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ACTIVE PANCHAYAT BOOK I

Sanitation in Gram Panchayats

Ministry of Panchayati Raj
Government of India

SANITATION IN GRAM PANCHAYATS

BOOK I

Ministry of Panchayati Raj, Government of India

Developed under the Ministry of Panchayati Raj - UNDP - Strengthening Capacities of Panchayati Raj Institutions (SCPRI) Project

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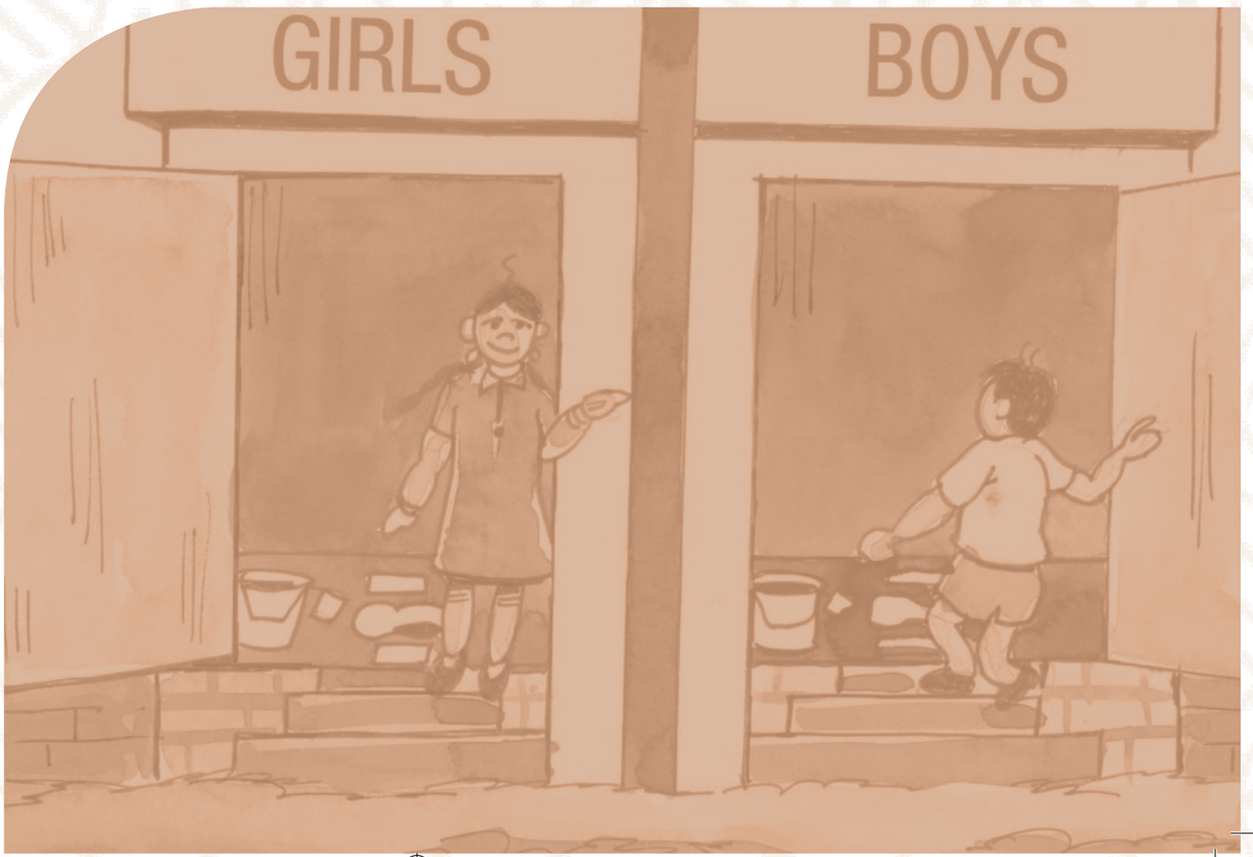
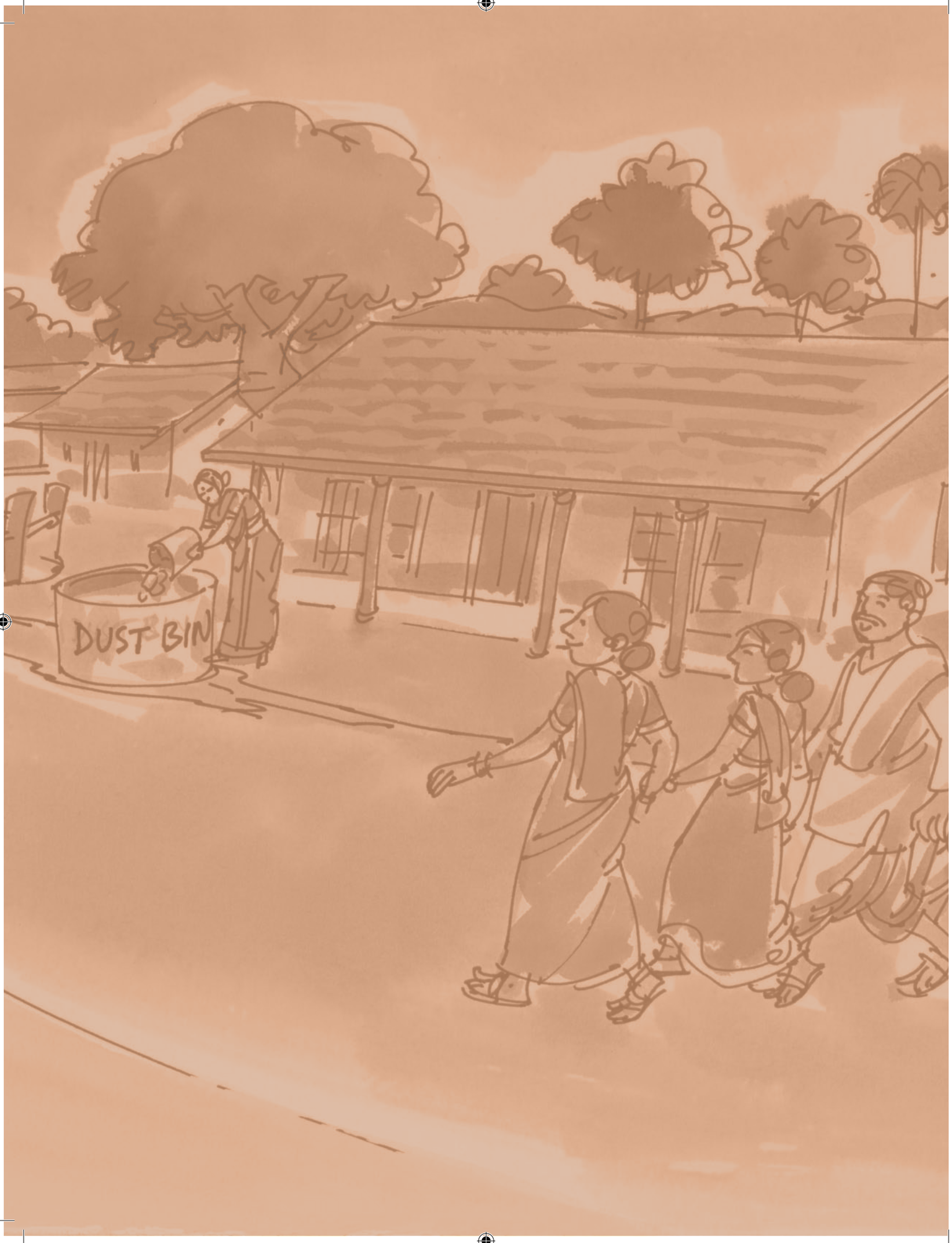
Elementary Book on

Sanitation in Gram Panchayats




DUST BIN

Foreword

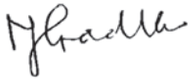
Sanitation is a top priority of the government. For this, there needs to be a country-wide movement with participation of one and all. And for a social movement of such scale, Panchayats, especially Gram Panchayats, will have to play a vital role: the role that is envisaged for Panchayats in the Constitution of India.

It is my pleasure to introduce the book titled 'Sanitation in Gram Panchayats', the first book of the 'Active Panchayat' series, prepared specially for the elected representatives and government functionaries of Gram Panchayats.

This book is meant to assist the elected representatives and functionaries of Gram Panchayats to keep their village clean, end open defecation, manage liquid and solid waste in an eco-friendly manner, encourage people in hygienic habits, pay special attention to hygiene in schools, Anganwadis and public places, and by doing all these things, improve the health status of their village.

I would request elected representatives and government functionaries of Gram Panchayats to refer this book often, and discuss it with fellow Panchayat members and in the Gram Sabha. For those Panchayat representatives and functionaries who are especially interested, a more advanced book on this topic will follow soon.

I would urge State Rural Development and Panchayati Raj departments, and State Institutes of Rural Development (SIRDs), to translate this book in their state language and also make state specific changes where necessary. They should then share and disseminate the information in this book as freely and as much as possible.



Nitin Gadkari
Minister for Panchayati Raj
Government of India

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How Sanitation and Hygiene Contribute to Health

1 Gram Panchayat and its Cleanliness

"Sanitation is more important than Independence"

– Mahatma Gandhi

Panchayat elections were held in the Nagarikpur Gram Panchayat (GP) recently. After the elections, the newly elected Panchayat representatives faced many prevalent health-related issues:

- High mortality rate among children due to diarrhoea;
- Several cases of dehydration among women;
- High rate of absenteeism among school children;
- Cases of snake bites;

- **Total economic impact of inadequate sanitation in India amounts to Rs. 2,40,000 crore**
- **Per person annual impact of Rs. 2,180**

Source: WSP-SA, 2006

- Molestation of women on the outskirts of the village (open defecation areas); and
- Loss of working days due to sickness on account of communicable diseases.

The newly elected Panchayat representatives of Nagarikpur GP held their first meeting to address the sanitation challenges facing the village. The meeting was attended by all elected representatives. The Sarpanch emphasised the importance of the GP addressing these issues itself and not relying on or waiting for outside support or aid for initiating the process. "Since the problem affects us the most, and since the Constitution of India, through the 73rd Amendment, has provided GPs the responsibility of 29 subjects, including sanitation issues, it is our responsibility to overcome the problem," he said. Other elected representatives

Sarpanch discussing sanitation issues with community members.

of the GP agreed, and a unanimous decision was taken to improve the sanitation status of the GP within six months.

During the same meeting, the Village Water and Sanitation Committee (VWSC) was also constituted as per the guidelines and it was decided that the VWSC, under the guidance of the GP, will take measures to improve sanitation.

The next day, the Sarpanch and ward members along with other VWSC members took a tour of

A model VWSC should comprise about 6-12 members, including:

- Members of the GP;
- 50 per cent representation of women (including Accredited Social Health Activists (ASHAs)/Ancillary Nurse Midwives (ANMs)/ Anganwadi Workers (AWWs), and teachers); and
- Representation of Scheduled Castes (SCs), Scheduled Tribes (STs) and the poorer sections.

Sanitation includes…

- Safe disposal of human and animal excreta;
- Safe storage and handling of drinking water;
- Personal hygiene (including menstrual hygiene);
- Cleanliness of the house;
- Food hygiene;
- Safe disposal of waste water;
- Safe disposal of solid waste; and
- Community hygiene.

various localities within the GP limits. They observed several sanitation problems such as:

- Open defecation (OD);
- Dumping of garbage everywhere;
- Clogged drains and waste water over-flowing on the road;
- Dirt, filth and mud around the hand pumps, bore wells and public taps;
- Non-functioning toilets in schools and Anganwadis; and
- Lack of awareness about the need for hand washing and other personal hygiene habits.

The Sarpanch consulted other elected representatives and village-level functionaries and proposed the following plan of action to start with:

Why is proper sanitation important?

Poor sanitation leads to:

- Various communicable diseases;
- Stunted growth of children;
- Higher infant mortality;
- Under Five Mortality Rate (U5MR) (children dying before completing the age of five years); and
- Reduced resistance and immunity in children.

This, in turn, leads to economic losses to the household through increased medical expenditure, loss of wages, and reduction of output and productivity.

A man going for open defecation.

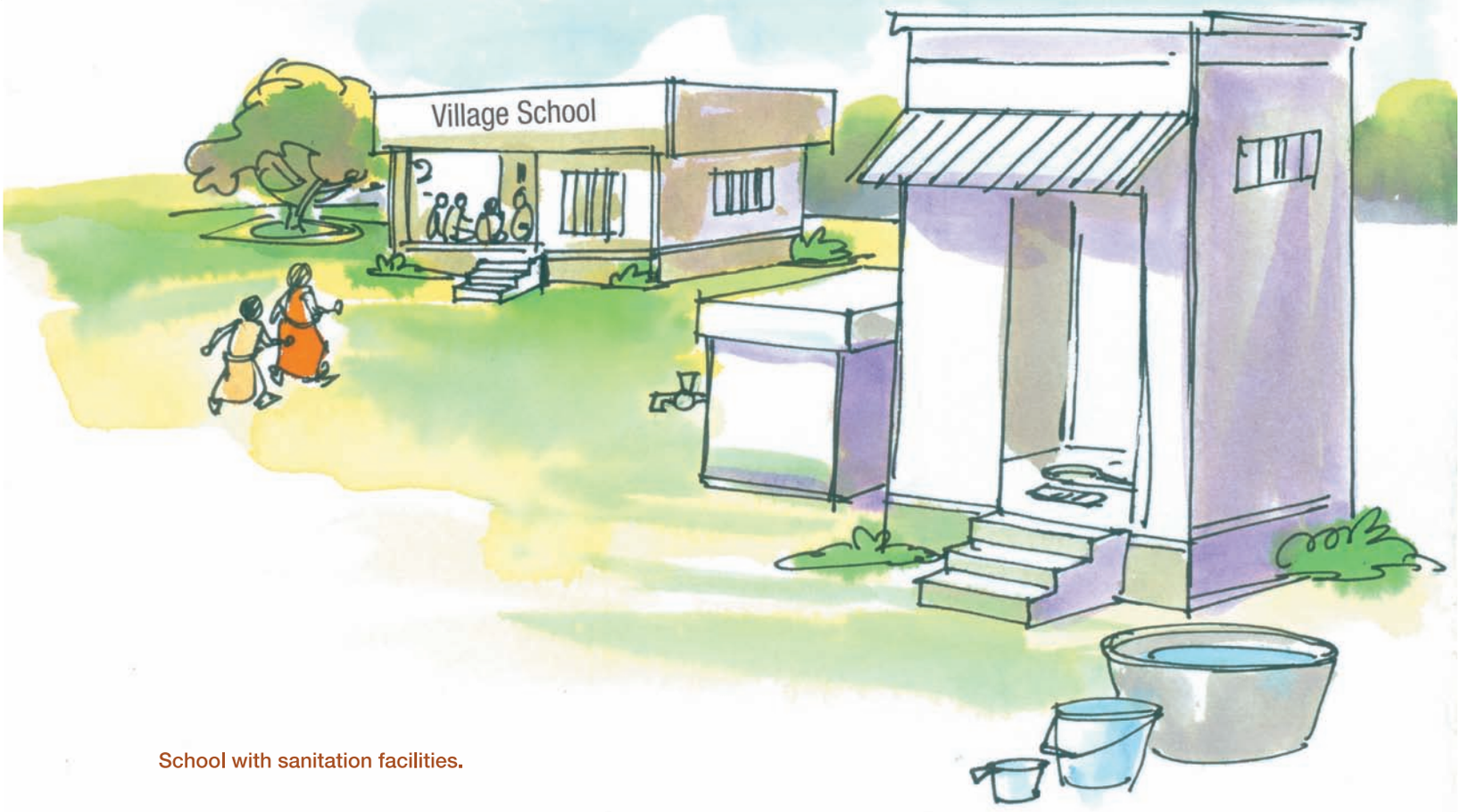
A GP may:

- Form a VWSC as per guidelines;
- Provide space for a dumping yard;
- Frame rules and decide punitive action for non-adherence; and
- Take VWSC's help in planning, implementing and monitoring sanitation activities.

