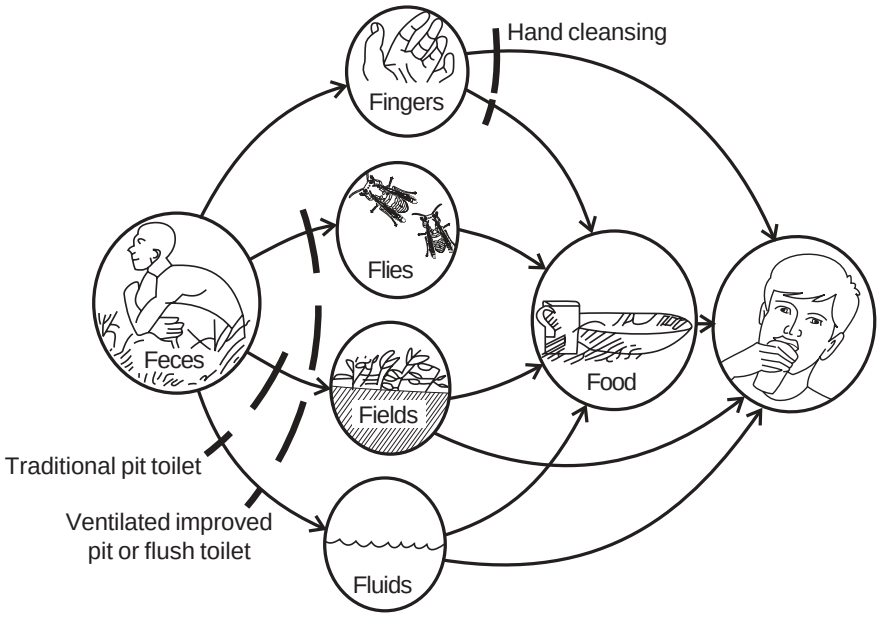
- Inadequate sanitation adversely impacts human well-being.
- In India, reported coverage of rural sanitation has registered an impressive increase since the launch of the Total Sanitation Campaign of the Government of India.
- However, we have a long way to go, and usage and sustainability need to be addressed along with scaling-up.

What is Sanitation?

Sanitation refers to interventions for the safe management and disposal of excreta, with the principal safety mechanism being the separation of excreta from all future human contact. It includes both hardware (e.g., latrines, sewers) and software (e.g., handwashing, regulation).

How does Poor Sanitation Impact Well-being?

Sanitation and health: poor sanitation is one of the key causes of diarrheal diseases, which take a heavy toll of lives, especially children's lives, in developing countries. Most of the diseases that result in diarrhea are spread by pathogens found in human excreta. These pathogens can enter the mouth through a number of routes, as shown below in the 'F-diagram' of the fecal-oral transmission routes.



Source: Participatory Hygiene and Sanitation Transformation Manual (PHAST) 1998, after Wagner and Lanoix 1958.
Wood S, Sawyer R and Simpson-Hubert M. 1998. PHAST Step-by-Step Guide: A Participatory Approach for the Control of Diarrheal Disease. Geneva: World Health Organization.

Sanitation and human dignity: surveys have found that people value household latrines, more for the resulting convenience, privacy, safety, prestige (e.g., families are ashamed when they cannot offer guests proper toilet facilities) and aesthetic benefits (sight, odor), than for their health benefits (Bruijne et al. 2007). The privacy afforded by adequate sanitation gives a sense of dignity to people, especially women. In addition, school latrines have been proven to be linked with continued education enrollment of teenage girls and young women, particularly at puberty (Government of Philippines *et al.* 2005).

Sanitation and the environment: improperly disposed human waste is a major polluter of rivers and aquifers. This depletes waters of oxygen that is needed to sustain aquatic life. Investment in sanitation can dramatically improve the quality of water bodies.

Sanitation-related burden of disease and economic impact: sanitation remains one of the biggest development challenges across developing countries. Consider these facts:

- Four out of 10 people in the world, 2.6 billion, lack access to adequate sanitation. South Asia has one of the lowest sanitation coverage rates at 36 percent.
- Diarrheal diseases are the single biggest killer of children under five in poor countries (Water Aid 2006).
- Illness and death linked to poor sanitation contributes to malnutrition, loss of productivity and has repercussions on the educational enrollment of children, especially girls.

Rural Sanitation in India

Open defecation is a traditional practice in rural India. This, combined with the low priority accorded to rural sanitation programs in previous decades, meant that rural sanitation coverage was negligible in 1990 and grew at only 1 percent throughout the 1990s (Water Aid 2005). According to Census data, only 21.9 percent of rural households owned latrines in 2001. To address this problem at scale, the Government of India (GoI) initiated the Total Sanitation Campaign in 1999. Recent progress has been good, with some surveys estimating that rural sanitation coverage has nearly doubled to about 40 percent in 2007 (GoI, pamphlet on *Nirmal Gram Puraskar* 2007). However, latrine usage remains a concern. Sample surveys carried out by GoI assessment teams in 478 districts (under the District-level Monitoring program) indicate that actual latrine usage is around 80 percent nationally, with significant variation across and within states.

The lack of safe sanitation and associated burden of disease take an immense toll of life in India. Children are particularly vulnerable - India loses between 0.4 to 0.5 million children under five years due to diarrhea. However, according to the Planning Commission (2002), 'the data grossly under-reports the true burden of [diarrheal] disease… Community studies indicate that every child below five years of age has two to three episodes of diarrhea every year. This means millions of cases of diarrhea occur every year, but only a small percentage of diarrheal diseases are reported every year through routine surveillance systems' (Planning Commission 2002: 46).

Further Reading (on CD)

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- Planning Commission. 2002. Water Supply and Sanitation: India Assessment 2002
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GUIDANCE NOTE 3

Approaches to Rural Sanitation

Key Messages

- Despite significant investment in toilet construction, traditional sanitation programs have failed to motivate people to stop open defecation.
- By contrast, a community-driven total sanitation starts from the assumption that it is not just the availability of toilets, but motivating behavior change at the collective level to stop open defecation that is important for safe sanitation to take effect.

Traditional Approach to Sanitation: Confusing Means and Ends

Earlier, rural sanitation programs were based on the assumption that people defecate in the open because they are too poor to construct a toilet. Therefore, traditional rural sanitation programs provided subsidies for identified poor families to construct toilets of a specified design. This assumption was proved wrong because open defecation is not a reflection of poverty but a traditional practice, while safe sanitation is not a felt need. Therefore, the key issues of motivating behavior change to end open defecation and use of constructed toilets were not addressed by the traditional approach to sanitation, leading to its failure.

Other key reasons for the failure of the traditional approach to sanitation include:

- Negligible community participation.
- Limited attention to hygiene education or school sanitation.
- Promoted single standard design of latrines that was often of high cost relative to household incomes.
- Latrine construction took place largely through coercion, often as an obligatory condition for access to development projects e.g., water supply schemes.
- Offered relatively high hardware subsidies that could not be sustained by the Government or donor.
- Was not effective in reaching the poorest members of communities.

Community-driven Total Sanitation in Rural Areas

Community-driven total sanitation in rural areas was pioneered in 1999 by Village Education Resource Centre and Water Aid in Bangladesh. Since then, this approach and its variants have spread within Bangladesh and has been introduced in many countries in Asia and Africa. A participatory approach to total sanitation contends that **it is not just availability of toilets but changing the behavior of the people at the collective level that is important for safe sanitation to take effect.** In this approach, through a process of participatory facilitation, community members analyze their own sanitation status, including the extent of open defecation and the spread of fecal-oral contamination that adversely affects each one of them. Once people are convinced about the need for sanitation, field experiences have shown that communities construct latrines on their own at the household level, according to their own capacity, and more importantly, use it regularly due to a strong sense of ownership. A community-driven approach does not require high subsidies, but it does need greater understanding of the individual and collective 'triggers' or factors that motivate people to change their perceptions about the need for safe sanitation.

The shifts in mindsets and practices required by a participatory approach to total sanitation can be summarized as:

- From teaching and educating to facilitating communities' own analysis.
- From 'we must provide toilets' to 'communities can do it'.
- From 'we persuade and do it' to 'we motivate communities to take independent decisions and action'.
- From top-down standard designs to bottom-up innovations ('they design').
- From hardware support to supporting people and processes (adapted from Kar 2005).

How is Community-driven Total Sanitation different from a Traditional Approach Focused on Toilet Construction?

The table below illustrates some of the key differences:

Elements	Traditional Approach	Community-driven Total Sanitation
Focus	Latrine construction.	Stopping open defecation.
Technology	One fixed model.	Menu of options.
Motivation	Individual subsidy.	Igniting behavior change through self-realization of harmful effects of open defecation.
Financial	Individual upfront hardware subsidy given.	Subsidy as incentive routed through collectives.
Monitoring	Focus on number of toilets constructed.	Focus on meeting ODF outcome at community level.
Outcome	Increase in number of latrines.	Sustained behavior change and open defecation free villages.
Impact	Negligible; high cost.	High; at lower cost.

Experience with Community-driven Total Sanitation in India

India was the first country where community-driven total sanitation spread to from Bangladesh. An exposure visit for senior bureaucrats and NGO representatives from India to villages in Bangladesh that had successfully achieved total sanitation using participatory approaches was organized by WSP-SA. Some key champions of a community-driven total sanitation emerged from that group. This led to the organization of a state-level workshop by the Government of Maharashtra in which all districts and several NGOs participated to discuss an appropriate approach to scaling up rural sanitation. Based on the workshop, a state rural sanitation strategy emerged that articulated a focus on collective outcomes, participation by local governments and triggering collective behavior change with appropriate choices and incentives.

Against this backdrop, community-driven total sanitation was piloted in two districts of Maharashtra in 2002. The pilots successfully demonstrated that such an approach can be implemented when communities are mobilized at a collective level. In addition, an apparent roadblock to the success of this approach – upfront hardware subsidies – was converted into an incentive to scale up the approach by presenting it as a post-achievement cash reward to *Gram Panchayat*s (local governments) that had attained communitywide safe sanitation. The active participation of local governments has been a crucial factor in scaling up a participatory approach to total sanitation and it is hoped, also its long term sustainability in Maharashtra.

Other Indian states have organized exposure visits to Maharashtra and are trying to replicate its success with this approach. At the national level, the Government of India has introduced a fiscal reward scheme – *Nirmal Gram Puraskar* (NGP, Clean Village Prize) – in 2003. The NGP seeks to reward outcomes i.e., achievement by local governments of communitywide open defecation free (ODF) status and successful management of solid and liquid waste, instead of providing upfront hardware subsidy to identified below poverty line (BPL) families. This signals a policy shift from a supply-driven to a demand-responsive approach which is a significant window of opportunity to implement community-driven total sanitation at scale within the context of a national rural sanitation program, the Total Sanitation Campaign (TSC). A brief description of the TSC and the NGP is provided below.