- Organising a transect walk to identify issues and to educate and mobilise the village community on the urgent need for improving sanitation;
- Undertaking a household survey to assess the status of sanitation and prevalent hygiene practices;
- Determining the number of individual and community toilets required;

A GP may guide the VWSC to carry out the following activities:

- A survey to assess the problem;
- Prepare a sanitation action plan;
- Implement sanitation programmes;
- Provide place for a dumping yard;
- Arrange sweeping of streets, construction and cleaning of drains, and disposal of solid and waste water disposal;
- Maintain platforms at drinking water sources/outlets; and
- Create awareness on sanitation and hygiene among villagers.



School with sanitation facilities.

Disscussion in a village community.

- Developing a proposal for the construction of Individual Household Latrines (IHHLs) and Community Toilets (CTs) after receiving an approval from the Gram Sabha;
- Motivating people to maintain separate bins/ bags for biodegradable and non-biodegradable waste;
- Arranging a mechanism for door-to-door collection of the waste;
- Arranging a dumping yard;
- Developing a proposal for solid and liquid waste management, including construction of compost pits, treatment of grey water and construction of bio-gas plants;
- Cleaning the area around bore wells, hand pumps and public taps;
- Cleaning of drains on a regular basis; and
- Drawing up a plan for improvements in other areas required for winning the Nirmal Gram Puraskar (NGP).

The GP and VWSC regularly reviewed the progress made and, after six months, the situation had improved greatly with regard to:

- Construction of IHHLs as per plan;
- Cleaning of areas around water sources and outlets;
- Cleaning of drains;
- Collection of household waste and dumping in yards;
- Management of solid and liquid waste;
- Management of animal manure; and
- Personal hygiene.

The Sarpanch and ward members, in this case, faced many problems. However, they went ahead with determination and obtained the willing support and cooperation of the people even if it required visits to households to persuade them to discharge their responsibility, both individually and collectively.

STEPS FOR DEVELOPING A GP SANITATION PLAN

Step I: Collection of information and assessment of the problem

- Population of the GP
- Number of households (HHs)
- Number of HHs without toilets
- Number of dysfunctional IHHLs required to be put into use
- Number of persons practicing OD
- Number of persons practicing OD in spite of having a household toilet
- Information on disposal practices of solid and liquid waste
- Information about status of toilets in schools and Anganwadis

Step II: Identifying strategies

- Number of HHs for whom community toilets are required (for unavoidable reasons)
- Quantification of solid waste produced in the village per day (organic and inorganic)
- Place identified for locating the dumping yard
- Collection mechanism proposed – door-to-door or public bin
- Mechanism proposed for waste transportation to the dump yard
- System proposed for segregation of waste (organic /inorganic)
- Technical options proposed for disposal of solid waste (compost pits, vermi-compost, bio-gas units, incinerators, recycling units, etc.
- Technical options proposed for disposal of liquid waste
- Details of construction and clearing of drains, soak pits, leach pits, etc.
- Provision for improving platforms around bore wells and public taps
- Promoting community awareness on sanitation and hygiene

Step III: Preparation of cost estimates

- Finalising and prioritising demand and proposals
- Developing technical and cost estimates with assistance from concerned government functionaries

Step IV: Resource mobilisation

- Assessing the scope for utilisation of funds provided under the Nirmal Bharat Abhiyan/ Mission Swachh Bharat (NBA/MSB) and other schemes
- In case of a gap between cost estimates and available funds, making a decision on the appropriation option, i.e., either phase-wise implementation of priorities or filling the gap with community and public contribution.

(Activities mentioned in the four steps above are suggestive and not exhaustive.)

While developing a GP sanitation plan, the GP may ask for technical assistance from the concerned local area Rural Water Supply and Sanitation engineer/Block Resource Centre (BRC).

A women's Self Help Group conducting a sanitation awareness programme.

Is there a provision for IEC activities at the GP to promote sanitation awareness?

Information, Education and Communication (IEC) funds are provided under NBA/MSB to encourage IEC activities at the district level through the District Water and Sanitation Mission (DWSM); at block level through BRCs and at the GP level through GPs. Details of funds available to the GP are provided in Chapter 7.

According to the NBA/MSB guidelines, IEC activities may also include the following with a focus on interpersonal communications:

- **Swachchhata Doots:** the GP may identify trained rural motivator/s, designated as 'Swachchhata Doot/s' who would coordinate sanitation activities, guide households and act as a bridge between the GP and the households;
- **Swachchhata Diwas:** the GP can earmark a particular day of the month as Swachchhata Diwas (Sanitation Day). A meeting is conducted on this day in an open public space. GP members, along with the community members and other stakeholders, review the progress made in sanitation, identify drawbacks, review expenditure and identify the future plan of action based on trends and experiences; and
- **Gram Swachchhata Sabha:** a Gram Sabha on sanitation is convened especially once in six months. Known as the Gram Swachchhata Sabha, this meeting is held to review progress

on the decisions taken on various Swachchhata Diwases, read out the list of beneficiaries, evaluate the quality of sanitation work, review the finances, and answer queries from the villagers, etc. These meetings should be conducted in all seriousness just as regular Gram Sabha meetings are and follow-up on the decisions should be ensured.

In this regard, GPs can request guidance from BRCs and district-level NBA/MSB coordinators and implement IEC activities.

In subsequent chapters, we will learn in detail about issues, challenges and solutions related to sanitation in rural areas.

Support agencies accessible to GPs

As GPs often do not have the expertise or necessary information for carrying out all tasks, the following institutions /agencies are available to extend technical and other support:

- Junior Engineer/Assistant Engineer in charge of the Water and Sanitation Department (for all technical matters, planning and preparation of reports);
- BRC (for IEC and training activities); and
- DWSM (for IEC, training and for establishment of Rural Sanitary Marts (RSMs), etc.)

C.

B.

A.

A. A Swachchhata Doot explaining the importance of sanitation and hygiene in a village meeting.

B. Swachh Gram-Swachh Bharat.

C. Kalajatha spreading the message of sanitation in a village.

2 Open Defecation

The biggest sanitation challenge for GPs is to eliminate the practice of OD. Around 65 per cent of rural people practice OD in the country, resulting in exposure of human excreta to the environment. Release of human excreta into the rural environment adversely affects the health of rural communities. Human excreta contain a huge number of disease-causing pathogens and there is great scope for these pathogens to enter the human system and food through:

- Air
- Flies
- Fluid
- Feet
- Fingers
- Fields
- Animals
- Motor vehicles

One gram of human excreta can contain:

- 1,00,00,000 viruses
- 10,00,000 bacteria
- 1000 parasitic cysts/ova
- 100 parasitic eggs

OD leads to the following diseases:

Diarrhoea, dysentery, cholera, polio, hepatitis, typhoid, intestinal worms, trachoma, hook/round/tape worms, malaria, filariasis, jaundice, tetanus, etc.

OD means:

Defecation in fields, forests, bushes, near water bodies or in other open spaces.

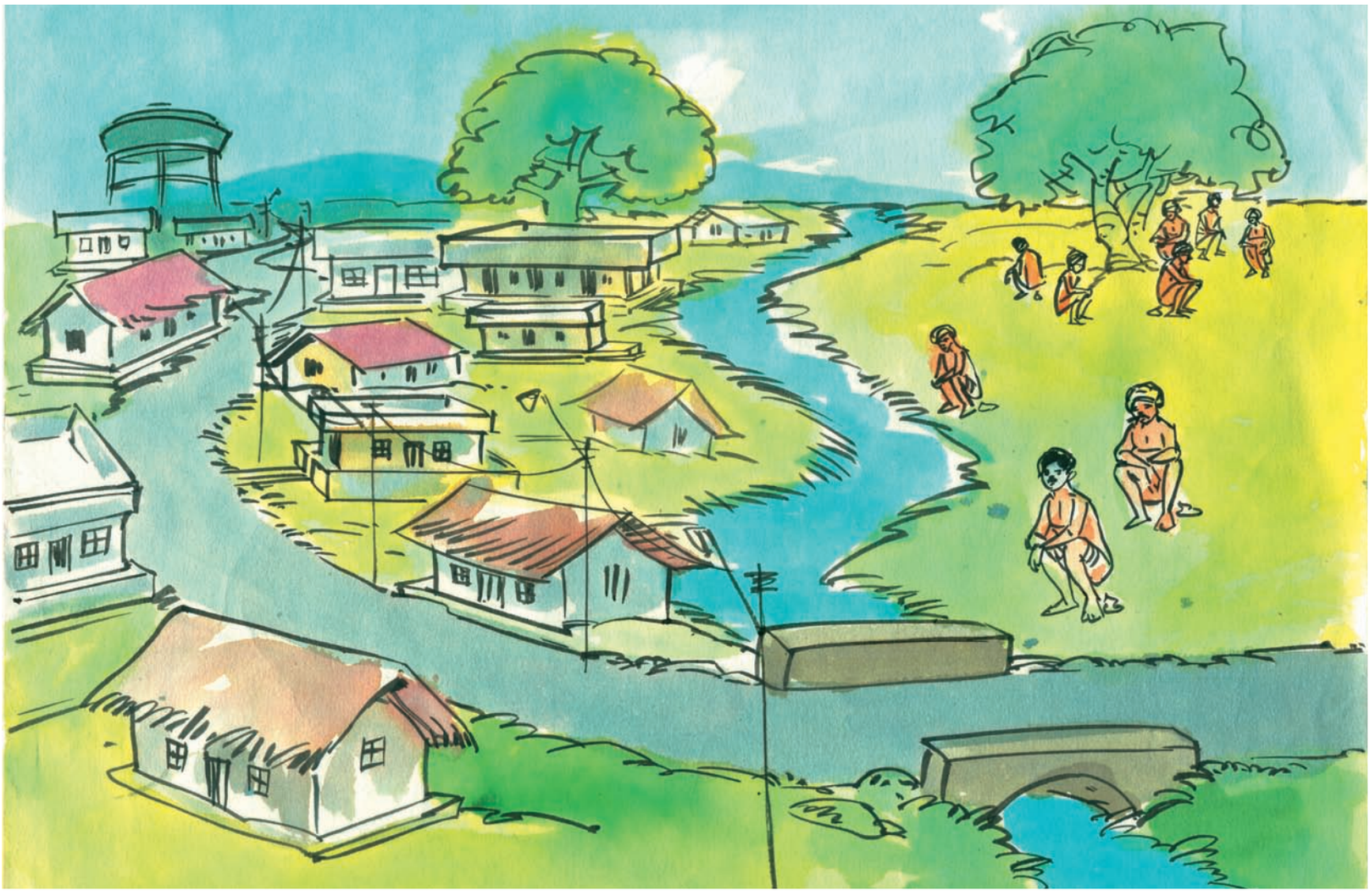
There is scope for transmission of pathogens through hands, various surfaces, ill-maintained and unclean toilets, contact with animals and through vehicles moving in OD areas.

Will just construction of toilets solve the problem?

Not exactly, because sanitation is a habit and changing human behaviour is a complex process. In the past, just emphasising the construction of toilets without a proper behaviour change strategy has resulted in toilets being unused or used as store rooms, bathrooms, kitchens, etc.

Food for thought

It is estimated that, on an average, a village with a population of 1,200 and without toilets, produces 300 kilogram (kg) of human faecal matter every day. Imagine the amount of pollution to the surrounding environment and water due to the excreta that is left untreated! If we assume that the food the villagers eat and beverages they drink are contaminated by even 1 per cent of the 300 kg of excreta, they are indirectly consuming, through their contaminated food, about 3 grams (equal to one chocolate!) of each other's faecal matter every day.



A village without proper sanitation

A random physical survey in several villages will reveal that OD is practiced by people either due to non–availability of household toilets or non–utilisation of the existing toilets.

Reasons for such behaviour may be one or more of the following:

- Psychological and behavioural block;
- Traditional beliefs and superstitions;
- Lack of space, money, water and awareness; and
- Faulty design of toilet, etc.

Hence, a three-pronged strategy is necessary for eliminating OD:

Create demand for toilets

A participatory campaign has to be organised in the GP with the active involvement of people to discuss the sanitation situation, opportunities to improve, specific issues for elimination of the OD practice.

Various participatory approaches such as the Community Approach to Total Sanitation (CATS) could be adopted to motivate people to take up toilet construction.

Strengthen sanitation materials supply

If people are motivated to construct latrines in their homes, adequate access to/supply of all the required hardware must be ensured. GPs, Self Help Groups (SHGs), agencies, individuals and Non-Governmental Agencies (NGOs) interested in supplying the material must be encouraged to take this up as a business proposition and also for the community's benefit. NBA/MSB, the National Rural Livelihoods Mission (NRLM) and other programmes have funds for starting RSMs and Production Centres (PCs).

Create social pressure to ban OD

As OD is a traditional habit, a movement should be started to create social pressure to stop it by persuasion, advocacy and pressure. Successful examples of such initiatives include the following:

- Dr. Nishi Gandha Mali, Chairperson of Solapur District Panchayat in Maharashtra, has been visiting villages, meeting Panchayat members, school children, officials and citizens, and vigorously advocating for stopping OD and constructing toilets. She has vowed not to wear any footwear till her district becomes open defecation free (ODF). Her efforts have begun yielding results and several GPs have started implementing sanitation programmes aimed at the elimination of OD.
- A school boy in a village in West Bengal planted placards at specific identified spots in his village identifying the names of the villagers who defecated at the spot. This novel idea helped the community to succeed in their campaign against OD.

Illness in a Village where OD is practiced

Community Approach to Total Sanitation (CATS) is one of the most successful participatory behaviour change approaches adopted by facilitators to reach a collective decision in rural areas to stop OD. The essential components of this approach are detailed in Table 1.

Table 1: Components of CATS

Sl. No.	Triggering tool	Description	Expected outcome
1	Rapport-building	Initiating a dialogue with the community	Set the stage for subsequent activities by developing mutual trust, agreement and cooperation
2	Defecation Transect	Walk to understand community sanitation practices by way of conversation	Knowledge of sanitary conditions including OD areas
3	Defecation Mapping	To facilitate analysis of the 'big picture' with respect to the situation of the village vis-à-vis sanitation	Community members visualise the problem of defecation areas being in the proximity of their homes
4	Calculation of Faeces	Estimation of the amount of faeces produced	Community members quantify the magnitude of the sanitation problem
5	Flow Diagram	Traces the routes by which the faeces makes its way back into the community's food and water	Realisation by community members that OD at a distance from their homes does not mean that the faeces problem goes away
6	Calculation of Medical Expenses	Calculates the cost of treating diseases caused by ingesting faeces	Community members understand the hidden costs of inaction on sanitation
7	Water Quality Testing	Testing of water samples from different sources for bacteriological contamination	An understanding on the extent of bacteriological contamination of water sources due to OD

Note: The GPs could contact BRCsor IEC consultants in DWSM for organising a CATScampaign.