Total Sanitation Campaign and *Nirmal Gram Puraskar*

The Government of India launched the Total Sanitation Campaign in 1999, under the restructured Central Rural Sanitation Program (CRSP). TSC advocates a people-centered, participatory and demand-driven approach. It is being implemented in a campaign mode, taking district as a unit with significant involvement of local governments. Some of the key features of the TSC include:

- Shift from a high-subsidy to a low-subsidy regime.
- Flexible menu of technology options.
- Implementation in campaign mode.
- IEC campaign to create demand for improved sanitation services.
- Development of supply chain to meet the demand stimulated at the community level.
- Shift from hardware subsidy to performance incentives through the – *Nirmal Gram Puraskar*.

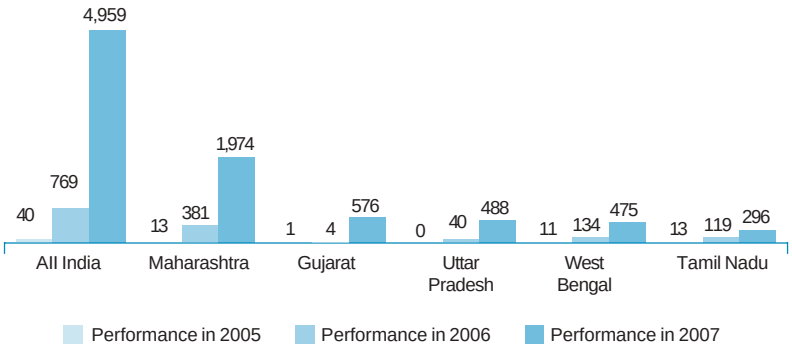
Nirmal Gram Puraskar

To accelerate achievement of TSC objectives, the Government of India introduced the *Nirmal Gram Puraskar* in 2003. This is an incentive scheme that offers cash rewards to local governments that achieve 100 percent sanitation i.e., they are 100 percent ODF and have tackled liquid and solid waste management. The amount of incentive is based on population as shown below.

Particulars	*Gram Panchayat*					Block		District	
Population Criteria	Less than 1000	1000 to 1999	2000 to 4999	5000 to 9999	10000 and above	Up to 50000	50001 and above	Up to 10 lakhs	Above 10 lakhs
PRI	0.50	1.00	2.00	4.00	5.00	10.00	20.00	30.00	50.00
Individuals			0.10			0.20		0.30	
Organizations other than PRIs			0.20			0.35		0.50	

Providing fiscal incentives to reward outcomes is a significant shift from the traditional approach to sanitation provision. The NGP scheme has elicited a tremendous response, with number of local governments awarded going up from a mere 40 in 2005 to nearly 5,000 in 2007. By providing incentives to community efforts to meet collective gains in sanitation, the scheme helps to raise the status of the winning village, create peer pressure among neighboring villages, and stiff competition among all tiers of governance within and across states.

Top Five States Performance for NGP: 2005-07



Source: Govt. of India, Dept. of Drinking Water Supply <http://ddws.nic.in/TSC/crsp/TSCPhy_st.asp?Form=ALL> Accessed 6 May 2007.

Further Reading (on CD)

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GUIDANCE NOTE 4

Community-driven Total Sanitation: Key Principles

Key Messages

- Community-driven total sanitation is a significant departure from the way that rural sanitation programs are usually implemented.
- The key principles can be summarized as follows:
  - Focus on outcomes rather than building toilets.
  - Focus on collective behavior change rather than mobilizing individual households.
  - Accommodate a variety of technological options to get people on the sanitation ladder.
  - Promote private suppliers/entrepreneurs to respond to demand.
  - Appropriate institutional frameworks are key to achieving scale and sustainability.
  - Focus on incentives that reward outcomes rather than provide upfront hardware subsidy.

Each of these principles is explained in detail below.

Why Focus on Outcomes as Opposed to Latrine Construction?

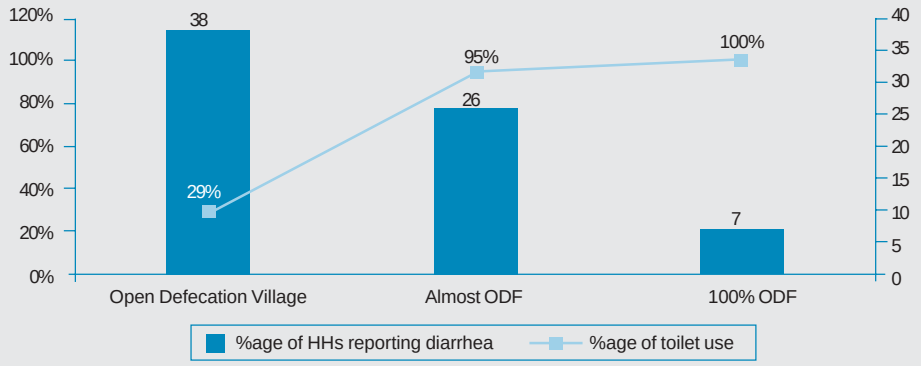
Traditionally, rural sanitation programs measured success by counting the numbers of latrines constructed in a given time frame. By contrast, community-driven total sanitation measures its success on the basis of outcomes, i.e., achievement of communitywide open defecation free (ODF) status. **Latrine construction means little if open defecation continues alongside it because the overall risk of bacteriological contamination remains high.** Therefore, latrine construction is only a means to an end, i.e., improved public health outcomes, but not an end in itself. For this reason, community-driven total sanitation focuses on triggering collective behavior change to stop open defecation rather than meet construction targets.

Why Focus on Collective rather than Individual Behavior Change?

Sanitation is a private practice that has public consequences. Therefore, public health benefits can be achieved only by targeting the collective instead of focusing on motivating individual households to construct toilets, as illustrated by the case study below.

Community-driven Total Sanitation: Why Target Collective Behavior Change?

A rapid assessment in Himachal Pradesh reveals that in villages with around 30 percent household toilet use, the incidence of diarrhea was reported as being around 40 percent. Even villages with 95 percent household toilets, still reported around 25 percent diarrheal incidence. Only open defecation free villages with 100 percent toilet usage have reported significant drop in diarrhea to less than 10%. In effect, *even if a majority individual households switch to using toilets, the overall risk of bacteriological contamination and incidence of disease continues to be high*.



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

Why Accommodate a Variety of Technological Options instead of Prescribing a Single Latrine Model?

In the past, rural sanitation programs provided limited technology options. Decisions were made by technical experts and handed down to community members, who typically contributed by providing labor for the construction of a predecided design. This top-down approach, with no community participation in decision-making, has proven unsustainable in India and elsewhere because toilets built in this way were either not used or used for alternative purposes, e.g., storage. The lesson learnt from this experience is that the choice of sanitation technology adopted has to come from the people using the latrine.

In addition, it has been observed that improvements in sanitation systems generally occur incrementally rather than in a single leap (Cairncross and Feachem 1993). What is promoted in community-driven total sanitation is a switch from open defecation to a safe yet affordable sanitation option. While affordability is naturally determined by individual household circumstances, the availability of relatively low-cost options particularly helps those who are uncertain about changing their habits to get into the habit of using a toilet. **The significance of the first relatively low-cost toilet is enormous in terms of breaking the habit of open defecation** (Kar 2005). Experience with community-driven total sanitation shows that the users of relatively low-cost toilet models adopt upgrades or graduate to more expensive models, using their own resources, when the design life of their first toilet is over.

What Role do Private Sanitation Demand and Suppliers Play in Promoting a Total Sanitation Approach?

Obviously, if communities are upgrading their toilets, there will be a market for private suppliers to sell sanitary goods and provide the required services. Thus, community-driven total sanitation stimulates entrepreneurs to produce and market latrine hardware, such as different types and grades of pans, rings and slabs. Field experience shows that in response to demand for sanitation products and services, local innovations have resulted in a range of differently priced products, and a spontaneous and competitive market has developed. Private suppliers have also taken the initiative to undertake promotional activities for their business.

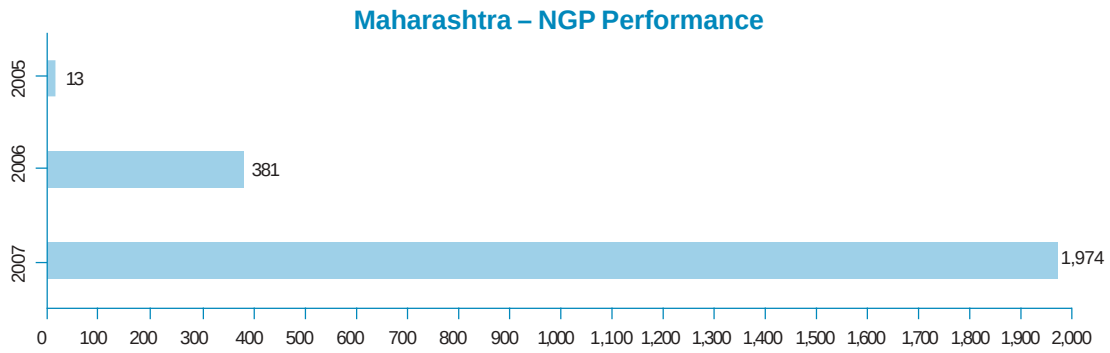
Why are Institutional Frameworks Key to Achieving Scale and Sustainability?

Institutions matter and **experience shows that *Gram Panchayat*s (local governments) are ideally placed to promote total sanitation** in order to ensure public benefits and are well suited to address the issue of scaling up due to their outreach and mandate. In addition, local governments are in a good position to undertake or facilitate the long-term monitoring and support of rural sanitation services.

NGO interventions have been successful in demonstrating the total sanitation approach but experience shows that local government involvement in partnership with civil society organizations accelerates scaling up.

Community-driven Total Sanitation: Why do Institutions Matter?

In 2003, prior to implementation of total sanitation program in Maharashtra, not even one *Gram Panchayat* had an open defecation free village or 100 percent sanitation coverage, while today, with the involvement of local governments in promotion of total sanitation, there are around 1,974 *Gram Panchayat*s (as of June 2007) which have received the *Nirmal Gram Puraskar* of the Government of India.



Source: Govt. of India, Dept. of Drinking Water Supply <http://ddws.nic.in/TSC/crsp/TSCPhy_st.asp?Form=ALL> Accessed 6 May 2007.

Why does Community-driven Total Sanitation Support Incentives to Reward Outcomes?

A key feature of the total sanitation approach is that it is not in favor of upfront hardware subsidy. Experience with community-driven total sanitation shows that:

- Subsidy is not effective in creating demand for safe sanitation as people defecate in the open not because they can't afford latrines but because safe sanitation is not a felt need.
- Subsidies raise community expectation of getting free money from outsiders and community initiative to change its own sanitation status takes a backseat.
- The Government of India has spent huge amount of money on subsidies in the past two decades but around 80 percent of people in rural India continue to defecate in the open (2001 Census).
- Stopping open defecation does not require large sums of money as there are a variety of affordable technological options available.