Rural women – importance of elimination of OD and adoption of hygiene practices

Elimination of OD not only contributes to greater community health by minimising the scope for "faecal oral route" diseases, but also:

- Provides dignity, privacy and safety to women;
- Reduces vulnerability of rural women and girls to sexual violence;
- Reduces hardships of women and girls who usually have to wait longs periods to relieve themselves in the absence of toilets; and
- Reduces school dropout rate of girl students and enhances their academic performance through provisioning of separate toilets for girls in every school.

Pani Samiti members campaigning against OD.

Importance of sanitation for women.

Frequently Asked Questions

There is a dearth of water in our village. How can we stop OD and construct toilets?

It is true that we need water for cleaning after defecation in latrines. However, even if water is not adequately available, construction and use of a simple type of toilet is possible, since

i. The rural pan (ceramic pan) that is used has a steep slope (40 degrees) sufficient to slide the waste with the least amount of water;
Ii. If some water is poured on the pan before using the toilet, the excreta slide faster;
Iii. Using this toilet requires only a little more water than water required in OD; and
Iv. People feel the need for safe sanitation.

In drought prone areas too people have constructed toilets and are using them regularly.

Even if we stop OD in our Panchayat, how can the issue of OD by migrant workers be addressed?

OD by migrant workers is usually a seasonal issue. For migrant workers, a temporary trench latrine can be built for short-term use.

Nobody in our village has a toilet, but we are all still healthy. Where is the need for a toilet?

The effect of OD is not merely on the family concerned but on all others in the village because of transmission of bacteria and virus.

Sarpanch explaining the dangers of contamination by faecal matter.

Further, the scope for diseases also depends on individual immunity levels which vary from person to person.

OD leads to diseases such as diarrhoea, typhoid, jaundice, etc. Not only this, the ill effects of OD, especially in the case of children, appear over a long time in the form of reduced growth, lower resistance to diseases, etc., and these consequences are not limited to those practising OD but to all those residing in the locality.

Yet another dimension is the sense of dignity that the toilet provides, especially to women and girls. It also greatly reduces the risk of sexual assault on women, snakebites, accidents in the dark, long waiting periods to be relieved, etc.

What about the problem of elderly/sick/handicapped persons without access to latrines?

The GP (itself or through VWSC) should identify the number of households with special abilities and elderly or sick members, but without proper latrines. To the extent possible, priority should be given in GP plans for obtaining assistance under government schemes for such households.

Households in our village are poor; it is not possible for them to invest in construction of latrines. What to do?

Investment in latrines has great economic value even for resourceless and poor households.

This small investment pays back in the form of improved health, increased number of working days for adults, increased attendance in schools for children, reduced annual expenditure on medication and also entrusts a sense of dignity. The gain through investment in latrines is much more than any other household expenditure. Preferring investment in construction of latrines to other social activities harmful to health (alcohol, tobacco, etc.) is right, and requires courage and will power. It is also possible to avail financial assistance for the construction of IHHLs under NBA/MSB and the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). GP-level functionaries have to guide such households about available options for construction of low cost latrines.

Is it true that children's faecal matter is harmless?

It is not true. A child's faecal matter also contains the same number of bacteria and virus as an adult's faecal matter. Hence, it is important to dispose children's faecal matter safely either in the latrine or by burying in the ground. Also, after defecation, the infant's and child's hands and body parts should be washed with soap.

OD in the field provides manure to the soil. So why should I use a toilet?

Leaving faecal matter in the fields exposes it to the environment and creates great scope for spreading diseases among humans and animals because it is untreated and full of bacteria and virus. Safely treated

Proper disposal of child faeces and inculcation of toilet habits in children are important.

faecal matter alone can be used as manure, not raw untreated faecal matter.

What is the relevance of social justice in cleanliness and sanitation campaigns in the GP?

For historical and economic reasons, the areas or colonies inhabited by weaker sections like SCs and STs are usually not covered adequately or have been neglected in sanitation campaigns. The GP representatives (Sarpanch, ward members and government functionaries) and VWSC members can make extra efforts to advocate and campaign for toilets in such areas, help them stop the practice of OD and motivate them to undertake construction of latrines in their houses (like other sections of the society).

Why doesn't the government or an external agency build latrines for us?

Experience has shown that, in spite of a large amount of money having been spent, toilets built without people's contribution and involvement (regarding location, type, material, cost, etc.) have failed or were not properly used. Hence, the emphasis has now shifted to creating awareness among people and motivating them to construct latrines with their own resources.

Maintenance of sanitation during floods and droughts

It is much more important to maintain sanitation in times of floods than in normal times because, during floods, there is strong likelihood of floodwater (from solid and liquid waste and from dead carcasses) contaminating sources of drinking water. Likewise, acute scarcity of water during droughts affects sanitation due to non-adherence of basic hygiene practices for want of water. Some precautions that can be taken during floods and droughts are as follows:

Floods:

- Constructing temporary trench latrines as an emergency measure at select locations along with provisions for hand washing with soap; and
- Higher level of protection of all water sources, cleaning of catchment areas around service reservoirs and disinfection of water.

For both floods and droughts:

- Procuring safe drinking water from alternate sources for supply to the villagers; and
- Duly arranging its transportation where necessary and providing sufficient number of clean containers with lids for stocking drinking water.

Drought:

- Arrangements for hand washing should be made near trench latrines, and also at temporary stand posts.

Generally, during these situations, the Public Health Departments issue advisories cautioning people about the likelihood of common diarrheal diseases and asking people to take certain precautions to prevent the spread of diseases. Hence, the GP should watch out for these advisories and vigorously disseminate cautionary messages among villagers.

3 Construction and Use of Latrines for a Clean Panchayat

The main purpose of any sanitary latrine is to prevent human and animal contact with excreta and exposure of untreated excreta to the environment. In order to achieve this, a good sanitary latrine should ensure that:

- Excreta from the latrine should not pollute the soil;
- Excreta from the latrine should not pollute surface water or ground water;
- The latrine should not stink;
- Excreta from the latrine should not be accessible to flies and animals; and.
- The latrine should be as simple as possible to suit the sick, the aged and people with special abilities.

Every latrine has two main parts:

1. Super structure – which is mainly meant to provide privacy for the toilet user; and
2. Sub structure – which is technically important as it provides safe disposal or re-use of human waste.

Depending on the type of soil and level of water table, different types of latrines are recommended:

For normal soil with a low water table, a situation which exists in most parts in India, a pit latrine is the most suitable type of latrine. Different designs of pit latrines are available, from simple single unimproved pit latrine through ventilated improved pit latrines to twin pit systems.

Pan and P Tube.

The basic parts of a pit latrine are

- Squatting platform with a hole
- Pan
- P-trap
- A pit below the squat hole (with a connecting pipe in most cases)

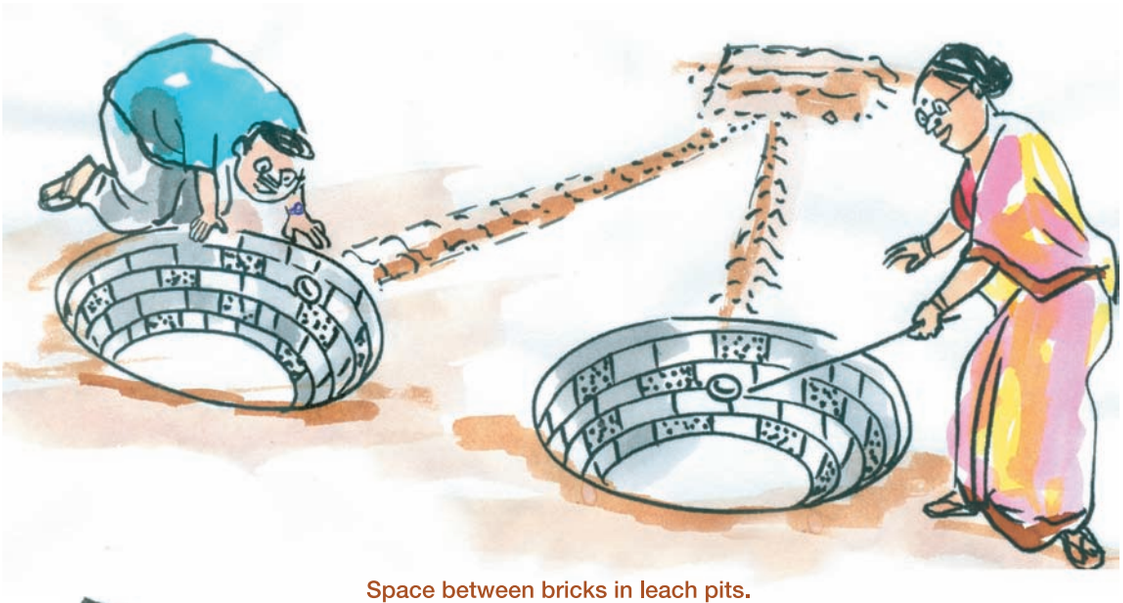
How do pit latrines work? In the pit, the faecal matter decomposes through bacterial and fungal action. The decomposition process may take place in the presence of oxygen (aerobic) or without oxygen (anerobic). Gases are released into the atmosphere or absorbed in the surrounding soil. Urine and other liquids creep into the soil. Pathogens in the faecal matter are destroyed, because conditions in the pit are not favourable for their survival. The left over material gets compressed and compacted and

Construction of a pit latrine.

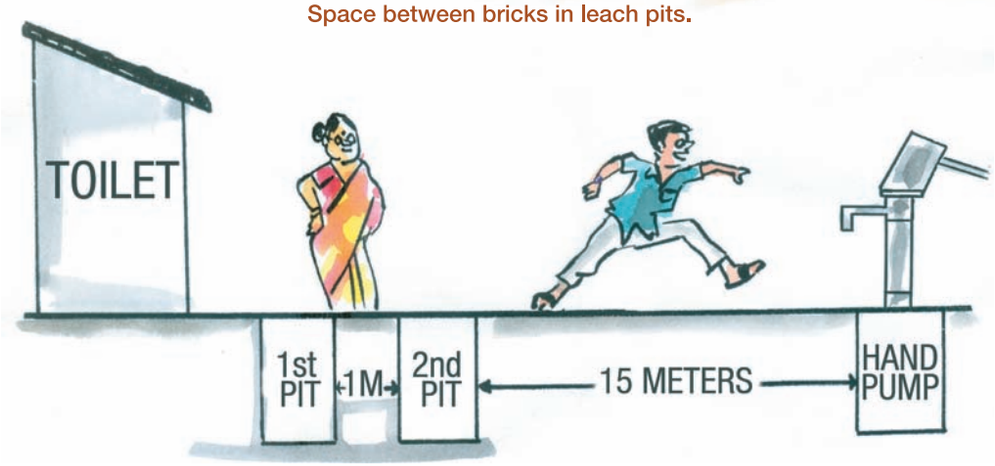
Manual scavenging

- The removal of human excreta from unsanitary dry toilets involving the use of brooms and plates and carrying of excreta by humans is not only hazardous to health, but is also highly undignified and humiliating.
- The Government of India has prohibited manual scavenging through the "Prohibition of Employment as Manual Scavengers and Their Rehabilitation Act, 2013" replacing another Act which was in force till 2013. Violation of provisions of this Act is a punishable offence.
- The Supreme Court of India has also heard various petitions under the Act and issued various directions to the Government.

In the simple single pit latrine, the human waste falls into a pit where it decomposes and urine leaches (creeps) into the soil. Over a period of time, disease causing pathogens are destroyed and residual matter gets compacted when the pit has to be cleared.



Space between bricks in leach pits.



Regular cleaning of toilet is important.

A twin pit latrine has an additional pit which has to be used when the first pit becomes full. In the meantime, the first pit is cleared after full decomposition. Hence, this type of latrine is also called alternating double pit latrine.

slowly fills the pit. The pit latrine is the most common type of latrine used in India, suitable for most soils. The leach pit is a pit in which leaching (percolating into the soil) takes place. In leach pit latrines, urine leaches into the soil through leach holes.

In addition to this, other types of latrines are:

1. **Pour flush pit latrine:** these are considered more hygienic but require more skilled maintenance, are more expensive and require more water (4 litres per use).
2. **Eco San latrine:** in this type of waterless toilet, human waste is converted by addition of some materials at appropriate temperature by the aerobic process, into nutrient "humanure". This toilet is more expensive and requires more maintenance.
3. **Septic tank latrine:** here a septic tank receives human waste from a flush toilet and, after some treatment, connects it to the sewerage system. It should have a soak pit to absorb outflow. This toilet is difficult to maintain.
4. **Bio digester toilets:** in this type of waterless toilet, human waste gets converted to biogas comprising mainly methane and carbon dioxide by the anaerobic process. It has the advantages of occupying comparatively much less space and requiring almost no water. Even though its initial cost is high, the investment is recovered over a period of time. It is a promising technology, likely to become less expensive and simpler in due course.

Community Latrines

In several GP, the need for community toilets arises due to the following factors:

Simple precautions to be taken in the construction of leach pit latrines

- The two pits should be dug to a depth of up to 4 feet (3 feet diameter) and should be 3 feet apart.
- The pipe from junction box to pits should have a slope of 2.5 to 5 per cent. Similarly, there should be a slope of the pipe between the latrine and junction box.
- The entire bottom of the pit and at least 30 per cent of the side surface area in the pit should have leach pits through which gases and liquids escape into the soil.
- Appropriate space between bricks above the side surface should be ensured in such a way that it appears like a honey comb.
- A provision of 30 per cent of total surface area should be provided for leach pits when cement rings are used in place of bricks.
- It should be ensured that cement rings with 6 millimetre (mm) thick iron rods are used.
- The slab of the pit should be slightly larger than the pit hole and it should be of required standards.
- The pit latrine should be away from any water source by at least 15 metres (40-45 feet).
- Proper care should be taken in connecting basin to P-trap and also P-trap to pit pipes. P-trap connects the latrine to the pit.
- In construction of the latrine, a ratio of 1:2:4 must be followed in mixing cement, sand and gravel.
- Depending on the funds available, the user can choose the type of super structure for providing privacy.
- The leach pit latrine basin should be cleaned daily with soap/detergent (but not with acid/phenol).

A ventilated improved pit (VIP) latrine also works in a similar way but comes with an additional arrangement. It has a straight ventilation pipe starting from the pit and ending above the superstructure level with a fly mesh at the top. Any fly that might have entered the pit goes up towards light and gets trapped in the fly mesh without travelling back to the superstructure. The superstructure in the VIP latrine has to be always kept dark. In this type of latrine, the superstructure is more odour free because fresh air is drawn into the pit from the superstructure and travels up the ventilation pipe. But the darkness in the superstructure is a disadvantage.

The advantages of VIP latrines are: low cost, suitability for construction by householder him/herself, less water requirement, fly control, absence of smell, etc.

The Community Sanitary Complex is an important component of the NBA/MSB and the complexes are set up in any place in the village, which is acceptable to the stakeholders and accessible to them. The GP and user groups are expected to own the ultimate responsibility or make alternative arrangements for the maintenance of the complex.

- To meet the needs of the visitors who come for business or to attend fairs and festivals from nearby areas;
- For passengers and visitors at bus stands/community centres; and.
- To meet the requirement of households that have no space at all in their houses for construction of toilets.

Construction of community toilets is also covered under NBA/MSB, a scheme providing assistance and incentives for rural sanitation infrastructure.

Some dos and don'ts on toilets

Dos:

- Before use, pour a small quantity of water to wet the pan so that excreta can slide smoothly into the pit;
- Pour a little water, say half a litre, in the squatting pan after urination;
- The squatting pan should be cleaned daily with a soft broom/brush with a long handle after sprinkling a small quantity of water and detergent powder/soap; and
- When the pit in use is full, divert the flow to the second pit.

Don'ts:

- Do not use both pits at the same time;
- Do not use caustic soda/acid for cleaning the pan; and
- Do not throw garbage, vegetable or fruit peelings, rags, cotton waste, cigarette butts and cleaning materials such as corn cobs, mud balls, stone pieces, leaves, etc. in the pan or the pits.

Maintenance of Community Toilets

Responsibility for routine maintenance of the community toilet, including collection of user charges, should be taken up by GP. Members of the VWSC can be entrusted with duties for this purpose. The GP can also think of entrusting this to NGOs/village organisation.

RSMs and PCs

In order to provide ready access to materials required for the construction of IHHL, so that interested households need not travel distant places for purchase, it is highly desirable that GPs encourage the establishment of RSMs and PCs.

Discussion about materials required for toilet construction.

Initiative to be taken by GPs with regard to RSMs

1. Encouraging prospective entrepreneurs (including NGOs, SHGs, village organisations) to establish the RSM for a village or group of villages.
2. Identifying suitable land in the GP area for the purpose.
3. Taking the assistance and guidance of DWSM (District Rural Development Agency (DRDA)/District Implementation Agency (DIA)) and facilitating the establishment of the RSM and sending proposals.
4. After the RSM is successfully established and functioning, monitor the quality and price of the sanitary items sold there.
5. Utilising the provision available in NBA/MSB to establish RSMs.

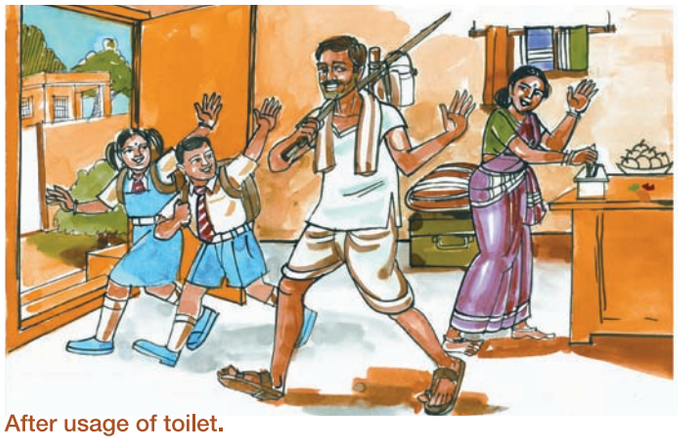
Initiating RSMs is a business opportunity with a social objective. The availability of building material at the door step would make construction of latrines much easier. The RSMs do not only stock sanitary items such as pans, basins, P-pipes, valves, P-trap, cement rings, bricks, pit lids, simple material required for the super structure, etc., but also provide advice to the villagers on sanitation.

Depending on demand, the GP can also encourage PCs where the above items are manufactured, as per local preferences at the village level. The PC can be either independent or a part of RSM. These RSMs/PCs can also be operated by GP/village organisations/NGOs/others.

Village sanitary mart.

The RSM is a commercial venture with a social objective. It is an outlet selling materials required for the construction of sanitary latrines. The main aim of an RSM is to provide materials, services and guidance needed for constructing different types of latrines and other sanitary facilities, which are technically and financially suitable to the area. The RSM may be opened and operated by NGOs, SHGs, women's organisations, panchayats, etc.

In this connection, the GP may take the assistance and guidance of the DWSM/DRDA/DIA which can also enter a Memorandum of Understanding (MoU) with an appropriate agency for establishing RSMs and PCs in GPs. In due course, these RSMs can be encouraged to provide technical guidance to the households and also train local masons. All this requires social marketing by GPs, not only to motivate village households to opt for household latrines but also to create demand among them for procurement of locally available toilet construction material.



After usage of toilet.

A VWSC member appreciating a villager for constructing a toilet.

Role of GP and VWSC in Construction and Usage of IHHLs

The GP and VWSC have to play a key role in ensuring construction and usage of IHHLs, which includes:

1. Guiding the villagers on the location of IHHLs within their houses, materials required, and their procurement.
2. Communicating simple precautions required during the construction of latrines.
3. Explaining the process of financial assistance available under NBA/MSB/MGNREGS/Members of Parliament Local Area Development Scheme (MPLADS)/Indira Awaas Yojana (IAY)/other state housing schemes.
4. Ensuring utilisation of IHHLs soon after the latrine is constructed. This is because, in some households, even after construction of toilets, some members (or all of them) prefer OD to using the latrines, which defeats the objective of the GPs. Therefore, the GP should ensure regular use of latrines and elimination of OD.
5. Where manual scavenging is still prevalent, the GP may vigorously propagate for discontinuance of the practice. Manual scavenging is not only a punishable offence but also inhuman and extremely unhygienic.

Frequently Asked Questions

What type of latrine is suitable in an area with a high water table?

If the water table is high, it is necessary to prevent contamination of ground water in the following ways:

a) Raising the level of the bottom of the pit by at least 1.5 metres (4-5 feet) above the water table level. Depending on the number of toilet users, the pit size can be decided. It is better to have a large number of small capacity latrines rather than fewer large capacity latrines; and
b) A sand cover may also be constructed around a pit to minimise the risk of ground water pollution.

Why is the leach pit latrine recommended as the first choice in rural areas?

The reasons are as follows:

a) A leach pit latrine has a lower initial cost;.
b) It can be constructed in one day;
c) It does not require periodic maintenance;
d) The decomposed human waste becomes harmless bio fertiliser and needs to be removed only once in three to five years; and
e) The leach pit latrine has a simple design and occupies less space as compared to a septic tank and other types of latrines.

Is the compost from leach pits safe?

Yes. Left for 12 to 18 months in the pit, the excreta turns into bio fertiliser and can be safely taken out unless there is seepage of waste from the second pit which is also in use or excreta is oozing in from some other neighbouring structure.

I have no space in my house for constructing a toilet, what can I do?

It is possible to construct a pit latrine even in a small space of 2x2 metres in a corner. If even that is not possible, a group of such households can come together and request the GP to assign a suitable site for the construction of either a community toilet or individual toilets depending on the situation. Or, if possible, two neighbours can share a pit but can have their own separate superstructures.

I am afraid to use the latrine because the pit may get filled up very fast?

There is no such danger. A normal 3x3x4 feet leach pit latrine, if used daily by five to six people will take four to five years to fill up. This is because 80 to 90 per cent of faecal matter is water, which soaks into the leach pit. In a twin pit latrine, the second pit can be used after the first pit is nearly filled.

Will it be useful if the depth of the pit is further increased?

Not at all. If we do so, there is a likelihood of contamination of the ground water. Since the pit is sufficient for meeting the requirement of a normal size family, there is no need for digging the pit deeper. A deep pit will cost more, it will be difficult to extract decomposed matter and there is a possibility of contamination of the ground water. So digging a deeper pit (more than 4 feet depth) is not useful.

There is hard rock close to the surface. What should be done in such cases?

In such cases, it is better to raise the pit latrine level so that the pit is partially above the ground. However, where a natural slope is available, it should be utilised so as to avoid the additional cost of raising the level of the pit latrine.

Is it possible that, in the rainy season, rain water can enter the pit through the pores in the soil?

If water level increases too much in the rainy season, water may go inside the pit through the pores. However, it will again recede after the rainy season. In flood affected areas, the squatting place should be constructed on a raised platform.

How do we build a temporary latrine for short term use?

- Choose a site away from any water source;
- Dig a shallow pit about 2 to 3 feet deep;
- The length of such a trench will depend on the number of users. A screen/curtain can be made out of locally available material to provide for privacy;
- The dirt from the dug pits should be kept in a pile near the trench latrine covered with a layer of locally available material. After defecating, the user of the trench latrine should cover their faecal matter with this dirt; and
- When the trench is about to fill up, i.e., close to the ground level, close the trench. It should be covered with earth and left undisturbed for at least two years.

4 Management of Waste

Next to elimination of OD, the highest sanitation priority of a GP should be the safe and effective disposal of the waste matter, both solid and liquid, which is produced regularly. The unsafe and improper disposal of waste matter also leads to the spread of various diseases.

Why is safe disposal of waste important?

Accumulation of waste, if not decomposed or recycled properly, gradually:

- Provides a breeding ground for germs, flies and rodents;
- Generates smell/stink;
- Looks dirty and filthy;
- Affects the quality of drinking water; and
- May affect the health of cattle and other domestic animals feeding on the waste.

The objectives of waste management at the GP level are:

1. To protect the community's health through safe disposal of waste.
2. To reduce pollution and contamination.
3. To create awareness on the need to minimise waste generation itself.

After applying the 3R strategy (refer to the box overleaf), the principle of subsidiarity should be

Principle of subsidiarity

As far as possible, management of waste should be taken up at the point of generation itself, i.e., house/institution/market.

applied in waste management, i.e., do not create waste and treat waste where it is generated.

Wastes can be categorised into:

I. Solid waste, and
II. Liquid waste

Solid Waste

Solid waste matter is classified as bio-degradable and non-biodegradable depending on its nature (Table 2)

Waste or resource:

The modern way of looking at waste is to treat it as a resource instead of useless material. The 3R strategy recommended for this is as follows:

1. Reduce
2. Reuse
3. Recycle

Management should follow these measures to manage waste.

Table 2: Classification of solid waste.

Solid biodegradable waste	Solid non-biodegradable waste
Solid biodegradable waste is that which gets completely decomposed by a biological process over a period of time either in the presence or absence of oxygen. Examples are kitchen waste, agricultural waste, garden waste, animal dung, etc.	Solid waste that cannot be decomposed by the biological process at all is called non-biodegradable waste. Non-biodegradable waste is of two types: Recyclable (which can be reused) like plastic, paper, metals. Non-recyclable waste like thermocol, tetra packs, glass, and so on

Classification of solid waste.

Selection of technical options for management of solid waste:

While deciding on the suitable technical option, the GP should consider the following aspects:

- Type of waste presently generated in the GP;
- Quantity and frequency of the waste generated;
- Is the technical option simple?
- Cost of the technical option; and
- Availability of skilled personnel, land, Operation and Maintenance (O&M) needs, etc.

Most of the waste produced by households in rural areas is organic. Hence, for organic waste, composting is the most suitable, sustainable and environment friendly method of recycling and reusing. This ultimately produces compost manure.

Composting: Composting means a controlled process involving microbial decomposition of organic matter.

- Composting is the most preferred technical option because it is an age old simple practice which produces 'plant food' quickly;
- It requires no additional chemicals;
- Composting does not result in excessive weed growth as is the case with ordinary farm manure;
- However, meat, bones and oily waste should be avoided as they attract insects; and
- It is not essential to have a specific structure as the composting pit can be constructed in any corner of a house/yard/field. But if a compost pit is arranged, it will retain the heat which will speed up the composting process. Composting is of two types, i.e., aerobic and anaerobic.

Vermi composting: Vermi composting is another type of composting in which various species of worms are utilised to break down the organic material instead of the natural process. Vermi composting is generally carried out in a 'vermi tank'.

However, this is not advisable in hilly/low temperature areas where the vermi composting process is difficult. In such cases, thermophilic composting is recommended.

Advantages of composting

- Organic waste creates problems such as smell and attracts flies and rodents. The emission of gas from composting overcomes these problems;
- Production of compost at home will encourage the use of organic farming and reduce the need for chemical fertilisers;
- Household composting reduces the amount of waste that needs to be collected and managed, thus reducing the cost of solid waste management;
- In areas where waste collection and management systems are not effective, household composting will reduce haphazard waste disposal and its related adverse environmental impacts;
- Household composting facilitates recycling;
- Separation of organic waste and composting at the household level ensures that the remaining waste is clean and easier to recycle;
- Household composting is a simple practice that anyone can do at home with minimum resources; and
- Household composting can be an educational tool for young children at home.

Note: The above methods of composting are applicable even in the case of waste disposal at the community level. Only a larger area and larger compost units will be required.

Bio-gas Plant

A bio-gas plant is based on the management of animal waste, involving its conversion to bio-gas comprising mainly methane and carbon dioxide by the anaerobic process. This is very useful to manage animal dung.

Solid waste management – a good practice:

In Karcheliya GP of Surat District, money from different schemes was pooled in and

- Each household was given a dust bin;
- Tricycles were bought for collection of waste from each household;
- A shed was constructed for segregation and recycling;
- Plastic and other non-biodegradable waste was sent to a nearby factory for recycling; and
- The GP realised an annual income of Rs. 46,600 through the sale of fertiliser that was produced from the waste.

Inorganic Waste

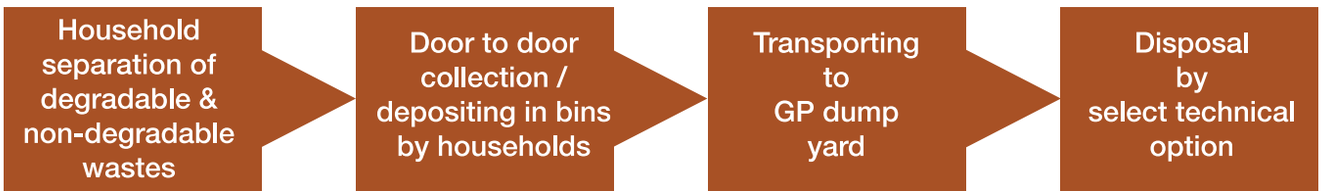
It is essential to to minimise generation of inorganic waste as much as possible. Inorganic waste should be properly segregated and disposed of through scrap dealers or recycling agencies.

Plastic is a major component of inorganic waste and has a great potential for environmental pollution through generation of harmful gases when burnt. It further clogs drains and also affects soil fertility. Several cases of cattle consuming garbage containing plastic and dying a slow death have come to light.

GPs can play a proactive role in minimising usage of plastics by:

- Spreading awareness among villagers;
- Imposing a ban on plastic usage;
- Advocating and facilitating construction of plastic roads (with technical support and training); and
- Getting more information on this from:
  – http:pmgsy.nic.in/circulars/gpw.htm (on government guidelines on plastic roads);
  – www.siudmysore.gov.in (on project related details on plastic roads)
  – "Roads from Plastic Waste", Dr. S.S. Verma, the *Indian Concrete Journal*, November

Figure 1: Steps in Community-level Solid Waste Disposal



Note: Under MGNREGA, proposed or completed Nirmal Grams are eligible for funding under this head. The GP may also have to work out community contribution and user charges for sustainability.

Transportation of solid waste.

Table 3: Approximate cost calculation for solid waste management in a GP with 300 households

Particulars		Estimated expenditure in Rs.
Civil and Material	Compost pit preparation	50,000
	Purchase of rickshaws/vans (3)	30,000
	Containers (600)	30,000
	Dress material of sanitary workers	20,000
	Construction of segregation shed (depends on size)	4,00,000
	Tools and accessories	10,000
	Total	**5,70,000**
Human resource	Supervisor	6,000
	SHG workers (10)	30,000
	Total	**36,000**
Assuming that the total initial estimated cost for solid waste management is met from NBA/MSB funds, the monthly recurring expenditure in the above example works out to Rs.120 per HH per month which can be met either by the GP or by the community.		

Liquid Waste

Liquid waste is generally classified as grey or black water:

1. Grey water (mostly from kitchen, garden, bathroom, hotels, vegetable markets, etc.); and
2. Black water (containing pathogenic toilet matter).

It is estimated that, in rural areas, 75 to 80 per cent of water supplied to the community comes out as grey water. The treatment methodology should be such that the waste water becomes pathogen free, does not promote insect breeding and, at the same time, is recycled and reused.