Instead of giving upfront subsidies for the construction of latrines, providing incentives for sanitary 'outcomes' has been found to be effective in achieving communitywide total sanitation. Offering rewards (financial/nonfinancial) for communities that have completely ended the practice of 'open defecation' empowers the collective to develop appropriate methods of addressing individual and collective sanitary behavior change. The *Nirmal Gram Puraskar* of the Government of India (see boxed item on *Nirmal Gram Puraskar* in Guidance Note 3) is an effective example to demonstrate this point. Incentive schemes introduced by State governments also motivate local governments and communities to achieve sanitation outcomes, e.g., the *Sant Gadge Baba Gram Swacchata Abhiyan* introduced by the Government of Maharashtra.

Incentive Schemes Introduced by State Governments

The Government of Maharashtra launched a program popularly known as *Sant Gadge Baba Gram Swacchata Abhiyan* (SGBGSA), *Rashtra Sant Tukdoji Maharaj* Clean Village Competition (RSTMCVC) and *Rashtrapita* Mahatma Gandhi Competition (RMGC) for cleanest *Zilla Panchayat*s and *Panchayat Samiti*s in 2001. The *Hagandhari Mukt Abhiyan* (Open Defecation Free Campaign) was also launched subsequently in 2002. While the SGBGSA is a campaign with a prescribed calendar of activities and goals, the other two programs provide for financial rewards to *Gram Panchayats, Panchayat Samiti*s and *Zilla Parishad*s that perform relative to others. The competition is assessed in a transparent and impartial manner across 11 parameters and 105 subparameters. The assessment committee at different levels – ZP ward, PS, ZP, division and state – is constituted by a mix of personnel from administration, elected political leadership and professionals. The competition is an annual one with a *panchayat* having achieved 50 percent household sanitation free to enroll. The format follows a pattern of three winners at the *Panchayat Samiti*, competing to select three winners from the district, then the division and then the state. An outlay of Rs. 60 million is earmarked annually for this.

Source: Sen and Raman (2006) (unpublished).

Further Reading (on CD)

- Cairncross S. and Feachem R. 1993. Environmental Health Engineering in the Tropics: An Introductory Text. Chichester: John Wiley & Sons*
- Kar, K. 2003. Subsidy or Self-Respect? Participatory Total Community Sanitation in Bangladesh
- Sanan D and Moulik SG. 2007. Community Led Total Sanitation: An Approach that Works. New Delhi: Water & Sanitation Program
- WSP-Knowledge Links. 2005. Formative Research for IEC Manual. New Delhi: Water and Sanitation Program-South Asia

* Not available in electronic format.

GUIDANCE NOTE 5

Triggering Behavior Change

Key Messages

- Supply-driven approaches assume that if people are better informed, they will change their behavior.
- By contrast, community-driven total sanitation relies on the triggering approach which seeks to identify the triggers or factors that motivate people to change their behavior.
- Triggers can work on individuals or collectively, but the latter is more sustainable as it generates social pressure to prevent individuals from reverting to ingrained habits.
- Triggering can lead to four types of outcomes: matchbox in a gas station, flames under ash, spark, and damp matchbox. Each is briefly discussed below.

Toilet Construction-driven Approaches vs. Triggering

Traditionally, rural sanitation programs targeted individuals with predetermined messages focusing on latrine construction without emphasizing why latrines should be used. By contrast, participatory total sanitation relies on a triggering approach which tries to find locally relevant triggers or factors that can be used to motivate behavior change in a community. The differences between conventional toilet construction-driven approaches and triggering are detailed below:

Toilet Construction-driven Approach	Triggering Behavior Change
Assumes that if people are better educated or informed, they will change their behavior.	Seeks to 'find out' what causes people to change their behavior.
Has a predetermined set of core messages.	Innovates to establish core messages driven by local factors.
Has a predetermined approach of who does what and how.	Allows plenty of freedom as to 'who does what' in each particular context.

Source: Kumar, 2004.

Types of Triggers

Triggers broadly fall into two categories: Individual and Community.

Individual Triggers

Some of the individual triggers related to sanitary behavior are:

- Dignity and privacy.
- Shame (amongst women when 'watched' by passers-by or among men – 'how can you allow the women of your house to publicly defecate in the open when people may be watching?').

- Safety of children and elderly against falling down during rainy season or night-time.
- Fear (of darkness, wild animals, loss of money due to medical expenses, etc.).
- Prestige (when guests from urban areas visit, families feel embarrassed at being unable to provide adequate toilet facilities).
- Convenience (for the elderly, infirm, pregnant ladies and children, during bad weather or sickness).

Different individuals change behavior due to different reasons. However, behavior change triggered by such individual reasons is often sustained only until the reason remains in existence, e.g., a family that builds a household latrine because it is more convenient after dark, may continue to defecate in the open during daytime. Therefore, behavior change triggered in this manner is partial and the risk of fall-back is higher.

Community Triggers

Community triggers are factors or situations that concern and affect a community as a whole, thus prompting every member within it to change a behavior that is collectively perceived as hazardous. Some of the community triggers related to eliminating open defecation are:

- Health.
- Water quality.
- Prestige.

When the community realizes that their health is at stake due to their own habit or the habit of others to defecate in the open, the community collectively resolves to change its behavior. Once the process is initiated, members begin to monitor each other's behavior within the community. Thus, those who have a tendency to 'fall back' are also prevented from doing so due to the social pressure created after such a collective resolution. Behavior change, when triggered by such collective concerns or situations, is more likely to be sustained.

What are the Expected Sources of the 'Triggering' Process?

Outcomes of total sanitation triggering exercises can be classified into four broad categories. These are:

- 'Matchbox in a gas station' (*petrol pump mein maachis*): refers to a situation where everyone agrees to stop open defecation and start the action immediately.
- 'Fire under ash' or 'promising flames' (*raakh ke neeche aag*): is the situation where most of the people have agreed.
- 'Scattered sparks' or 'hope' (*chingaari*): is the situation where the majority is undecided, but few individuals in the community agree to act promptly.
- 'Damp matchbox' (*bheegi diya salai*): is the situation where community-driven total sanitation exercises are not able to trigger any positive response at all.

Further Reading (on CD)

Kumar CA. 2004. A Guide to Participatory Approaches to Achieving Total Sanitation

GUIDANCE NOTE 6

Community-driven Total Sanitation: Toolbox

Key Messages

- Effective facilitation is key to community-driven total sanitation.
- Tools to facilitate participatory total sanitation can be implemented in any sequence, provided a rapport has been established with the community.
- This note provides an overview of different tools, explaining the purpose and process guidelines on how to use these in the field. Where appropriate, 'Do's and Don'ts' are included for facilitators.

Attitude of the Facilitator

According to Kar (2005), **the key to success is the attitude and approach of the facilitator.** At the outset, it is important that the facilitator should understand his/her own motivation for undertaking the task, his/her own perceptions toward sanitation and the type of relationship he/she has with the people of the village. An unequal, superior-subordinate relationship will hinder rapport-building. **The facilitator must be convinced that people have the capacity to do it themselves, they just require 'facilitation' to move in that direction.** Therefore, the facilitator must never lecture or advise on sanitation habits and should not prescribe toilet models, at least in the first instance. The aim of facilitation is purely to help community members see for themselves that open defecation has detrimental consequences and creates an unpleasant environment. It is then up to community members to decide how to deal with the problem and to take action.

The Sequence of Steps

The diagram on the next page shows the rough sequence of steps which can be followed for triggering. This is intended as a guide only and there is no prescribed 'best' format. While it is advisable to undertake rapport-building first, variations in terms of which sequence to follow these steps are not only possible, they are recommended and should be based on the local conditions in which triggering is undertaken. It is also not necessary to apply all the tools during interactions with the community and the facilitator should be observant about the ignition moment. However, the 'Do's and Don'ts' are important.

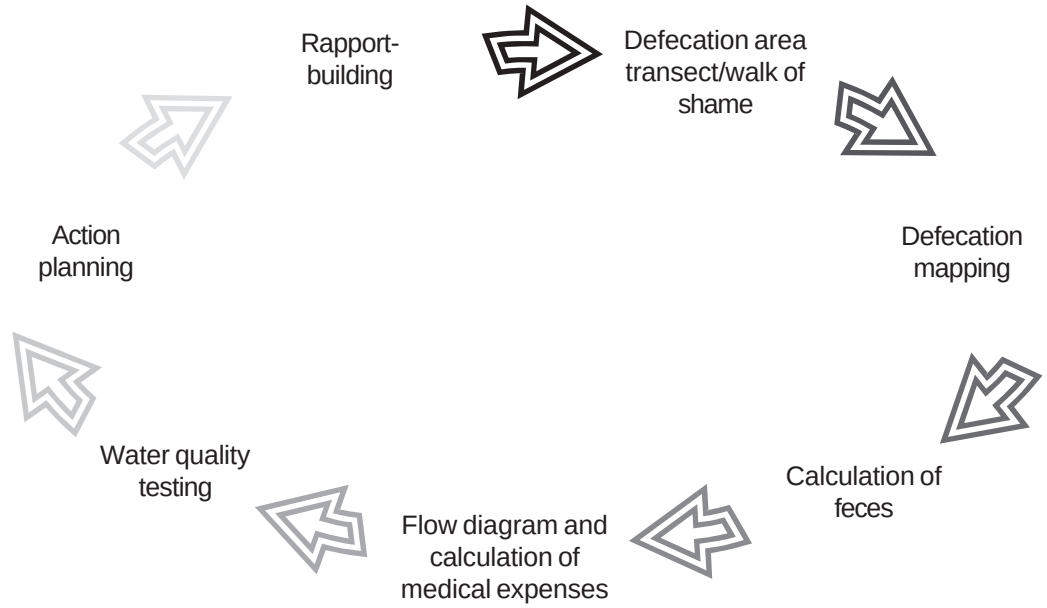
Rapport-building

Purpose

Set the stage for subsequent activities by developing mutual trust, agreement and cooperation.

Process Guidelines

- Various techniques can be used to break the ice. You can begin with a simple self-introduction and begin a discussion with a few community members as you informally walk through a village.
- To broach a private and sensitive topic like sanitation/defecation, sometimes directly hitting the issue helps, while at other times, the topic is best approached at after talking about the general cleanliness situation in the village.
- Try to meet with as many people as possible and understand their perception of sanitation, defecating in the open, and how this affects their well-being.
- Try to encourage women to share their experiences as they suffer the most because of poor sanitation but often lack an opportunity to voice their views.



Do's	Don'ts
✓ Think you are going to the community only to facilitate, not to teach. ✓ Ask people what the local words for 'feces' and 'defecation' are and use these throughout your interaction with them. ✓ Be alert and take interest – try to remember names and potential change agents, e.g., *Anganwadi* workers, member of PRIs/SHGs.	x Don't forget to introduce yourself and explain why you're there. x Don't prolong introductions longer than necessary, especially in a large group. x Don't be impatient and start firing questions from a checklist.