Grey Water Management

The grey water in a rural context could be broadly categorised into:

1. Domestic grey water; and
2. Community grey water.

Therefore, the grey water management system can be established at two levels:

1. Domestic level; and
2. Community level.

In villages, the largest quantity of grey water is produced at the household level. When this water leaves the house, it becomes community grey water. Management of grey water at community level is more complex.

Domestic Grey Water Management

Disposal of grey water at the source by each household is a more appropriate and economical proposition. This approach would ensure zero or minimum community waste. Of course, the availability of area/courtyard/land surrounding the house will be a requirement.

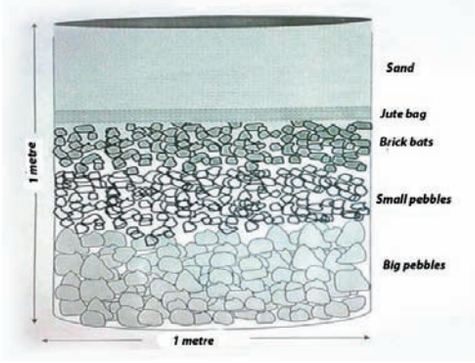
Domestic grey water disposal can be taken up by the following three methods:

1. Kitchen garden;
2. Leach pit; and
3. Soak pit.

Kitchen Garden

- Kitchen garden is the most preferred option at the domestic level because, from the garden, the household gets consumable produce such as vegetables or fruits. However, this will be possible where open land is available near the house;
- If the grey water is clarified before it is let out into the kitchen garden, the garden will thrive. This can be achieved by passing the water through a very simple device such as the silt and grease trap. There is need to separate silt, grease and other solid material from the waste water flow. For this purpose, an interceptor tank or chamber is installed as per requirement; and
- The garden can be irrigated in two ways:
  - Filtered water can directly reach the roots of the plants through underground PVC pipes. This method would require maintenance of a pipe and the filter bed.
  - "Surface irrigation", which is simpler, cheaper and requires less maintenance. But the yield could be lower and the excess water will be exposed.

Soak Pit



- The soak pit is a very simple and cheap option for grey water management;
- For domestic purposes, a cubical pit is dug in the soil with dimensions of approximately 3 feet length, 3 feet width and 3 feet depth;
- The surfaces of pit walls and the bottom provide more surface area of the soil for absorption of water;
- To provide stability to the pit and distribute incoming water to the available surface area,
  - The pit is filled with stone rubble of graded sizes. At the top, the pit is covered with supporting material such as tree twigs or gunny sacking, etc., and topped up with 'murrum' (sand), so that the inflowing water does not remain exposed
  - At the centre, an inlet with a filter, a grass-filled perforated matka (clay pot) is placed, through which water is allowed to flow into the pit. Stone rubble is also more efficient in distributing water to all the absorbing surfaces; and
- An important point is that ordinary brick pieces or gravel, etc., should not be used as filling material because brick pieces tend to crumble when wet. In due course, they obstruct the flow of water towards the soil surface at the sides of the pit.

Leach Pit

If the availability of open land is a constraint and the quantity of grey water is large, a domestic leach pit would be a suitable option. This will involve some construction costs for the family. A leach pit is a brick lined circular pit constructed in honeycomb masonry, having a diameter of approximately 3 feet. The pit should have a proper insect proof cover. Water should be led into the pit through a water seal trap so that insect movement and mosquito breeding is avoided.

Community Grey Water Management

In very compact habitations, sometimes with wall to wall houses, it may not be possible to manage grey water at the domestic level. In such a situation, domestic grey water is let out from the house. As a result, community grey water would accumulate. This will have to be collected, channelised and led to open spaces or outside the village for final treatment. Various treatment options can be used for managing such grey water. In rural areas, in public places such as water stand posts, hand pumps, public wells, etc., overflow of grey water is generated. This grey water, which is usually cleaner, also requires to be managed properly. Such water can be managed onsite by adopting suitable technical options.

Community Grey Water – Onsite Management

The following options can be used for onsite management of grey water from stand posts, hand pumps, etc., as stated above:

1. **Plantation with intercepting silt chamber;**
2. **Community leach pit; and**
3. **Soak away system.**

These methods are very similar to those adopted for domestic grey water disposal, but with larger pits over a larger area.

4. Root zone system: This is another system for managing community grey water onsite. This system can also be useful for moderately limited community grey water from households. Here, a kind of sedimentation cum filter bed is established, on top of which plants such as reeds, etc., are grown. Micro-organisms grow in these beds. Oxygen is provided by the roots of the reeds which also take care of pollutants. The water flowing out from this system is well stabilised and pathogen free. It can be used for horticulture, etc.

Community Grey Water – Offsite Management

In very crowded and compact habitations, the offsite management options are considered. Usually, by establishing a suitable transportation system, this community grey water is carried away outside the village to a place where the final treatment system can be established. For such treatment, the most appropriate system is the waste stabilisation pond system.

Approximate cost calculation for liquid waste management in a GP

1. Soak pit in each household: the cost of unlined soak pit is estimated as Rs. 600.
2. Stabilisation pond for a population of 300 HH
   - Land area required is 900 square metre approximately
   - Earthwork required may be of the order of 1,600 cubic metres
   - The cost may work out to approximately Rs. 80,000
   - Cost per household therefore would be Rs. 266
3. Estimated drainage channel cost for a community of 300 HHs would work out to about Rs.1,00,000 at the rate of Rs.1,000 per metre. Therefore, estimated expenditure for each HH will be Rs. 334
4. The total cost for liquid waste management would, therefore, be Rs. 600+266+334=1,200 per household.

Waste Stabilisation Pond System

This system is low cost and easy to maintain. The stabilised water flowing out from the system can be used for various purposes in agriculture, horticulture, pisciculture, etc. In this system, grey water collected via the drainage system is passed through a system of ponds in which grey water is naturally treated, its pathogenicity (ability to produce disease) is reduced and the treated water becomes usable for irrigation. Treatment of grey water in these ponds takes place through natural processes involving natural oxygen from air, bacterial digestive processes and algae with their photosynthetic process and own metabolism.

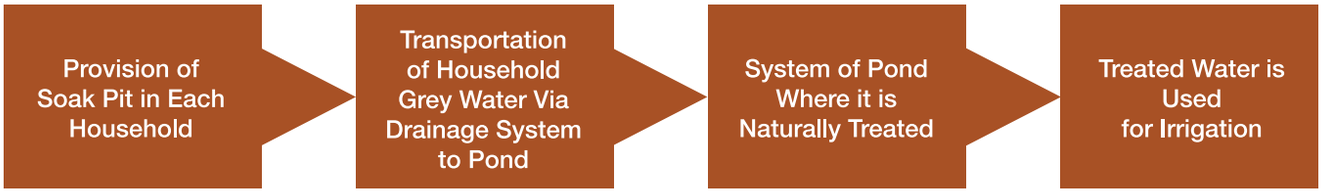
Black water management at GP level

Black water mostly contains pathogenic toilet matter. Normally, in rural areas construction of a properly designed simple leach pit latrine helps effective disposal of black water.

However, where black water and grey water get mixed up, the suitable option recommended for rural areas with low water supply would be installation of a "small bore sewer system" by the GP concerned in which:

a) the liquid portion is separated for offsite treatment and disposal; and
b) the remaining solid portion has to be periodically cleared from "interceptor tank" and disposed of.

Figure 2: Steps in Community Off Site Liquid Waste Disposal



Action Plan for Solid and Liquid Waste Management

The VWSC, under the guidance of the GP, can prepare a Solid and Liquid Waste Management (SLWM) action plan and implement the various activities in the six steps shown in Table 4.

Table 4: Six steps in preparation of a SLWM Action Plan

Step 1	**Assessment of the level of solid and liquid waste generated in the GP** For the SLWM action plan, the VWSC and the GP require appropriate information about the GP which should be compiled through a household survey. Mainly, the survey should include: • Population • Number of HHs • Mapping of the area • Details about shops/marriage halls/bazaars/houses/cattle sheds/institutions, etc. • Existing system and practice of waste management like approximate quantity of solid and liquid waste generated • Details of vacant spaces available in the GP area for locating dump yard and compost pits, if any already available, etc. • Details of NGOs, village organisations, SHG s, etc., whose services can be requested

Step 2	**Community mobilisation & community meetings** Extensive community mobilisation is undertaken through village level meetings and use of other communication tools. The GP presents the findings of the survey to the community and discusses various technical options available. The suitability of options for the GP may be decided based on survey findings. These meetings should also be utilised to conduct education campaigns on the responsibility of villagers to minimise waste generation and practice proper waste management at home.
Step 3	**Preparation of the GP-level action plan** Based on the survey findings and community appraisal, the GP plan on SLWM should contain the following (for details please refer to GP sanitary plan in Chapter 1): • Problem statement, defining targets and timeline • Technical options suitable for the GP at household and community levels with appropriate cost estimates • Sources of funds • Measures to be undertaken at household and community levels, including penalties • O&M plan along with the cost estimate
Step 4	**Implementation of SLWM action plan at the GP level & adoption of technology options** • Based on the above factors, the technology options are adopted • The implementing agency is identified • Monitoring by VWSC and GP is undertaken
Step 5	**Resource mobilisation** Apart from fixing user charges as a part of the SLWM plan, the GP can also try to access funds from NBA/MSB, Finance Commission Grants, various centrally sponsored schemes including Ministry of Rural Development programmes (MGNREGS) and NGP award money.

Frequently Asked Questions

How can I start practicing waste management at home?

- Keep separate containers for dry and wet waste in the kitchen;
- Keep plastic clean and dry, and drop it into dry waste bins; and
- Keep a separate paper bag for disposing sanitary waste.

I live in a remote locality away from the Panchayat headquarters. The Panchayat waste management system may take some time to be introduced. What can we do till then?

- Form a small group with likeminded people;
- Explain waste separation to all the households in your locality;
- Arrange separate storage drums (green for bio-degradable and red for non-biodegradable waste);
- Make arrangement for transportation of waste to the collection centre; and
- Work out community sharing of the cost involved.

What is the meaning of aerobic composting?

Aerobic composting is the process of decomposition of organic materials in the presence of oxygen. In this

process, many harmful pathogens are destroyed. Some nutrients are also lost. But aerobic composting is considered more efficient and faster, especially for agricultural purposes.

What is the meaning of anaerobic composting?

Anaerobic composting is the process of decomposition in the absence of oxygen. Compared to aerobic composting, less work is involved and fewer nutrients are lost in this process. But the disadvantages are that the process takes longer and some of the by-products have strong odours and are phytotoxic (harmful to plants).

What is the best way to manage cattle waste?

Generally, in our country, cattle waste is managed in three ways:

i. Cattle excreta is dumped into heaps near cattle sheds where they get converted into manure after some time;
ii. The cattle waste is made into cakes, dried and used as fuel for cooking purpose;
iii. Cattle waste is processed through a bio-gas plant; and
iv. Methane gas is used for cooking purpose and the slurry left after extracting methane gas can be used as farm manure.

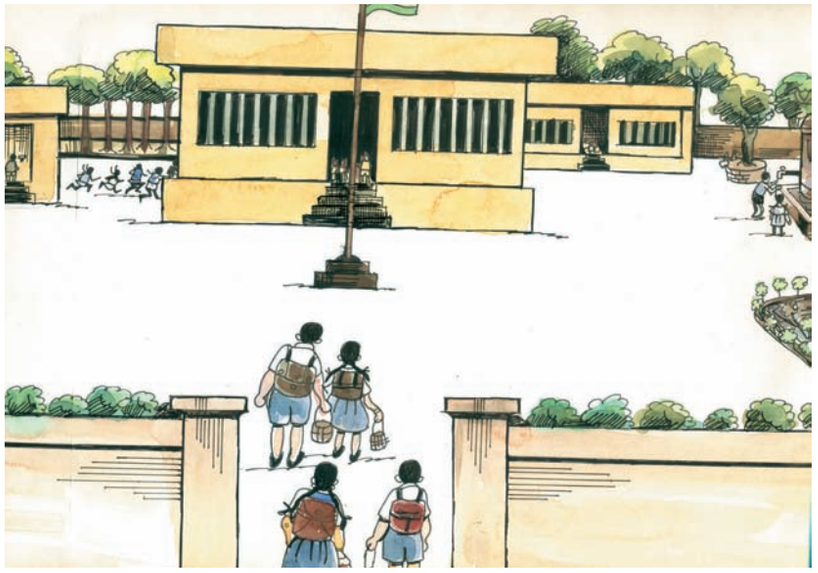
The most useful method for managing cattle waste is processing it through bio-gas plants at both domestic and community levels. The government's schemes could also be availed. The Panchayat can seek guidance from the concerned state nodal agencies on new and renewable energy.

For more details on composting and SLWM techniques, please refer to "Technical Options for Solid and Liquid Waste Management in Rural Areas". The booklet is available at the website of the Ministry of Drinking Water and Sanitation.

5 Sanitation and Hygiene in Schools and Anganwadis

Encouraging the availability of safe and adequate drinking water, provision of sanitation facilities and practice of hygiene behaviour at schools and Anganwadis are important components of the Panchayat-level water and sanitation programmes and initiatives for the following reasons:

- A hygienic environment provides better learning conditions to the children;
- There is reduction in school dropouts especially when separate sanitary facilities are provided for girls in schools;
- Better protection is provided against diseases and worm infestation, especially when proper drinking water and sanitation facilities are provided in schools;
- If proper sanitation and hygiene attitudes and practices are inculcated in pupils by caring and



A school with proper toilet facilities.

Hand washing and waste disposal in a clean school

properly oriented teachers, these will be carried forward to adult life; and
- Pupils' links to home and neighbourhood will help spread the message of sanitation and hygiene in their families and neighbourhoods.

School Water Supply, Sanitation and Hygiene Education

Considering the importance of drinking water, sanitation and hygiene at schools, there has been worldwide promotion of school water supply, sanitation and hygiene education (SSHE) programmes.

The important components of the SSHE programme are:

- Construction of toilets in all types of rural schools with hand washing facility, storage tank and adequate water supply;
- Construction of separate toilets for girls;
- Installation of hand pumps, pipe connections in schools, proper storage and handling of drinking water;
- Provision of hand washing facilities along with soap, buckets, mugs, etc.;
- Arrangement for proper disposal of solid and liquid waste with a drainage system, garbage pit, soak pit, etc.;
- Proper and hygienic arrangements for mid-day meal preparation and storage, including observance of personal hygiene and usage of gloves by cooks and other workers concerned;
- Special arrangements for physically challenged children;
- Kitchen garden;
- Rainwater harvesting; and
- O&M activities.

In addition, the programme includes "software" activities such as health and sanitation clubs, orientation programmes for school heads and teachers, etc.

For drinking water and sanitation provisions at schools, support can be obtained from the Sarva Siksha Abhiyan (SSA), National Rural Drinking Water Programme (NRDWP), NBA/MSB and Mahatma Gandhi Nation Rural Employment Guarantee Scheme (MGNREGS).

Powers of a GP

Under Right to Education (RTE) ACT
Section 9:

- Every local authority (including GP) so designated by the respective state governments shall monitor implementation of the RTE Act for providing free and compulsory education, infrastructure, etc.

Section 32:

- The local authority can function as the grievance redressal authority in respect of any grievance under the Act in terms of a notification issued by the state government under the Act (some state governments have issued such notifications).