Defecation Area Transect/Walk of Shame

Purpose

To walk along with community members through the village, observing sanitary conditions including open defecation areas, asking questions, and listening.

Process Guidelines

- After initial rapport-building, the facilitator can ask the group to show her the cleanest and dirtiest places in their village. Substantial time must be spent at both these locations to discuss why the group feels these locations to be cleanest or dirtiest. This helps understand popular perceptions related to clean and unclean in the community, giving useful clues to the facilitator to build further.

'Walk of Shame' can be a Powerful Trigger

A 'walk of shame' differs from other interactions with outsiders where the community generally projects a positive image. Going through the defecation area, walking among the feces and talking about the issues related to open defecation can have a lasting impact on people. Although they go every morning to this area to defecate, they do so without any thought for the reality in which this takes place. However, when they go as part of the transect with outsiders and the others of the village, they develop a sense of shame about the situation and often an immediate desire to change their sanitation status.

- Another way to do the walk could be the classical method to first take a round of the entire village, including the open spaces, and help the group observe general cleanliness conditions. Try to make the process interactive by asking questions such as those suggested in the following checklist.

Suggested Checklist of Questions

- Where do men, women, elderly and children of the village defecate? Visit and observe the area.
- Where and how is an infant's excreta disposed off?
- Where do people defecate at night?
- Where do people defecate during monsoons or winters?
- Where do we fetch our drinking water from?
- Where do people shower and wash their utensils?
- Is the area around our water sources clean?
- Are household toilets functional? Visit some houses with toilets during the walk.
- Are our lanes, agriculture fields and open areas of the village dirty or clean?
- Do we or our children defecate around water sources, forests, agriculture fields and in the backyard of the house during day or night?

- Try to locate areas of open defecation and visit all the different types of latrines along the way (see observation checklist). When this is proposed, some people may be hesitant or even leave the group as they feel embarrassed to show outsiders the dirty spots of the village. However, since this is an important step, try to persuade these people to join in the transect.
- Spend substantial time discussing in open defecation areas.

Do's	Don'ts
✓ Be curious. Walk slowly, observe carefully. ✓ Don't miss an opportunity to talk to passers-by. ✓ Give positive reinforcements for initiatives observed in the village during the transect. This could also be outside the purview of sanitary conditions of the village.	x Don't be bored or bore the group by lecturing or asking for too much information that you won't use. x Don't avoid the defecation areas. x The objective of the activity is to instill a feeling of disgust but not to insult anyone. At any point, do not pass judgment on the community.

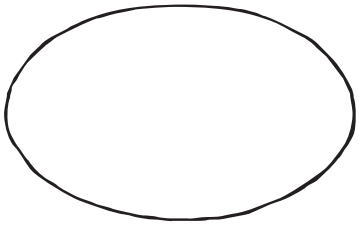
Defecation Mapping

Purpose

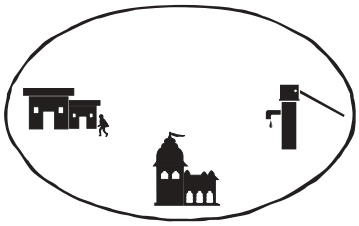
To facilitate analysis of 'big picture' with respect to the situation of the village vis-à-vis sanitation – this exercise will enable community members to visualize defecation areas and the close proximity of these areas to their homes.

Process Guidelines

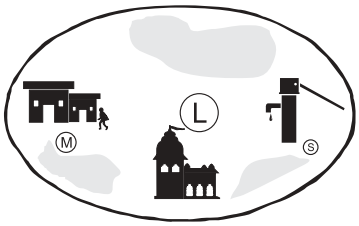
1. First draw a boundary of the village with chalk/piece of brick. In case neither of these are available, wheat flour or a piece of coal can also be used for the purpose. The boundary could somewhat look like this.



2. Ask community members to mark the main spots of their village – like school, temple, *panchayat bhawan, Anganwadi*, all water points like handpump, taps, well/with blue color powder.



3. Next, each member should plot their house within the boundary with the stones. Large stones (L) shall denote big *puckka* houses of rich people while small stones (S) shall denote *kutchha* houses belonging to poor families. The medium-size stones (M) should be used for average families which are neither very rich nor very poor. Alternatively, chalk could also be used for the purpose.



4. Also, mark the agriculture fields and forest area by spreading leaves. After the houses have been marked, every member present should write the name of the head of the family or of self on a piece of paper and place it beneath the stone.

5. Now members who defecated in the open on the same morning would be asked to raise hands and then plot the location used for defecation with yellow colored powder. Once every member has marked his/her defecation site, arrows from the defecation sites to their houses would be drawn. Members would also be asked to locate the sites where children defecate (drains, etc.) or adults defecate during odd hours.

Do's	Don'ts
✓ Choose an open space and draw a large map in which lots of people can participate. ✓ Encourage people to use local material for mapping – stones, sticks, leaves, etc. ✓ Ask questions about the map, e.g., which is the dirtiest neighborhood? Second dirtiest? And so on. The map is not an end in itself but a means to facilitate community understanding of their sanitary conditions. ✓ Transfer the map to paper and try to have it displayed in a prominent place. The map can be used as a monitoring tool as the village progresses toward ODF status.	x Don't draw the map yourself! The facilitator's role is to facilitate the mapping. You can encourage initially by drawing a major landmark. After that, let community members take over and observe community dynamics – who is taking the lead? Who is being passive? Which issues do people spend time discussing?

Calculation of Feces

Purpose

To quantify the magnitude of the sanitation problem.

Process Guidelines

- While the defecation transect and mapping exercises make people aware of the existence of the problem, the calculation of feces makes them realize the scale of the problem.
- Taking an average of 250 gms (or local unit of measurement, e.g., *tola/maund*) of feces produced per person per day, the calculation first determines the amount for a day (250 gms X population of the village).
- A daily figure can be multiplied to figure out how much feces is produced each week, month or year, which may run into tons. The quantum of human feces deposited in their area generally horrifies the community, an emotion which should be tapped. The analysis of where this feces goes has been described through a flow diagram.

Flow Diagram and Calculation of Medical Expenses

Purpose

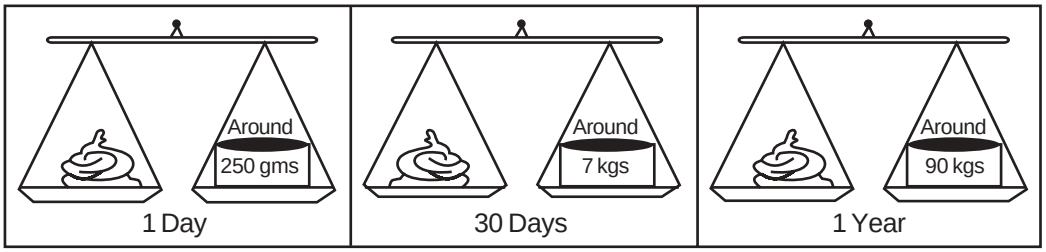
To trace the routes by which feces defecated in the open makes its way back in to the community's food and water, and the cost of treating diseases caused by ingesting feces.

Process Guidelines

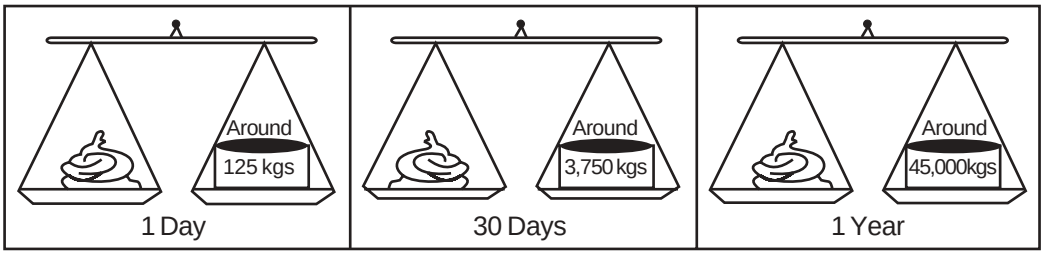
- The calculation of feces should lead to further questions: where does all the fecal matter go?
- Using a flow diagram, the movement of the feces after defecating is traced (this can be done on a chart paper, blackboard, etc.). The flow of feces will include its lifting in the dry state by wind, getting into the feet of chickens, pets, flies, mixing with water streams (especially during rains), etc. The idea that has to be gotten across is that the very feces that we have thoughtfully deposited away from us and our homes, doesn't go 'away'. Instead, it makes its way back through these carriers.
- The revelation that they have been ingesting feces in some form or other brings revulsion. Try to sustain the tempo here by asking related questions: how would the ingested feces affect our health?

- At this stage, the facilitator can ask community members to calculate spending on health expenses incurred due to ingesting feces. First, ask members to list out the diseases that can be caused by ingesting feces. Next, try to calculate the medical bill of treating a disease, say diarrhea, by estimating cost of travel to a clinic, doctor's fees, cost of medicines, cost of productive time lost, and so on.
- This figure (medical expenses to treat diarrhea for one week) can be multiplied by estimated number of cases in a family in one year, and from there on multiplied by the number of families to calculate how much the village spends on medical expenses to treat one sanitation-related disease in a year.

One Person



500 People



Do's	Don'ts
✓ Do ask questions – of men, women, elderly, children – and try to get community members to take responsibility and work out things for themselves. ✓ If the group hesitates to choose between nurse/doctor and traditional healer, you can help by reminding them it's the type of health problem and expense of treatment that is important, not the type of healer. ✓ This activity may have shown you that the group lacks health knowledge. If this is so, the facilitator's role is to help the group find out for itself – how disease spreads – the way disease spreads, how people handle water and how it is linked to open defecation.	x Don't lecture or try to educate the community about the diseases caused by open defecation, flies as disease carriers or need for handwashing. x Don't worry if the group misses out what you think are important diseases. This is a discovery in itself. It means that you will have to help the group to discover this information themselves. Do not suggest diseases – instead let the group make suggestions based on its knowledge and experience.

Water Quality Testing with H_2S Vials

Purpose

To reveal the extent of bacteriological contamination of water sources due to open defecation.

Process Guidelines

- Testing with H_2S vials is very simple and it reveals the extent of contamination of the water that people have been using for bathing, drinking, cooking, etc. This step is particularly useful in places where people defecate in the water (rivers, lakes, backwaters, etc.) and there may be less visual impact of doing a defecation transect/walk of shame.
- Count the number of drinking water sources in the village including handpumps, wells, streams and taps, and arrange to get as many numbers of samples.
- Take samples from surface water sources directly into the bottle. In case of groundwater sources, first fill water into a clean glass, and then transfer to the bottle for testing.
- Check the samples after 24 hours. If the water turns black, that is a proxy for fecal contamination. If the water color is unchanged, wait for another 24 hours to confirm the test results. If the color does not change to black, it means the water is safe to drink.
- Share the results of the test and tell families that are using contaminated water sources to use other sources or treat water before use.
- Bury the vial safely in around 2 ft. deep pit after throwing away the contaminated water in the pit, and breaking the vial inside the pit and covering it with soil.

Do's	Don'ts
✓ Keep the H_2S vial and bottle safely at recommended temperature and away from sunrays and children.	x Don't pass judgment on the community. Try to use the test results to help them analyze their sanitary conditions and impact on their health.

Decision-making

Purpose

Ignition – to switch from facilitating analysis of the sanitation conditions to assessing whether the community is ready to take action.

Process Guidelines

- At the end of the analysis, many in the group may actively want to change the situation. To tap into this motivation, the facilitator could ask: **who will go for open defecation tomorrow? Or who will take a bath in the river in which everyone has been defecating?** Ask them to raise their hands. If no one raises their hands, ask what can be done instead.
- Usually, at this stage arguments run high between community members on how to stop open defecation. Don't interrupt or advise. If questions are addressed to you, you may tell them that as an outsider you don't know about the local situation and they would know best what to do. Tell them they are free to choose – they can even continue their age-old practice of open defecation!
- If at this stage some people say that they are interested and are willing to construct toilets but it is costly and they would not be able to afford it, tell them it is not. Quickly draw a picture of simple pit latrine. Ask how much that would cost and how difficult it would be to construct a similar direct pit latrine? Let them know that this was not your design, but one developed by poor people in one of the poorest countries of the world (additional information on sanitation technologies is included in Guidance Note 6). You could also share experiences of other communities who have taken up total sanitation move and have achieved success.

Do's	Don'ts
✓ Firmly say that you are not there to sell toilets or distribute subsidy. This perception about the high cost of toilets is derived from supply-driven projects of the past, which prioritized high-cost solutions.	x Don't prescribe any sanitation model or technology. Remember, the central idea of community-driven total sanitation is to let the community decide, not prescribe. x Don't worry if no one talks about starting any local action immediately. Politely thank them and tell them that you will record them as a village where people are willing to continue open defecation and eating one another's feces.

Action Planning

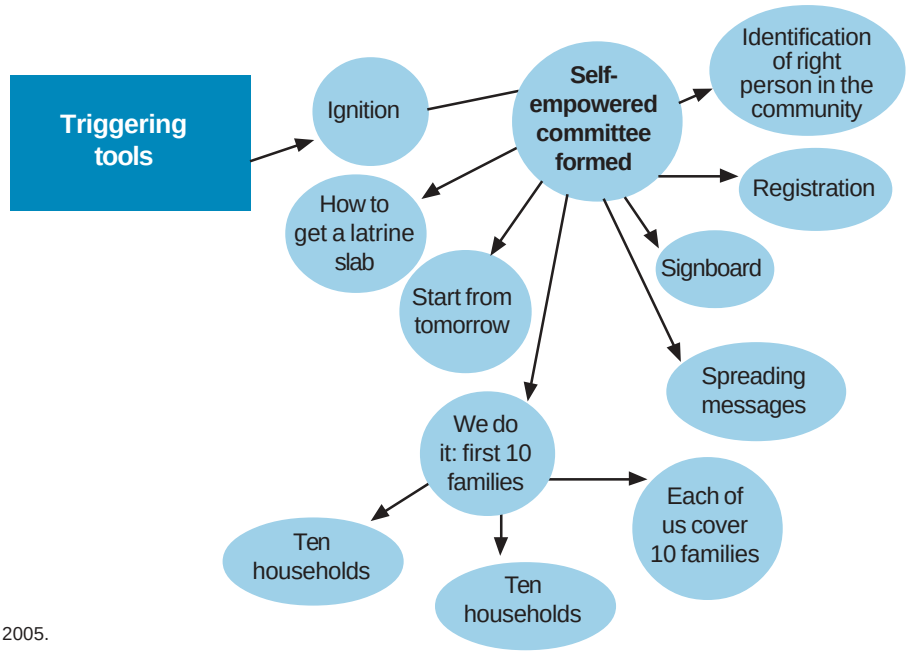
Purpose

To discuss three major next steps: (1) how to establish a Sanitation Action Committee; (2) create an action plan and decide deadlines; and (3) decide actions for the next day.

Process Guidelines

- As a first step, it is necessary to have a steering and management committee which will oversee the completion of this process. This committee, to be set up at this meeting, can include PRI members and if it exists, members of an active Village Water and Sanitation Committee.
- Next, decide on an action plan and approximate time frame to achieve the end of open defecation in the village. Discussions can be held on material availability, how to procure these, etc. The committee may also decide on whether any fines need to be imposed on those undertaking open defecation after a period of time.
- Although the process of completely ending open defecation will take some time, it is necessary to start the first step toward that process immediately. Some actions that can be taken immediately are:
  - Digging pits to use as makeshift latrines.
  - Learning more about low-cost technology models.

Process of Community Realization and Action toward an ODF Environment



Source: Kar 2005.

- Putting together a list of masons and sanitaryware suppliers, or entrepreneurs willing to take up the challenge.
- Making a list/map of all households in the village and their sanitation status.
- Identifying suppliers of sanitary materials.
- Getting commitments from well-off families to start constructing latrines immediately (adapted from Kar 2005).

Do's	Don'ts
✓ Encourage better off families to help the less well-off find ways to end open defecation as this will benefit them also. E.g., they may lend materials or allow poorer families to use their toilets in the short term. ✓ Encourage local governments to facilitate the discussion on how to support less well-off families. ✓ Look out for natural leaders who emerge from the PRA process and encourage them to take the lead in finding ways to end open defecation. ✓ Involve children in the discussion and ask them what they will do to end open defecation. Children often take an active interest and form their own monitoring groups and slogans.	x Don't prescribe models of latrines. Encourage people to innovate and use local materials while following broad technical quality parameters.

Further Reading (on CD)

- Kar, K. 2005. Practical Guide to Triggering CLTS
- Kar, K. 2003. Subsidy or Self-respect? Participatory Community Sanitation in Bangladesh
- Sanan D and Moulik SG. 2007. Community Led Total Sanitation: An Approach that Works. New Delhi: Water & Sanitation Program

GUIDANCE NOTE 7

Sanitation Technologies

Key Messages

This note provides basic information about three aspects of sanitation technologies:

- Components of a toilet.
- Sanitation technology options and their relative merits.
- Factors that influence decision-making on sanitation technology options.
- Ways to adapt sanitation technologies to difficult conditions.

Disclaimer

The total sanitation approach strongly discourages sharing any kind of information on sanitation technologies with the community without an expressed demand from their side. Even if there is a demand from the community for information on sanitation technologies, a facilitator should not prescribe models. Instead, a facilitator should try to share general principles of design or technical parameters, e.g., distance of latrine from water source or depth of pit.

Components of an On-site Sanitation System

On-site sanitation is a form of sanitation where human excreta are contained at the site of defecation in a manner that is environmentally safe, hygienic and affords privacy. A basic form of on-site sanitation comprises three building blocks:

- A substructure to isolate and contain excreta.
- A platform with a squatting pan or hole.
- A superstructure for privacy and protection from climatic factors.

This basic form can be modified by adding features or components that facilitate hygiene, operation, maintenance, esthetics or safety, e.g., a screened vent pipe can be installed for controlling smell and flies, a water seal can be provided for odor control and improved esthetics, an additional pit can be dug to increase the working life, and so on. Naturally, as features are added, the cost of a latrine goes up. What is important is to see how effectively a sanitation facility helps individuals and the community to break the habit of open defecation.

The remainder of this section is devoted to a brief description of the basic components of a latrine.

Latrine Substructure

A substructure should isolate and store excreta in a way that prevents harmful pathogens being carried to a new host. A substructure can be a pit or a tank and these are described briefly below:

- In a **dry pit**, excreta comes in direct contact with the soil. This option has many drawbacks such as odor and insect nuisance and is generally not recommended for individual household application. However, if constructed on the outskirts of a place that is usually used for open defecation, this can be an entry level option for developing the habit of using a toilet.
- In a **leach pit**, liquid and gas components of the excreta get absorbed by the soil through holes in the pit, while solids are decomposed into manure. It is preferable to line leach pits to prevent the walls from collapsing. Lining can be done with a honey-combed brick wall, perforated concrete rings, twigs, split bamboo matting, modified drum, stone masonry, etc.

- A **septic tank** comprises a watertight settling tank with one or more chambers through which waste is deposited into the tank. This system does not decompose the wastes. The pathogen-rich sludge deposited inside the tank needs to be pumped out once the tank fills up.

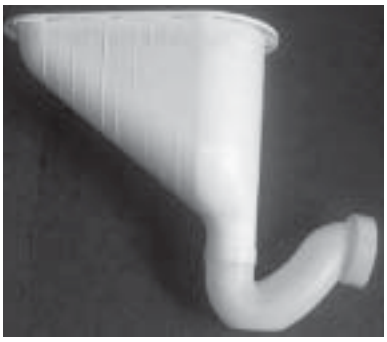
Differences between a Leach Pit and Septic Tank

The differences between a septic tank and leach pit are summarized below.

	Septic tank	Leach pit
Cost	High	Low
Space Required	More	Less
Design Life	10-20 years	Varies, but around 3-5 years
Time for Construction	7-10 days	One day
Sludge	Unsafe	Safe
		

Despite the differences between a leach pit and septic tank, it is important to note that a leach pit has lower initial cost and requires practically nil daily maintenance. The decomposed excreta becomes harmless biofertilizer and needs to be removed once in three to five years and not daily, making this advantageous from an environmental point of view. By contrast, wastes are not decomposed in a septic tank and need to be pumped out mechanically once the tank is full. The sludge deposited in the tank needs to be safely disposed.

Latrine Platform with Squatting Pan or Hole

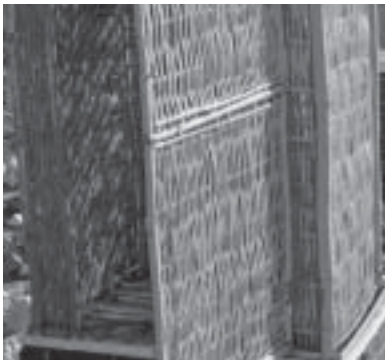


This is the floor of the latrine on which the user sits to defecate. The platform can be made of various materials, e.g., concrete, bamboo, wood, etc. It can have a squatting hole (pit latrine) or pan (flush latrine) fitted in it through which excreta travels to the pit. There are different types of pans used by different people according to their availability and affordability. The steeper the slope of the pan, the less water it needs for flushing. Pans are made of various materials: ceramics, fibre-reinforced plastic, cement, etc. A pan can be fitted with a water seal to prevent odor and improve esthetics.

Superstructure

Superstructure is a room for housing the latrine. Its design is irrelevant to the operation of the latrine but crucial to the acceptability of the latrine to the user, as it provides privacy and protection from climatic factors. Superstructures range from a simple shelter of sacks or sticks to a building of bricks or blocks which can cost more than the rest of the latrine! The choice of superstructure will reflect the income, customs and preferences of the user.