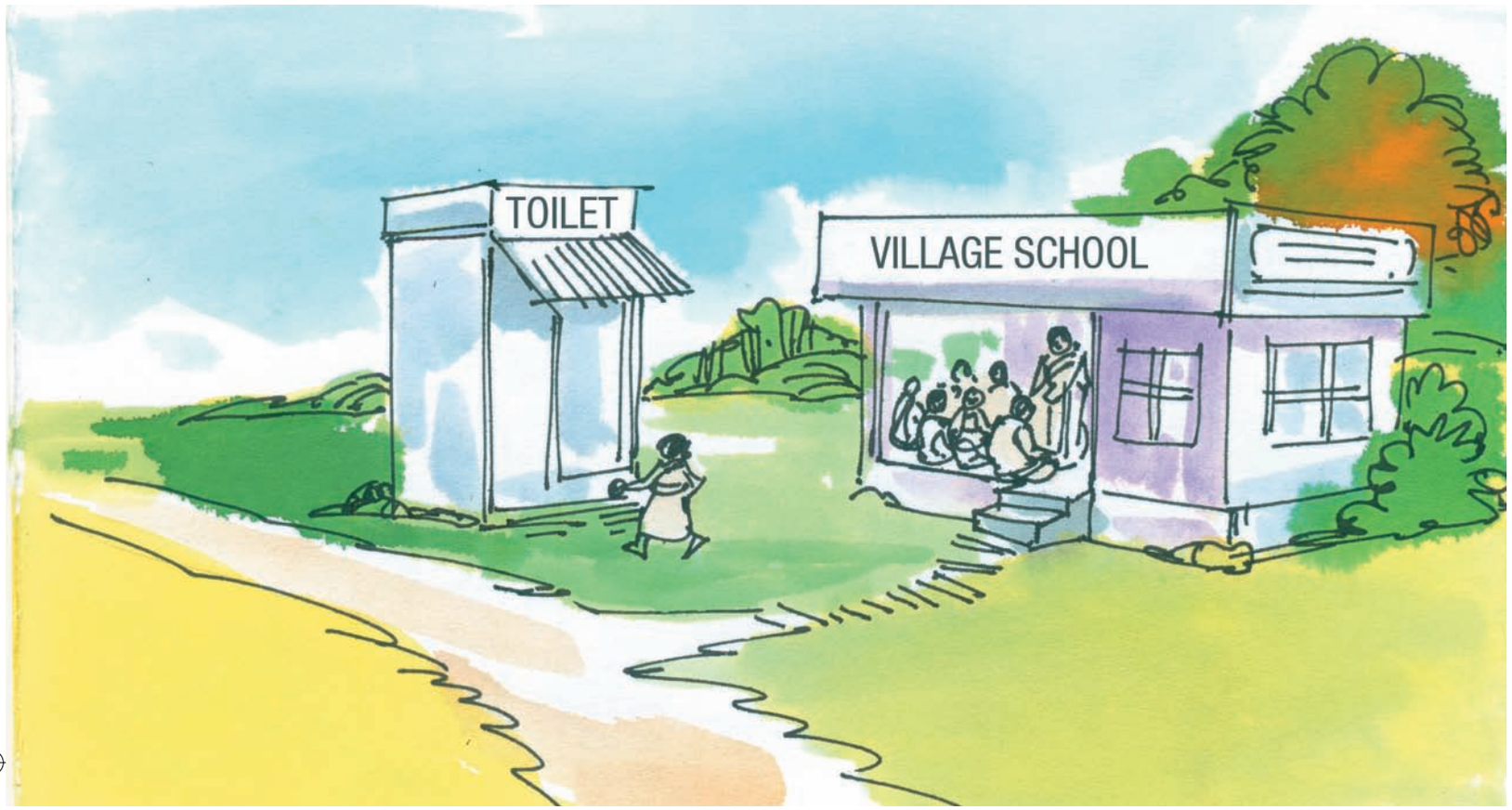
The Government of India has advised all state governments to prepare drinking water scheme plans in the future such that they cover 100 per cent of schools.

SSHE and Right to Education (RTE) Act specify recommended dimensions and specifications for the provision of drinking water and sanitation infrastructure at schools.

Role of GPs

- GPs have an important role to play in SSHE. They may prepare a village plan that covers the provision of drinking water and sanitation facilities at all the schools in their areas; and
- The Sarpanch and ward members, in School Management Committee (SMC) meetings, should stress the need for provisioning for safe drinking water and sanitation facilities in schools. Likewise, they can exercise certain powers vested in them under the RTE Act.

A teacher explaining the importance of hygiene to pupils



A village school

Anganwadis

The quality of life in early childhood in terms of nutrition, sanitation and hygiene has a great influence on the physical and mental development of the child. This, coupled with a caring and safe environment, enables the child to survive and develop into an emotionally secure, socially competent person with physical and mental fitness.

Considering the nature of early childhood development, hygiene and sanitation activities in the Anganwadis play a very important role. For little children, this includes provision of safe drinking water, hygienically prepared food, hygienic eating place and personal hygiene measures such as hand and bottom washing.

Hence all the actions and measures identified under school sanitation and hygiene apply with even greater force to Anganwadis.

School Management Committee

- The concerned ward member is a member of SMC; and
- The Sarpanch can attend and participate in any meeting of SMC.

The AWW has an important role to play in the following:

1. Teaching and supervising young children on cultivation and practice of personal hygiene.
2. Teaching children to use the toilet.
3. Checking the latrine every day and ensuring its cleanliness.
4. Reaching out to and educating mothers on the importance of improved sanitation, hygiene and the benefits of having a latrine.
5. Educating mothers on the importance of proper storage and handling of food & water.

A school girl's way of conveying to her family the necessity of a toilet.

Construction of Anganwadi toilets has also been covered in NBA/MSB and MGNREGA. There is also a provision for getting a toilet constructed by owners of private buildings housing Anganwadis.

However, whether the Anganwadi is located in a government or private building, the toilet for children should be of the BABY FRIENDLY type and not the regular type of toilet designed for adults and older children.

Summary of initiatives that can be taken by GP for SSHE

- Include water supply and sanitation improvement in schools and Anganwadis in a GP plan;
- The Sarpanch and concerned ward member/s must participate regularly in the SMC meetings and emphasise sanitation issues;
- Take initiative along with the head teacher of the school to motivate teachers to provide proper hygiene education to pupils;
- Convergence – maintain proper liaison with officials of different departments such as Education, Public Health, Rural Water Supply and Sanitation, Women & Child Development, Panchayati Raj and Rural Development, etc., to obtain assistance required for improvement of SSHE and Anganwadi sanitation; and
- Ensure the involvement of parents and parent representatives in SMC meetings.

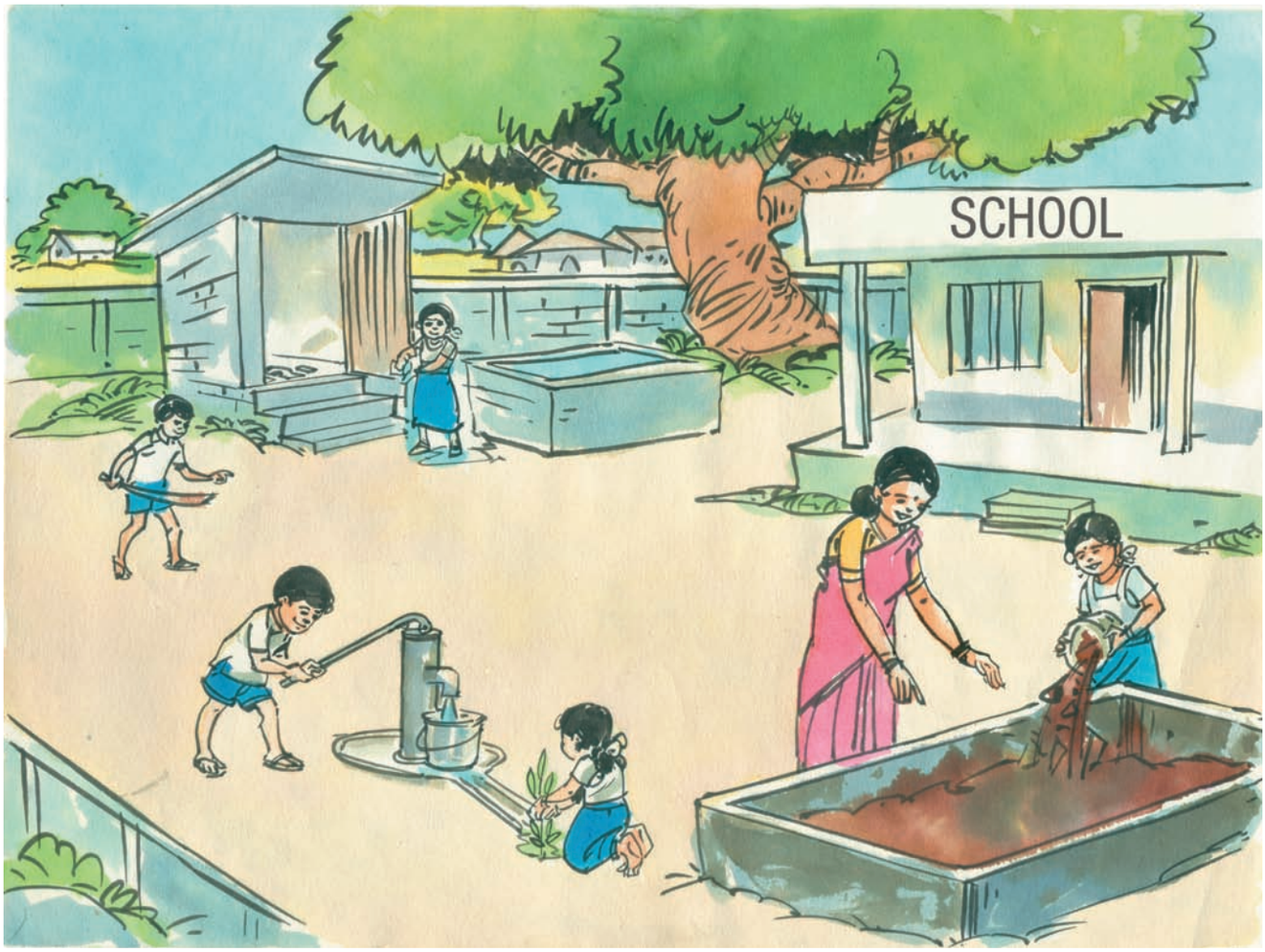
Frequently Asked Questions

1. What are the benefits of SSHE?

i. It helps form healthy habits in children who will grow up into adults with the right attitude towards sanitation and hygiene;
ii. It strengthens their learning capability and academic performance because of reduction of diseases;
iii. It helps reduce girl students' dropout rate through availability of proper sanitation facilities at schools; and
iv. It promotes children's right to a clean environment.

2. What are the main facilities to be provided at schools under SSHE?

i. Sufficient number of toilets and urinals;
ii. Separate toilets for girls with a provision for disposal of menstrual waste;
iii. Water supply facilities; and
iv. Garbage pit, soak pit, kitchen garden and drainage system.



School sanitation hygiene.

A school teacher guiding the pupils on toilet usage.

3. Are private schools covered under the NBA/ MSB scheme?

No. Only rural government schools are covered. Private schools charge fees from students and hence are expected to provide the facilities.

4. How to provide hand washing facilities?

Provision of toilets alone without proper hand washing facilities is only half the job done. Hence, hand washing facilities must be provided in each toilet block with the following:

i. Wash basin or any other suitable arrangement;
ii. Water drums;
iii. Regular provision of water;
iv. Buckets, mugs, soap with tray; and
v. System for waste water disposal.

5. Is special attention required for girls in SSHE?

Yes, certainly. This is because of the following reasons:

- Non-availability of separate toilets for girls is one of the important reasons for dropout of girl students from schools. It is necessary to reduce their dropout rate by providing separate toilets for girls and women teachers in all schools and also provisioning for adequate water and hand washing facilities;
- Location of the girls' toilet in a school is also important. It should be in a safe location but not in isolation because of the risk involved; and

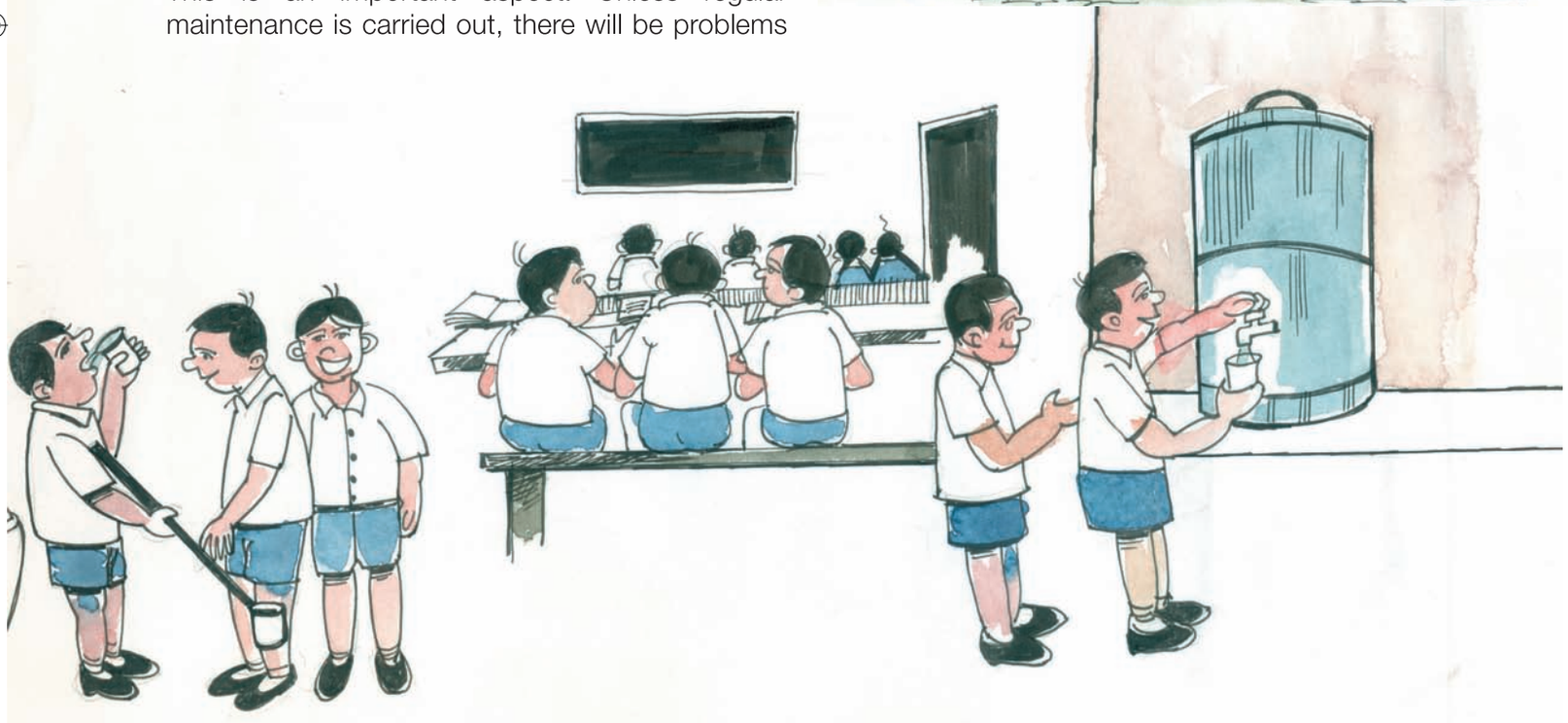
- Sensitive issues related to menstruation should also be taken into account and provision should be made for proper disposal of menstrual waste. A woman teacher should be designated as a confidential counsellor for girl students.