Plastic sheets



Thatch

Corrugated tin

Jute sacks

Cement

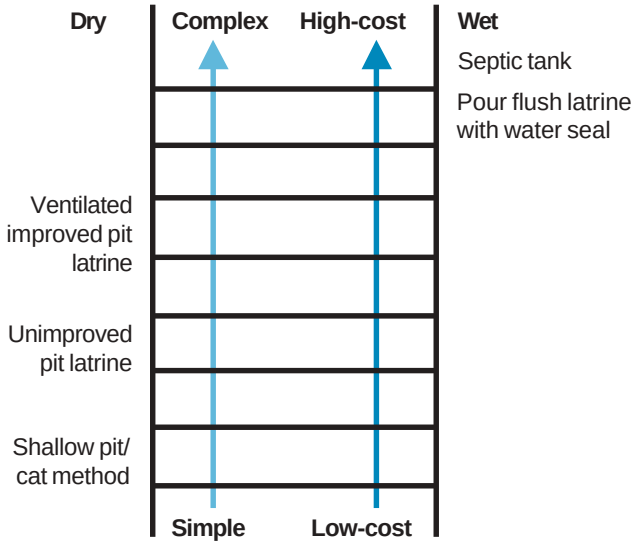
Dry bushes

Sanitation Options

Improvements in sanitation systems generally occur incrementally rather than in a single leap (Cairncross and Feachem 1993). Experience with community-driven total sanitation shows that users of relatively low-cost toilet models upgrade to more expensive models when the design life of their first toilet is over.

This section provides a description, and advantages and disadvantages of different technology options, from simple to complex (see figure of sanitation ladder). These options bring out variations in the three components of a latrine discussed above (substructure, platform with pan/hole and superstructure) as well as their applicability to different physical conditions.

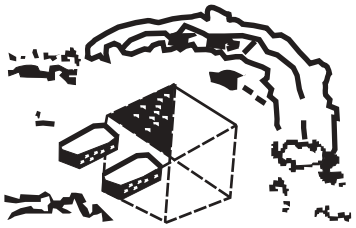
Simple to Complex Technology Options in a 'Sanitation Ladder'



Shallow Pit/Cat Method

Description

Farm workers, seasonal laborers and migrants can dig a small hole each time they defecate, and then cover the feces with soil. This is known as the **'cat method'.** In addition, this can be used as a temporary method immediately post-ignition in triggered communities. In this option, excavated soil is heaped beside the pit and some is put over the feces after each use. Decomposition in shallow pits is rapid because of the large bacterial population in the topsoil.



Source: Franceys *et al. 1992.*

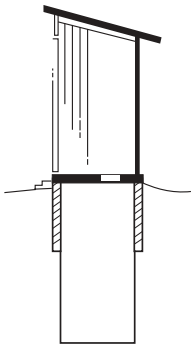
Advantages and Disadvantages

Advantages	Disadvantages
■ Low cost and easy to understand and construct. ■ Benefit to farmers as fertilizer.	■ Short life as shallow pit is soon filled. ■ Odor. ■ Considerable fly nuisance. ■ Spread of hookworm larvae.

Unimproved Pit Latrine

Description

An unimproved pit latrine consists of a slab over a pit which may be 6.56 ft. in depth. The slab should be firmly supported on all sides and raised above the surrounding ground so that surface water cannot enter the pit. Sides of the pit can be lined to prevent walls from collapsing. A squatting hole in the slab is provided so that excreta fall directly into the pit. The pit, in most cases, is designed to be used till it is filled up and then it is left to digest the excreta. A separate pit is then dug and used for defecation.



Source: Franceys *et al. 1992.*

Advantages and Disadvantages

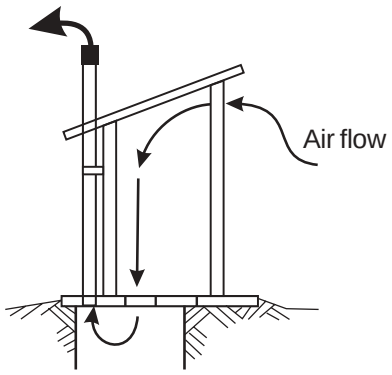
Advantages	Disadvantages
■ Does not need water for operation – appropriate for areas with water scarcity or snowfall. ■ Simple to construct: can be built by a person with minimal external assistance. ■ Helps get people on the sanitation ladder; amenable to incremental improvements. ■ If properly built, provides an effective barrier to disease that is at least as good as other sophisticated methods. ■ Small land requirement on plot.	■ Odor. ■ Fly and cockroach nuisance (and mosquito nuisance if pit is wet) unless there is a tight fitting cover over the squat hole. ■ Excreta may be visible. ■ Risk of falling into the pit. ■ Need to shift superstructure each time a new pit is dug, increasing overall costs.

Ventilated Improved Pit Latrine

Description

Fly and odor nuisance in a simple pit latrine can be substantially reduced if the pit is ventilated by a pipe extending above the latrine roof, with fly-proof netting across the top. The inside of the superstructure is kept dark. These incremental improvements are sufficient to convert a simple pit latrine into a ventilated improved pit (VIP) latrines.

There are two types of VIP latrines: single pit and alternating pit. For the latter, there are two adjacent pits below the toilet room and one pit is used at any given time. When one pit becomes full, it is sealed and the other pit is used. By the time the second pit becomes full, the first has fully decomposed and its contents can be used as manure. The pit is then emptied and returned to service till it becomes full.



Source: Franceys *et al. 1992.*

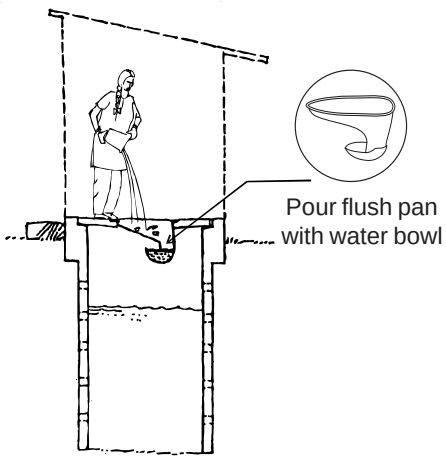
Advantages and Disadvantages

Advantages	Disadvantages
▪ Same as simple pit latrine. ▪ In addition: control of flies and odor. ▪ Amenable to incremental improvement.	▪ Does not control mosquitoes. ▪ Need to keep interior dark (deters flies).

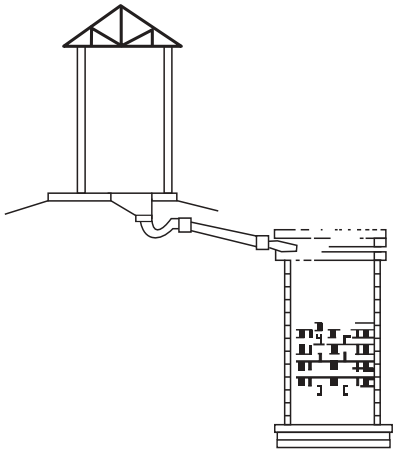
Pour Flush Latrine

Description

A pour flush latrine has a bowl with a water seal trap. Excreta is flushed down into the pit by pouring water into the bowl. The water seal prevents flies, mosquitoes and odors from entering the latrine from the pit. The pit can be under the latrine or may be offset from the latrine by providing a short length of pipe or covered channel from the pan to the pit (see pictures).



Single pit, direct flush latrine



Single pit, offset flush latrine

Source: Franceys et al. 1992.

Advantages and Disadvantages

Advantages	Disadvantages
■ Control of flies and mosquitoes. ■ Absence of smell. ■ Contents of pit not visible. ■ Offset type gives users the convenience of a WC. ■ Latrine can be in-house.	■ A reliable, even if limited, water supply must be available.

Deciding Sanitation Options

Factors that influence decision-making on sanitation options can be divided into two types – demand factors and technical factors.

Demand factors relate to customs and socioeconomic conditions. They are crucial to the design and acceptance of a sanitation option by a user and ultimately on the user's willingness to invest in and use a facility. Examples of demand factors include:

- Affordability.
- Social customs and traditions.
- Personal hygiene practices (e.g., material used for anal cleansing).
- Preparedness for emptying.
- Preparedness for maintenance.

Technical factors relate to physical parameters. They determine the feasibility of planning and design, and ultimately the effectiveness of the chosen option. Examples of technical factors include:

- Availability of water.
- Availability of space.
- Level of groundwater table.
- Soil permeability.
- Risk of flooding.

Adapting Sanitation Technologies to Difficult Conditions

Lack of space is a problem and that is why people do not construct latrines…

Experience with community-driven total sanitation has shown that the reason why people don't adopt safe sanitation is not due to lack of space but due to lack of a felt need at the collective level for safe sanitation. Some innovative ways in which this issue has been tackled include:

- The latrine squatting slab and superstructure can be on the roof of the house but the pit can be under the main room of the house.
- In many villages, latrines have been constructed on land donated by the *Gram Panchayat* or wealthy members of the community.
- Two neighbors can have separate superstructure and squatting slabs but share a common pit.
- Households which do not have adequate space in the house for building toilets can come together to construct community or group latrine facilities.

Shared toilet

Internal toilet

There is a severe water problem in our block/district.

Community-driven total sanitation has worked even in drought-prone areas. Therefore, the issue is not availability of water but lack of a felt need at the collective level for safe sanitation. This is because:

- Using a toilet takes as much water as people use for anal cleansing when they defecate in the open.
- Water use can be reduced by using other materials for anal cleansing, e.g., leaves, stones, paper.
- The slope of the pan can be so designed that it uses minimal water.
- Before defecating, pour a little water in the pan. This, along with the slope of the pan, will ensure that feces does not stick and also maintain cleanliness.

What type of latrine can be built where there is hard rock close to the surface?

It can be difficult and costly to dig a pit where hard rock is close to the surface. Some strategies to deal with this are:

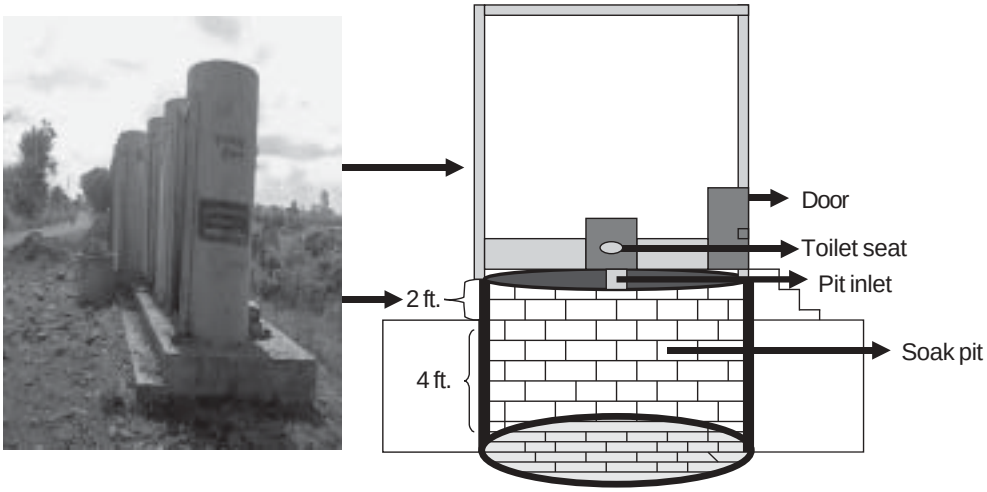
- A raised pit latrine can be built where the pit is partially above the ground level.
- Using the same concept as a raised pit latrine, mounds or platforms can be built whereby people defecate into drums or buckets and arrangements are made for safe disposal of the contents.

What type of latrine can be built where there is a high water table?

If water table is high and groundwater is used for water supply, a number of solutions can be applied to prevent contamination of groundwater, such as:

- **Raised pit latrine:** the bottom of the pit should be **at least 4.92 ft.** above the water table level. It is important to know how many people will be using the pit so that is can be sized accordingly. A large number of small capacity latrines, wide rather than deep, are preferable to fewer large capacity latrines.
- **Sand-enveloped pit latrine/raised pit latrine:** a sand envelope can be constructed around a lined pit to reduce risk of groundwater pollution. This envelope is usually 1.64 ft. thick.

Raised Toilet Pits in Rocky Areas



Toilet pit design modified to suit rocky terrain: part of the toilet pit is built above ground level to make the shallow 2-3 ft. pit a total of 4-5 ft. 'deep'.

Further Reading (on CD)

- Franceys R et al. 1992. Guide to the Development of On-site Sanitation. Geneva: World Health Organization
- WSP-Knowledge Links Pvt. Ltd. 2005. A Discussion of Technologies for Sanitation in Rural Himachal Pradesh. New Delhi: Water and Sanitation Program-South Asia
- WSP. Manual on Technology Options for Rural Sanitation in Maharashtra. New Delhi: Water and Sanitation Program-South Asia

GUIDANCE NOTE 8

Sanitation Hygiene Practices

Key Messages

Hygiene education is a potentially vast topic. To narrow the focus, this note details three hygiene practices:

- Washing hands with soap/ash after defecation and before eating.
- Washing hands with soap/ash after disposing an infant's feces.
- Proper and safe handling of drinking water.

Attitude of the Facilitator

Hygiene education is about helping people to understand, firstly, what causes some of their health problems and, secondly, what preventive measures might be possible. It needs to be approached in a sensitive manner, with a great deal of respect being shown to local beliefs, customs and practices. Following the core beliefs of community-driven total sanitation, it is important not to preach to villagers about the importance of hygiene and its health benefits. Instead, use the triggering approach. In different communities, the trigger for hygiene behavior change will vary – some may be influenced by the health argument, others by concepts of cleanliness, others by the messages bought home by children from school, etc. While promoting the hygiene messages, the catalysts should identify which type of intervention will trigger the community to adopt improved hygiene practices, and practice it sustainably.

Focusing the Issue of Hygiene Education

Although there are various hygiene practices, it may be more practical to concentrate on a few of them in the beginning. It is generally agreed that the three most important hygiene messages that should be inculcated by the community should be:

- Washing hands with soap/ash after defecation and before meals: While mud creates friction on the hands and will assist in cleansing, ash and soap will kill/remove bacteria.
- Washing hands with soap and ash after disposing an infant's feces: The popular perception that the feces of infants are harmless needs to be dispelled and greater precautions need to be exercised after handling babies.
- Proper and safe handling of drinking water: Since a high proportion of the contamination of water occurs between the water collection point and consumption, the safe storage and handling of water is an important hygiene practice.

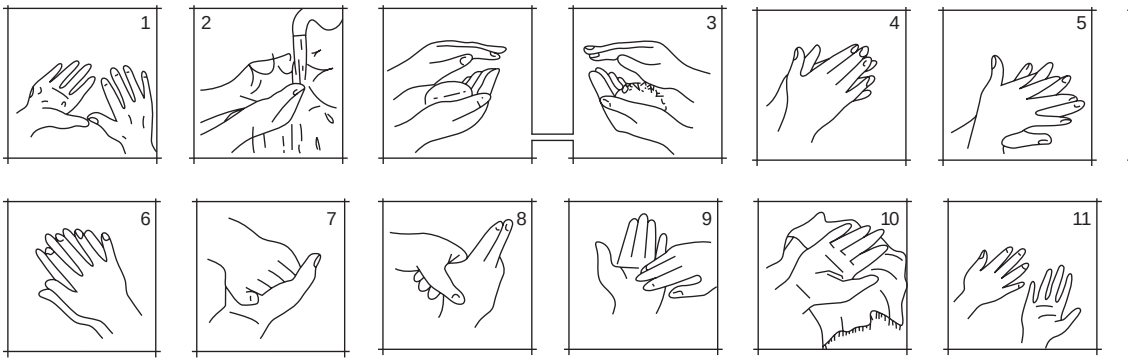
Each of these hygiene practices are discussed in detail below.

Washing Hands after Defecation and Before Meals

Due to not washing hands or washing hands with mud or only water after defecation, feces get stuck in the nails. On eating food with the same hands one can fall ill. So washing our hands properly after defecation is very important. It is also equally important to wash our hands properly before eating to make sure that there is no form of dirt on our fingers and nails.

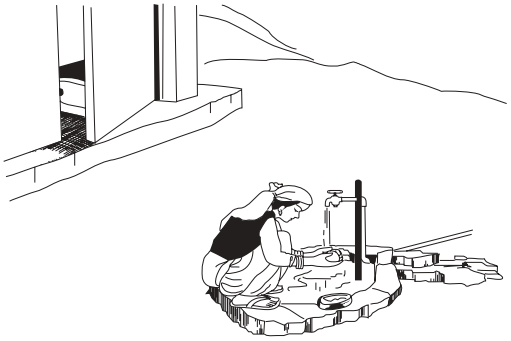
What is the proper way of washing hands?

Hands are believed to be washed properly only when there are no bacteria, pathogens or any other dirt left on our fingers or in our nails after washing. For this, we need to wash our hands only with SOAP and WATER or with fresh ASH and WATER.



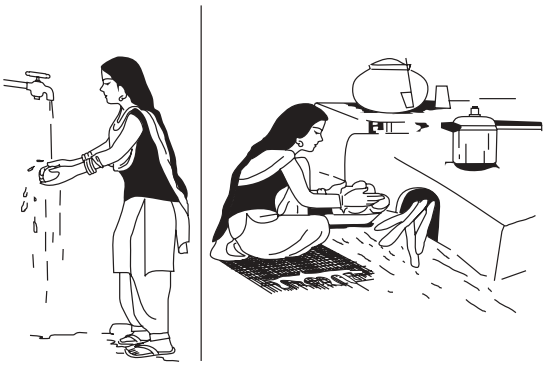
Critical Times for Handwashing

We must NOT forget to wash our hands at following times:



Handwashing after defecation

Handwashing after washing child's bottoms



Handwashing before cooking/handling food

Handwashing before eating food

Safe Disposal of Infant's Feces

Why is it important to know where is an infant's feces thrown?

This is important because an infant's feces is known to have five times more pathogens than the feces of an adult. So, casually throwing an infant's feces in the open is as dangerous as defecating in the open and, in turn, it pollutes our water sources. It is, therefore, very necessary that an infant's feces is disposed in a safe manner.

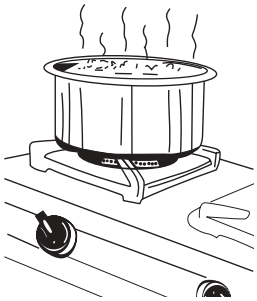
Which is a safe place to dispose an infant's feces?

A safe place to dispose of feces is a place where the feces cannot cause infection and contaminate the water sources. A clean latrine is such a place. If a hygienic latrine is not available, a shallow pit can be dug which is about 1.97 ft. wide and 2 ft. deep to dispose of an infant's feces. Care must be taken that an infant's feces is disposed in such a way that:

- Feces are not exposed to other people or domestic animals.
- Feces are not exposed to flies.
- Feces are not moved or used as manure on the field before they have become harmless.
- Feces should not drain through the soil into water supply sources.

Treatment, Handling and Storage of Drinking Water

Any of the following ways can be used to treat the water taken from a polluted/unsafe source:

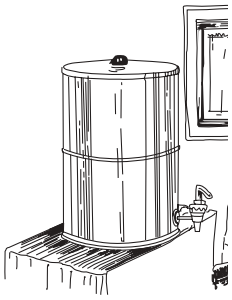


Boiling

- This is a safe and simple method of purifying/treating water for using before drinking and cooking.
- Here, we need to boil the water collected for drinking for 15-20 minutes on stove, heater or gas.
- Boiling kills the bacteria and other pathogens present in the water.
- If possible, we should boil the water in the same container used for storing it.

Home Filters

- Many of us have seen the filters used in households removing the harmful particles from drinking water.
- We can easily get this filter from the open market. While purchasing, we must make sure that it has an ISI mark on it.
- There is a candle in the filter that removes bacteria found in drinking water. These filter candles have to be cleaned by scrubbing with a hand brush under running water and have to be boiled to remove the impurities/bacteria. At regular intervals, say six months, the filter candle needs to be replaced.
- The filter has to be filled with water. Water can be used for drinking after one to two hours.



Use of Chlorine Tablets

- Store water in a clean container.
- Drop chlorine tablets in the container. We can easily get these tablets from the Irrigation and Public Health (IPH) worker visiting our village or from the market. But we must ensure that we do not put more than 10 mg of chlorine tablets in a container of 20 liter capacity.
- Use this water for drinking after two hours. Bacteria and germs present in the water shall be killed by this time.

Safe Storage and Handling of Drinking Water

To ensure that our drinking water remains pure and fit for drinking, we need to follow the tips given below:

- Clean the water container thoroughly before filling water in it.
- Always cover the container after filling the water.
- Do not allow own/child's hands to touch the water in the container.
- Inside the kitchen/home, keep the water container on a raised platform, away from the reach of children or animals.
- Use a ladle for taking out water from the container. Wash hands before using the ladle or pouring the water.

Further Reading (on CD)

- WSP-Knowledge Links Pvt. Ltd. 2005. A Discussion of Technologies for Sanitation in Rural Himachal Pradesh. New Delhi: Water and Sanitation Program-South Asia

GUIDANCE NOTE 9

Participatory Monitoring

Key Messages

- Participatory monitoring helps overcome some of the limitations of conventional monitoring as it recognizes the key role that local people play in planning and managing their environment.
- The four main principles of participatory monitoring are: participation, negotiation, learning and flexibility.
- There are nine basic steps that can be followed to facilitate participatory monitoring in the context of community-driven total sanitation. These are described in this note.