6. Who are the important actors in SSHE programme?

i. SMC;
ii. Head teacher and other teachers;
iii. Parents and other community members;
iv. GP; and
v. Others like NGOs, village organisations, health workers, etc.

7. What about O&M of school toilets and water supply?

This is an important aspect. Unless regular maintenance is carried out, there will be problems of defective toilets, inadequate water supply, locking of toilets, restriction of toilets to the staff, etc. Hence, a regular maintenance programme as decided by SMC has to be carried out. A motivated teacher has to be designated to ensure this on a regular basis.



Drinking water hygiene.

6 Live and Let Live by Practising Hygiene

Along with sanitation, good hygiene is an important barrier to many diseases. Better results in health and community development can be achieved by coordinating water supply, sanitation, nutrition and improvement of livelihoods.

GPs' sanitation programmes will not get full results if people do not practice hygienic behaviour. It is one of the responsibilities of the GP to spread awareness about the importance of personal, domestic and community hygiene so that people are motivated to practice hygiene.

What is hygiene and why it is needed?

Hygiene means the practice of keeping oneself and also one's neighbourhood clean in order to protect

Main modes of transmission of infection.

oneself and others from getting sick. Hygiene has two dimensions:

1. Individual hygiene; and
2. Community hygiene

Individual Hygiene

Hygienic behaviour consists of a set of personal day-to-day habits described below:

i. **Hand washing** especially at critical times (see boxes);

ii. **Regular bathing and washing of clothes;**

iii. **Regular trimming of nails:** to prevent deposition of dirt;

iv. **Safe storage and handling of drinking water and food:** drinking water has to be stored in a

Safe storage and handling of drinking water.

After usage of toilet.

clean vessel with a clean lid. Water has to be taken out from the vessel with a ladle. This is necessary to prevent contamination by unclean matter or pathogens. Similar precautions should be observed for storing cooked and uncooked food;

v. **Ensuring that drinking water is hygienic:** at all times. Special attention needs to be paid to drinking water security, particularly in times of epidemic and floods. When the quality of drinking water is doubtful, the household should boil it, because boiling is the best form of purification. Filtration of water, at least through a clean cloth, is also recommended in the case of unclear water;

vi. **Cleanliness of normally used surfaces:** as far as possible, the surfaces inside the house or an institution should be cleaned regularly to minimise deposition of pathogens. Similarly, the surroundings should be kept clean;

When and how of hand wash?

- The three critical times when we must wash our hands are:
  1. Before cooking or preparing food
  2. Before eating and before feeding children
  3. After defecating and after changing or cleaning babies
- The three steps to wash our hands are:
  1. Wash both hands with water and soap or at least ash
  2. Rub the front and back of your hands and also in between your fingers at least three times
  3. Dry hands after washing

vii. **Use of footwear:** especially in agricultural fields, etc., to prevent infestation by hookworms, etc.; and

viii. **Practicing menstrual hygiene (in the case of women and girls):** the maintenance of menstrual hygiene by girls and women in the reproductive age group is also an important part of personal hygiene for the following main reasons:

1. Unhygienic management of menstruation leads to urinary tract infections and other diseases which affect the mobility, dignity and quality of life of women and girls
2. Reduced learning performance by girls and, in several cases, dropping out from school.

This situation arises due to:

1. Ignorance about the normal biological process of menstruation and necessity to manage it hygienically.
2. Unwillingness even to discuss the topic of menstruation because of social stigma, let alone giving proper guidance to girls.

Proper menstrual hygiene management is now recognised as an important part of sanitation and hygiene because of:

- The necessity of ensuring the well-being of future mothers and promoting maternal welfare as well as child survival and development; and
- Necessity to maintain environmental cleanliness.

Effect of traditional beliefs of menstruation.

Wishing good luck to an adolescent girl after she adopted proper menstrual hygiene and restarted attending school

Proper Menstrual Hygiene Management

- Educating girls at the time of first menses and reassuring them (by senior women in the household, anganwadi worker/ASHA worker, ANM, designated lady teacher in schools, etc.)
- Use of sanitary pads and napkins during the period of menstruation.
- Proper storage of napkins and pads.
- Change of sanitary pads/napkins once in 6 to 8 hours.
- Proper hand wash practices before and after changing the pad.
- Proper depositing and disposal of used pads and napkins.
- Provision of incinerators for proper disposal of menstrual waste (in the case of institutions).

Community Hygiene

Some hygiene measures are required to be undertaken at the community level, including:

- Maintaining cleanliness and avoiding contamination around water sources;
- Proper disposal of solid waste and excreta;
- Waste water drainage;
- Controlling animal rearing; and
- Maintaining hygiene at the market place.

Dos and don'ts for menstruating girls and women

Dos:

1. Carry out all normal activities at home, school and at place of work (cooking, bathing, attending functions, etc.).
2. Eat normal food as usual.
3. Consult a doctor in case of problems like prolonged or heavy bleeding, cramps, absence of periods.
4. Segregate the used sanitary pads, store them in a covered bin and finally arrange for their disposal by burying/composting/incineration.

Don'ts:

1. Don't share used sanitary menstrual cloth with others.
2. Don't throw menstrual waste in the toilet, water bodies or in the garbage fill.
3. Don't reuse the used menstrual cloth without thoroughly washing it and drying it in the sun.

Markets/Bazaars/Village Fairs

A large number of people visit village markets, fairs, etc., from neighbouring hamlets and villages. Cleanliness problems at such places arise due to:

- Production of garbage by individual shops, food stuff hawkers, etc;
- Throwing of litter and garbage by visitors; and
- Inadequate sanitation facilities.

In order to maintain cleanliness, the GP can consider the following steps:

1. Have an appropriate system for granting permission for opening and running shops on these premises and also fix user charges or a market fee to meet the cost of provision and maintenance of water and sanitation facilities. Discounts can also be given to traders who maintain their own temporary water and sanitation facilities or contribute to the market water and sanitation requirements.
2. Water and sanitation facilities to be provided by the GP should include community toilets, drinking water arrangements, cleaning and disinfection.
3. An adequate number of waste collection bins should be placed at different points in such fairs.
4. Arrangements should be made for regular collection of solid waste from these bins. In order to facilitate easy movement of garbage trucks and trolleys for this purpose, the GP, at the initial stage itself, must enforce a proper layout for the market or fair.
5. GP representatives and VWSC members, by rotation, can visit these fairs and markets to monitor cleanliness and other arrangements.

Slaughter houses – control by GP

1. Slaughtering houses must be away from water sources and houses.
2. Slaughtering activity should be carried out in clean premises and precautions taken for avoiding foul smell during this activity as well as during transportation of animal skin, etc.,
3. Slaughtering house waste must also be disposed of safely.

Animal Rearing

In most communities, rearing of animals is taken up as a means of livelihood which ultimately leads to production of nutritional food and also other products such as fuel, leather, etc., from the animals.

In order to ensure cleanliness and sanitary conditions, the GP can monitor and ensure the following:

1. Animal rearing sheds should be located at least 100 metres (300 feet) away from water sources and 10 metres (30 feet) away from houses. This will prevent water contamination and also minimise the scope for mosquito induced diseases.
2. Animal waste and dead animals should be disposed of properly.
3. Animal shed owners should be encouraged to utilise animal excreta by installing bio-gas plants.
4. Advice of veterinary doctors should be obtained periodically in the matter of animal rearing, medical care, vaccination and other care.
5. Taking proper precautions (as advised by veterinary doctors) in the case of pigs/poultry rearing.

Hotels/Tiffin Centres/Restaurants

GP and/or VWSC members should periodically inspect eating houses and local food vendors to ensure clean maintenance of the kitchen, hand washing arrangements and other hygienic requirements for food and water as applicable in domestic hygiene.

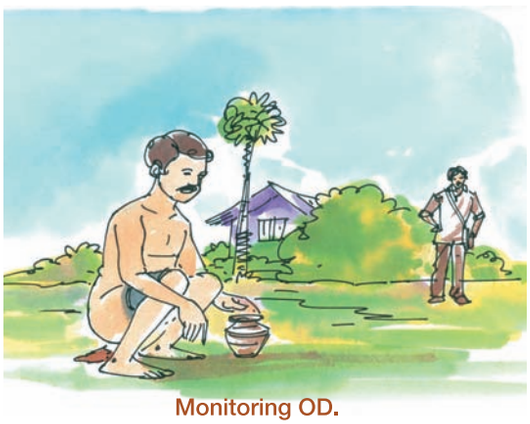
Role of GPs in Promoting Hygiene Education among People

GPs have a very important role to play in promoting hygienic education among people. They can:

1. Monitor status of sanitation and hygiene.
2. Play a proactive role by taking punitive measures such as levying fines for unhygienic practices which affect village cleanliness.
3. Prepare and implement a village health plan and converge this with sanitation and hygiene programmes with the help of medical and health agencies/personnel. For this, three steps are followed:

   i. Identification of common health problems in the GP based on a survey with community involvement.
   ii. Identification of causes of these problems.
   iii. Preparation of an action plan with the help of health functionaries and identification of sources of funds.

4. Play a proactive role in the SSHE programme through intervention in SMC and also in discharging thier role under the RTE Act.
5. Play a similar proactive role in Anganwadi sanitation and hygiene.
6. Utilise all possible channels including the Gram Sabha, village organisation meetings, fairs and festivals, special days touching different aspects (world toilet day, hand wash day, breast feeding day, etc.) and mobilise the community to participate in sanitation and hygiene drives, duly drawing support from local officials of the Health, Women and Child, Rural Development and Panchayati Raj, etc., departments.



Monitoring OD.

Collection of fine for OD.

A family that has understood the importance of hygiene.

Frequently Asked Questions

Is menstrual blood impure? If not, why and when does it smell bad?

Unlike sweat, urine or excreta, menstrual blood does not contain any toxins. Therefore, it is not impure, harmful blood. Menstrual blood is nothing but the egg and inner lining of the uterus which comes out when pregnancy does not take place. As such, it is odourless. But when it comes out of the body, and comes into contact with cloth/pad and air, chemical reactions take place which cause the odour. This is also why one has to change the pads at frequent intervals.

Is there anything that the GP can do in the matter of procurement of sanitary napkins for women?

i. Sanitary napkins, manufactured by different companies, are available in the market;
ii. The GP can also encourage SHGs to undergo training and manufacture low cost sanitary napkins. Assistance could be provided to SHGs to access bank loans. Some SHGs in different states are actually manufacturing low cost sanitary napkins. Mr. A. Muruganantham of Coimbatore has developed an award winning machine that produces low cost sanitary napkins @ Rs.1.50 per pad. He has also developed an automatic vending machine for purchasing sanitary pads; and
iii. The GP can also play a proactive role in proper distribution of sanitary napkins to girls under SSA, SABALA, and NRHM schemes.

7 Nirmal Bharat Abhiyan/ Mission Swachh Bharat

GPs have been provided a constitutional mandate for undertaking social and economic development. Sanitation is an important development activity; therefore, implementing and coordinating sanitation programmes are integral activities to the functioning of a GP. In this spirit, the NBA/MSB was launched to accelerate sanitation coverage in rural areas so as to comprehensively cover rural communities through a renewed strategy and saturation approach.

Nirmal Bharat Abhiyan is proposed to be replaced by Mission Swachh Bharat shortly.

In this context, GPs need to know about the scope for utilising provisions for financial assistance and incentives in promoting sanitation, especially under NBA/MSB and also other schemes.

For decades, we neglected sanitation for various reasons. The situation has gradually improved but much more needs to be achieved. Inadequate sanitation affects our future adversely by impacting our health and the health of our children, the future of India. Also, OD and lack of other sanitation measures give India a bad image. It is therefore imperative for us to work on mission mode to resolve the problem.

NBA/MSB: This is a premier programme of the Government of India, primarily based on the premise that a clean village will lead to clean India, i.e., a SWACHH Gram will lead to SWACHH BHARAT.

A woman segregating solid waste.

Main Objectives of the NBA/MSB

The main objectives of NBA/MSB are:

- Bring about an improvement in the general quality of life in the rural areas;
- Accelerate sanitation coverage in rural areas to achieve the vision of Nirmal Bharat by 2022 with all GPs in the country attaining Nirmal status;
- Motivate communities and Panchayati Raj Institutions (PRIs) to promote sustainable sanitation facilities through awareness creation and health education;
- Cover the remaining schools and Anganwadis not covered under SSA in the rural areas with proper sanitation facilities and undertake proactive promotion of hygiene education and sanitary habits among students;
- Encourage cost effective and appropriate technologies for ecologically safe and sustainable sanitation; and
- Develop community managed environmental sanitation systems focusing on SLWM for overall cleanliness in rural areas.

Main Components of NBA/MSB

- Start-up activities (conducting preliminary surveys to assess the status of sanitation and hygiene practices, baseline survey, orientation of key personnel at district/GP level, preparation of state plan);
- IEC activities;
- Capacity building;
- Construction of IHHLs;
- RSMs and PCs;
- Provision of a revolving fund in the district;
- Construction of community sanitary complexes;
- Provision of institutional toilets (in schools and Anganwadis);
- SLWM; and
- Maintenance of facilities created under NBA/MSB.

Role of the GP in NBA/MSB

GPs have a pivotal role in the implementation of NBA/MSB. The programme is implemented by the PRIs at all levels. NBA/MSB identifies the following role for GPs in NBA/MSB:

- Carry out social mobilisation for the construction of toilets and also maintain a clean environment by way of safe disposal of wastes;
- Engage suitable NGOs for inter-personal IEC and training;
- Promote regular use, maintenance and upgradation of toilets and interpersonal communication for hygiene education;
- Contribute from their own resources for school sanitation over and above the prescribed amount;
- Ensure safety standards are met for all components of NBA/MSB (e.g., the distance between water source and a latrine – adhering to the minimum distance for IHHL, school and Anganwadi toilets and community sanitary complexes; regulating pit-depth, pit lining to prevent pollution, collapse of pit, etc.);
- Ensure hygienic behaviour such as keeping the environment around hand pumps/water sources clear and tidy and free of human and animal excreta;
- Act as the custodian of assets such as the community complexes, environmental components, drainage, etc., constructed under NBA/MSB. GPs can also open and operate PCs/RSMs; and
- Monitor the NBA/MSB programme.

Frequently Asked Questions

How should a GP proceed to obtain assistance under NBA/MSB for IHHLs?

The GP should proceed in the following four steps to access assistance under NBA/MSB:

1. Mobilise the community for sanitation improvement through village organisations, BRCs and others.
2. Identify the proposed beneficiaries under the IHHL component.
3. Prepare the village sanitation plan.
4. Conduct the Gram Sabha to apprise the community and obtain approval.
5. Submit a proposal as per the prescribed format with support from the Rural Water Supply and Sanitation engineer.

What are the details of the financial assistance and incentives available to GPs under the component of construction of IHHLs in NBA/MSB?

1. The unit cost of one IHHL is taken as Rs.10,000 (Rs.10,500 in the case of hilly/difficulty areas).
2. Out of this, an incentive of Rs. 4,600 is provided under NBA/MSB (Rs. 5,100 in the case of hilly/difficult areas) to Below the Poverty Line (BPL) and to identified Above the Poverty Line (APL) households.
3. The Government of India share out of this shall be Rs. 3,200 (Rs. 3,700 in the case of hilly and difficult areas) and the state government's share shall be Rs. 1,400. State governments are allowed the flexibility to provide a higher incentive for a IHHL, of the same or higher unit costs from their own funds.

4. Under MGNREGA, the wage and labour cost component is provided to an extent of Rs. 5,400 upon verification.
5. The minimum beneficiary share should be Rs. 900 either in cash or labour.