Conventional vs. Participatory Monitoring

Monitoring can be defined as the periodic and systematic measurement of variables and processes over time. Conventional monitoring typically comprises external experts using standardized tools to measure performance against predetermined hypotheses.

Participatory monitoring emerged in response to the recognized limitations of the conventional approach. By recognizing the key role that local people play in planning and managing their environment, it offers new ways of assessing and learning from change that is closer to the perspective of those directly affected by it. The key differences between conventional and participatory monitoring are summarized below.

Elements	Conventional Monitoring	Participatory Monitoring
Who Initiates	▪ External expert.	▪ Communities, often helped by a facilitator.
Who Participates	▪ External consultants.	▪ Community members and associated stakeholders at different levels.
Role of the Community	▪ Provide information.	▪ Design the self-assessment from data collection to analysis and learning from change.
What is Measured	▪ Direct, quantitative outputs.	▪ Wider qualitative and quantitative impacts, both expected and unexpected.
Method	▪ Extractive (observation, survey and documentation).	▪ Empowering; consultative (interviewing) and collaborative (PRA tools).
Approach	▪ Predetermined.	▪ Adaptive, flexible.

Source: Adapted from IDS (1998) and Pasteur and Blauert (2000).

Key Principles of Participatory Monitoring

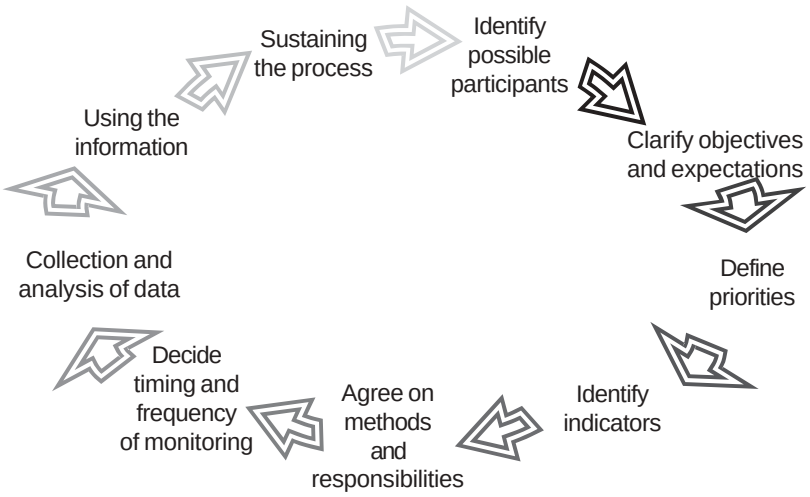
Participatory monitoring should not be confused with using participatory techniques in a conventional monitoring setting. It is a departure from the traditional approach and requires rethinking on not only 'whose reality counts,' but also 'who counts reality'.

There are many different forms of participatory monitoring and early examples of its use date back to the 1970s. However, four broad principles that define this approach can be articulated as follows:

- **Participation:** which means including those directly affected in collection, analysis and use of information.
- **Negotiation:** this involves reaching a consensus on what to monitor, how often, which methods to use, what the data means, how findings will be shared and action taken.
- **Learning:** participation and negotiation in monitoring leads to learning from change which forms the basis for further action.
- **Flexibility:** since the numbers, roles and skills of both those affected by change and the environment in which change is situated changes over time, flexibility is necessary (IDS 1998).

Participatory Monitoring & Evaluation in Community-driven Total Sanitation

Here are nine basic steps that can be followed to design a participatory monitoring initiative in the context of community-driven total sanitation.



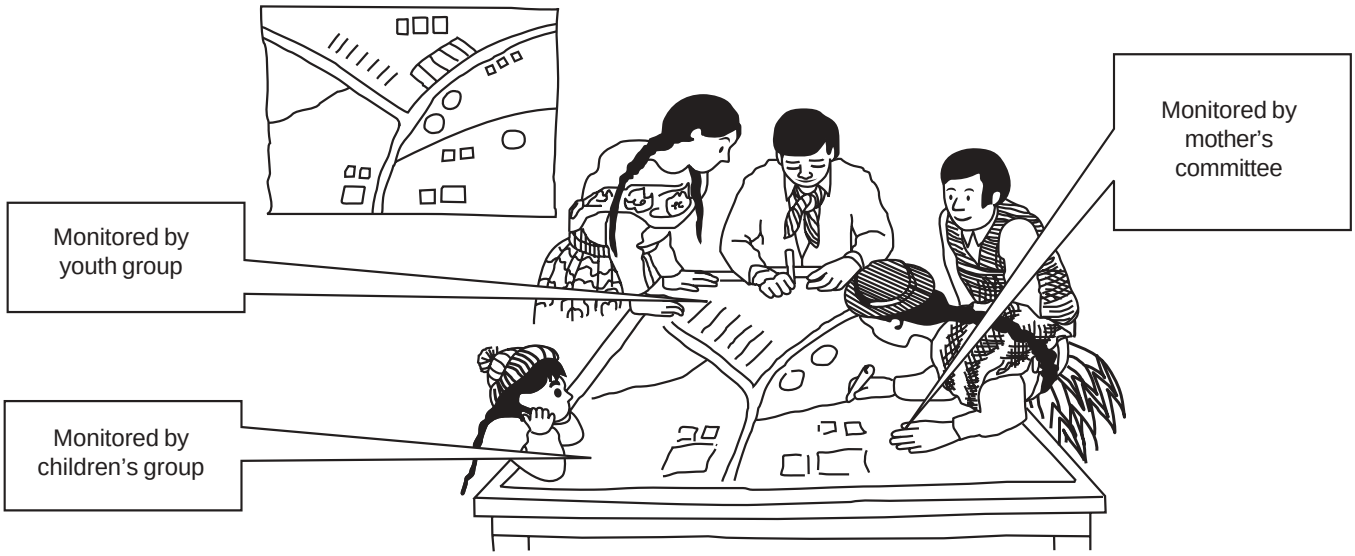
- **Identify possible participants:** who should be involved and who wants to be involved? For the process to be participatory, different stakeholders need to be included and not just the most vocal or accessible community members.
- **Clarify objectives and expectations:** this step helps to clarify why we are undertaking monitoring. Some of the reasons include:
  - To know if we are making progress toward our goal, e.g., ending open defecation.
  - To learn from experience – are some pockets/areas performing better/worse than others? If yes, why is there a difference in performance? Can good practices/ideas be replicated? What are the key challenges and how have these been tackled?
- **Define priorities:** sanitation is a private behavior with public consequences. Therefore, the scope of issues that directly or indirectly impacts is potentially vast. However, for monitoring to be effective, it is essential to narrow down the scope to selected priorities. This must be agreed upon by the community members, taking the local context as well as resources available for monitoring into consideration.

- **Identify indicators:** this is often the most difficult step as each objective can be measured by different indicators. A thumb rule for selecting indicators that will provide information needed is that they should be SMART i.e., Specific, Measurable, Attainable, Relevant and Timely.
  In the past, the most common metric used by sanitation programs was the number of latrines built. However, field experience has shown that construction of toilets must not be confused with usage of sanitation facilities. Therefore, under community-driven total sanitation, the focus is on facilitating behavior change at the community level toward ending open defecation. Under this approach, constructing toilets is a means to an end, but not an end in itself. Accordingly, the focus of monitoring should be on the outcome (ending open defecation) and not on inputs (toilet construction).
- **Agree on methods and responsibilities:** there is a vast variety of methods and tools that can be used for monitoring (Pasteur & Blauert 2000). In fact, many trigger tools can be adapted for this purpose, e.g., transect/walk, defecation mapping and flow diagrams. Some methods and their applications are discussed below.

- **Mapping:** to show the location and types of changes taking place in the area being monitored. An innovative way to monitor is to combine a social map/list of households with tricolored *bindi*s or pins to flag the sanitation status of each household or group in an area. This map should be kept in a public place so that it is visible to all and it should be regularly updated.
- **Venn diagrams:** to show changes in relationships between groups, institutions, and individuals.
- **Flow diagrams:** to show direct and indirect impacts of changes, and to relate them to causes.
- **Diaries:** to describe changes in the lives of individuals or groups.
- **Photographs:** to depict changes through a sequence of images.
- **Matrix scoring:** to compare people's preferences for a set of options or outcomes.
- **Network diagrams:** to show changes in the type and degree of contact between people and services.

Name and number of household	ODF (all feces disposed safely)  Green	Almost ODF (some members defecate in open)  Yellow	Not ODF (all members defecate in the open)  Red	Reasons for ODF/ almost ODF/not ODF

In addition to the methods used for monitoring, it is important to decide responsibilities for monitoring. One way to do this is to ask community members to volunteer for membership of sanitation monitoring committees. Separate committees can be set up for different parts of the village, based on recognized administrative divisions or number of households, e.g., each committee of five members is responsible for monitoring the sanitation status of a cluster of 30-35 households. Members of these committees can be youths, mothers, children or residents of a particular section of the village. The committees can meet on a monthly basis or nominate a member to represent the progress in their area to the *Sarpanch* or community leader responsible for the community's sanitation status. It is important to note that participatory monitoring does not exclude the role of government or civil society organizations. Rather, successful initiatives demonstrate partnerships between communities and both government and nongovernmental organizations.



Source: Adapted from: Pretty JN, et al. 1995. Participatory Hygiene and Sanitation Transformation Manual (PHAST) 1998.

- **Decide the timing and frequency of monitoring:** certain indicators are best measured at key moments or are heavily influenced by seasonality, e.g., incidence of open defecation may increase/decrease depending on time of day or season. To avoid confusion, those responsible for monitoring must agree on the timing and frequency of monitoring, possibly in the form of a daily/weekly/monthly calendar.
- **Collection and analysis of data:** after the data is collected, it needs to be analyzed and shared with relevant people and groups. Consideration should be given to building the capacity of selected resource persons from the community such that they are confident of undertaking the analysis as per the standards required. Based on the analysis, the community should be able to understand and take decisions about:
  - What progress has been made?
  - What is working well?
  - What is not working well?
  - What more needs to be done?
- **Using the information:** the same data and analysis may need to be presented in different ways to convey key messages to different groups. It should be used by each relevant group in the decision-making process to solve problems and/or plan for the future.
- **Sustaining participatory monitoring:** to be sustainable, participatory monitoring must overcome certain common mistakes. These include:
  - Assuming that everyone will have equal enthusiasm to participate.
  - Imposing inappropriate indicators without adequate consultation or collecting unnecessary information.
  - Being unclear about how the information will be used and by whom.
  - Launching into the process with inadequate preparation (adapted from IDS 1998).

Further Reading (on CD)

- Abbot, J. and Guijt, I. 1998. Changing Views on Change: Participatory Approaches to Monitoring the Environment. SARL Discussion Paper 2, London: IIED
- Estrella M and Gaventa J. 1998. Who Counts Reality? Participatory Monitoring and Evaluation. IDS Working Paper 70. Brighton: Institute of Development Studies
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Module 1: Guidance Notes

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