The construction of household toilets should be undertaken by the household itself and, on completion and use of the toilet, the cash incentive can be given to the household in recognition of its achievement.

Who is eligible for getting this assistance and incentives under NBA/MSB?

i. All BPL rural HHs are eligible;
ii. APL HHs belonging to the following categories are also eligible:
    - SCs/STs
    - Small and marginal farmers
    - Landless labourers with homesteads
    - Physically challenged
    - Women headed households; and
iii. All houses constructed by the beneficiaries under IAY or any other state rural housing scheme which did not have toilets shall also be eligible for these incentive for the creation of sanitation facilities for the targeted groups under NBA/MSB.

What is the meaning of a CSC under NBA/MSB?

A rural CSC comprises a toilet block, bathing cubicles, hand washing arrangements located at a place in the village convenient to all. Ordinarily such complexes should be constructed only when there is lack of space in the village for the construction of household toilets and the community owns the responsibility of their O&M. The ultimate aim is to ensure the construction of a maximum number of IHHLs and the restriction of construction of community complexes to cases when IHHLs cannot be constructed.

When can the GP propose construction of a CSC?

GP can propose the construction of the CSC:

- If there is lack of space in the village for the construction of additional IHHLs even though there is need;
- For toilet requirement at public places such as markets, bus stops, etc., where there is regular requirement of toilets; and
- If the GP is willing to take the responsibility for regular maintenance of these complexes, if necessary by collecting user charges.

What about the cost of CSCs to be constructed in a GP?

- The maximum cost prescribed is Rs. 2 lakhs per unit; and
- The GP has to contribute 10 per cent of the cost either from its own resources or from community contribution.

Are all the government schools eligible for incentives under NBA/MSB?

No. Only government schools which were constructed up to 2007 are eligible for incentive for the construction of toilets under the NBA/MSB scheme. In government schools constructed after 2007, toilets construction can be taken up under SSA.

What are the requirements of school toilets?

A school toilet as per NBA/MSB should:

- Have sufficient number of toilets and urinals based on the strength of the students;

- Have separate toilet units for girls and boys in co-educational institutions; and
- Take into consideration the requirements of children with special needs.

What is the option available for restoring the proper functioning of non-functional and dysfunctional school toilets?

The SSA programme has provisions for funding the repair and maintenance works required in such cases.

What is the cost of a school toilet under NBA/MSB?

The maximum cost of a school toilet under the scheme is Rs. 35,000 (Rs. 38,500 in the case of hilly and difficult areas). If the cost of the school toilet proposed is higher than this, the state governments and parent associations may contribute the additional amount.

How about provision of toilets in Anganwadis?

Under NBA/MSB, it is expected that:

- Baby friendly toilets should be constructed in all Anganwadis located in government buildings;
- Toilets will be constructed as per prescribed design; and
- Toilet may also be constructed in private buildings under the revolving fund component of NBA/MSB and appropriate deduction made from the rent payable to the owner.

What is the cost of an Anganwadi toilet?

The maximum cost of an Anganwadi toilet is taken as Rs. 8,000 (Rs.10,000 in the case of hilly/difficult areas).

What are the activities covered under the SLWM component of NBA/MSB?

Under the SLWM component, the project can be taken up for activities such as:

- Collection, segregation, transportation and disposal of household solid waste, establishment of compost pits, landfills, bio-gas plants, etc.; and
- Re-use of waste water, low cost drainage, soak pits, channels, menstrual hygiene management, etc.

Who will approve SLWM projects pertaining to various GPs?

The State Scheme Sanctioning Committee (SSSC) provides sanction to SLWM; projects that have been awarded NGP or have been targeted for Nirmal status are prioritised. SLWM can also be implemented by dovetailing funds from other rural development programmes like MGNREGS, etc.

What is the financial assistance available to GPs under NBA/MSB for SLWM?

The norms are as follows:

- The total assistance under NBA/MSB for SLWM projects will be worked out based on the number of HHs in each GP;
- This amount is subject the following limits

GP having up to 150 HHs	-Rs.7 lakhs
GP having up to 300 HHs	-Rs.12 lakhs
GP having up to 500 HHs	-Rs.15 lakhs
GP having more than 500 HHs	-Rs. 20 lakhs

- Any cost over and above this limit will have to be met by the state government concerned or funds may be raised by the GP; and
- Within the SLWM component, specific plans may

be included for menstrual hygiene activities such as provisioning for incinerators.

Villagers sometimes find procurement of construction material for IHHLs difficult both in terms of availability and cost. Is there any scope for tackling this problem?

- Yes. In view of this and as a social marketing strategy for motivating households to construct IHHLs, NBA/MSB has a separate component for the establishment of RSMs/PCs in GP areas;
- These RSMs must stock the required items for the construction of IHHLs and other sanitation infrastructure; and
- Similarly, NBA/MSB provides incentives for starting PCs for manufacturing cost effective, affordable sanitation material at the local level. These may be taken up as separate units or as part of RSMs.

How can RSMs and PCs be established under NBA/MSB?

The GP has to encourage prospective entrepreneurs, identify suitable land, and make a proposal to the DWSM. DWSM develops a proposal and submits it to the state government based on the GP's request and proposals. After approval, the DWSM will enter into a MoU with the entrepreneur concerned and also monitors the activity of RSMs and PCs. An interest free loan up to Rs. 3.5 lakhs may be provided as a revolving fund for establishing RSMs and PCs.

Is there a scope for accessing funds from other schemes/programmes for taking up various sanitation improvement activities?

Yes. There is scope for utilising certain provisions in the following schemes for obtaining assistance for works relating to sanitation improvement:

- **MGNREGS:** payment of funds towards the labour component for IHHLs, soak pits, leach pits, drainage, compost pits, vermi compost units, etc.;
- **NRDWP:** preference to GPs achieving ODF status for piped water schemes;
- **SSA:** construction of school toilets and toilet repairs and maintenance;
- **National Rural Health Mission (NRHM):** release of funds to the GP for sanitation improvement through the village health and sanitation committee; and
- **IAY:** inclusion of toilets as an essential element in IAY houses.

An integrated approach by the GP to utilise and also promote utilisation of various schemes such as those mentioned above will give good results in sanitation improvement.

8 Nagarikpur GP Gets NGP – Why Not Other GPs?

In the first chapter, we looked at how the newly elected Sarpanch of Nagarikpur along with ward members surveyed the sanitation situation in the GP and went about drawing up an initial plan of action for the first six months. The GP succeeded in implementing the plan and then prepared the next phase of the sanitation plan with the ultimate objective of getting the NGP.

The Nagarikpur GP Sarpanch, ward members and VWSC members found that, after a year, there was great improvement in the sanitation situation in the GP. The GP submitted its application for the award of NGP.

After some time, the Sarpanch received a letter informing him that the GP had been selected for the award. The entire GP was ecstatic with this

What are the qualifying conditions for the NGP?

A GP is eligible to apply for the NGP if it fulfills the following conditions:

- It has adopted a resolution to ban OD within its entire area inclusive of all habitations and villages;
- All habitations within the GP's jurisdiction have access to water for drinking and sanitation purposes; and
- It has achieved the objectives for all components as approved in the district project and entered the information in the Integrated Management Information System (IMIS) of the Ministry of Drinking Water and Sanitation.

recognition for their sincere and sustained efforts. This also strengthened the motivation of the Sarpanch, GP, VWSC members and villagers. They decided to maintain the improvement in the interest of cleanliness and community health.

The GP decided to use the award money for the following:

1. Creation of additional sanitation facilities in the GP area through construction of toilets for the aged and differently abled persons in the CSC and schools.

2. Strengthening eco-friendly disposal of waste water by establishing a purification plant and using the treated water for the development of park.

If every GP adopts a similar attitude and approach, the day will not be far off when every village will become a Nirmal Gram which in turn will lead to Nirmal Bharat, i.e., Swachh Bharat.

The real award to the Nagarikpur GP, however, was reduced child morbidity and mortality, significant reduction in cases of diarrhoea, and increased attendance of girls in school. Indeed, the sense of achievement among the elected representatives can be gauged from the enhanced trust and respect they now receive from villagers.

Frequently Asked Questions

What is NGP?

The NGP is an incentive scheme under which the NGP is given to fully sanitised and ODF GPs, blocks, districts and states.

How can a GP apply?

The GP can submit an application in the prescribed performa to the DWSM)/DRDA/DIA and also submit an online application on the Ministry of Drinking Water and Sanitation website.

The district agency verifies the information stated in the application and, if satisfied, forwards the application to the state government duly recommending the GP for the award. The state government verifies the information and takes a decision on the award.

What is the method of selection and the criteria adopted with relative weightages?

For the purpose of selection, the applicant GPs will be awarded marks on relative weightage, accorded to different aspects of sanitation (Table 5).

Table 5: Criteria and marks on weightage

	Criteria	Max Marks
	Mandatory criteria	
1	IHHL	50
2	School sanitation	8
3	Anganwadi sanitation	8
4	Access to adequate water as per NRDWP guidelines	10
5	IEC activities	9
	Other criteria	
6	Solid waste management	5
7	Liquid waste management	10
	Total Marks	100

For the purpose of awarding marks for each aspect, the sub criteria adopted by the selection committee are shown in Table 6.

Table 6: Sub-criteria and marks on weightage

	Sub-criteria	Max Marks
1	**IHHL**	
1.1	Toilet usage by all HHs, migrant labour at public places and no OD found in GP	30
1.2	Toilets constructed in a way that safely confines faeces (improved/safe sanitation)	5
1.3	Household and public/community toilets are properly maintained	5
1.4	Child faeces are safely disposed	5
1.5	No manual scavenging	5
	Sub total	50

	Sub-criteria	Max Marks
2	**School sanitation**	
2.1	Availability of separate and adequate toilets for boys and girls in schools	2
2.2	Toilets are being used by students and teachers	2
2.3	School toilets are properly maintained	2
2.4	Soap is available for hand-washing	1
2.5	Availability of adequate water for drinking and other purposes at school	1
	Sub total	8
3	**Anganwadi sanitation**	
3.1	Availability of toilet in the Anganwadi	2
3.2	Toilets are being used by children	2
3.3	Anganwadi toilet is properly maintained	2
3.4	Soap is available for hand-washing	1
3.5	Availability of adequate water for drinking and other purposes at Anganwadi	1
	Sub total	8
4	**Availability of water as per NRDWP guidelines**	
4.1	Availability of 55 litre per capita per day water for each inhabitant of the GP	4
4.2	Availability of a water source for each household within a distance of 100 metres	4
4.3	Regular testing of all water sources	2
	Sub total	10
5	**IEC activities**	
5.1	Child friendly drawings and paintings around the school and Anganwadi toilets	1
5.2	Sanitation and cleanliness messages displayed in public places in the GP	2
5.3	Appointment and engagement of Swachchhata Doots for interpersonal communication	2
5.4	Organised outdoor and traditional media activities like street theatre, folk art, dance drama, etc., at public places in the GP to create awareness	1
5.5	Organised community mobilisation activities like creation of a network of community leaders, youth groups, women's group to disseminate information about sanitation and hygiene in the GPs	1
5.6	Fines being collected for violation of OD ban	2
	Sub total	9

A clean village

	Sub-criteria	Max Marks
6	**Solid waste management**	
6.1	Proper system of segregation of solid waste at household and village levels	2
6.2	Proper system of safe transportation and /or disposal of solid waste at household or village level	2
6.3	General cleanliness in the streets, open spaces and surroundings	1
	Sub total	5
7	**Liquid waste management**	
7.1	Proper disposal and management of liquid waste at household level	4
7.2	Proper platform around water sources and drainage	3
7.3	Proper disposal and management of waste water in the public areas and near public water sources	3
	Sub total	10
	GRAND TOTAL	**100**

Source: Guidelines for NGP, Ministry of Drinking Water and Sanitation website.

The Sarpanch receiving the NGP

In addition to this, the awardee GP will also get 5 bonus marks for having household piped water supply connections in all its habitations. These would make the GP eligible for receiving an additional amount as an award under NRDWP. The bonus marks received shall be indicated separately by the survey team.

For the award, the minimum total marks to be scored is 90 out of which a minimum combined score of 85 is prescribed for items number 1-5 and a minimum combined score of 5 is prescribed for items 6-7.

What are the details of award amount?

Award money is given to the selected GPs based on the population:

- 25 per cent of the award money in cash on declaration of award; and
- 75 per cent of the award money is kept as a fixed deposit for two years in the GP's name.

The GP can utilise the interest derived from the fixed deposit to sustain its Nirmal status which will be verified by the authorities concerned.

How should a GP use the incentive money?

The GP which receives the incentive amount should use it for improving and maintaining sanitation facilities in its area. Some activities that could be taken up using this incentive money are:

- Ensuring maintenance of community sanitary facilities and sustaining NGP status;
- Fulfilling SLWM requirements over and above the funds available under NBA/MSB and other schemes such as MPLADS and other programmes;

- Creating additional sanitation facilities in the Panchayat area such as at mela grounds, market places, schools, Anganwadis, etc., not covered under any other programme;
- Promoting vermi-composting and other eco-friendly sanitary methods;
- Promoting toilets for differently-abled persons/ the aged; and
- Promoting any other innovative means of sanitation.

The incentive amount should not be used for other purposes.

Tables 7 and 8 show the NGP amount a GP receives based on population as well as additional bonus.

Table 7: NGP award money for GPs based on population

PRI	Population of GP				
Population criteria as per Census 2011	Less than 1,000	1,000 to 1,999	2,000 to 4,999	5,000 to 9,999	10,000 and above
Incentive amount (Rs. in lakh)	1.0	2.0	4.0	8.0	10.0

Table 8: Additional award money to GPs for bonus points for household piped water connections from NRDWP

PRI	Population of GP				
Population criteria as per Census 2011	Less than 1,000	1,000 to 1,999	2,000 to 4,999	5,000 to 9,999	10,000 and above
Award money (Rs. in lakh)	0.5	1.0	2.0	4.0	5.0

9 Your Obligations and Duties as a Member of Gram Sabha

All Gram Sabha members have responsibilities towards sanitation in various capacities – as individuals, members of households, members of society, and as residents of the GP. The different roles of the citizen may mean different responsibilities, but the need for ensuring adequate sanitation cannot be overemphasised in any role.

Based on the discussion so far, some basic duties of Gram Sabha members are:

1. Practicing individual hygiene, including hand washing, cutting fingernails and menstrual hygiene.
2. Maintaining cleanliness within the house.
3. Clearing unwanted grass, weeds and bushes periodically.
4. Avoiding OD and urination by using individual and community toilets and urinals.
5. Not throwing children's excreta in drains or other places, but ensuring safe disposal in a latrine.
6. Reducing generation of waste.
7. Reducing the use of plastics as much as possible.
8. Separating household waste into biodegradable and non-biodegradable matter.

9. Not throwing waste into open drains and on streets, but depositing it only at specified places or in specified bins.

10. Using adequate composting measures.

11. Not letting waste water on to the roads.

12. Ensuring proper disposal of unused coconut shells, broken pots, unused tyres, etc.

13. Burying dead animals and birds in the ground safely and away from water bodies.

13. Not dirtying the platforms of hand pumps/bore wells/public taps.

14. Maintaining cleanliness of livestock sheds.

15. Ensuring that waste water and other solid waste does not pile up in vacant plots or partially built and demolished houses.

16. Contributing to the maintenance by paying for sanitation services and measures undertaken in the village.

17. Bringing to the notice of VWSC members any problem noticed regarding sanitation infrastructure.

18. Undertaking additional sanitation measures, where existing sanitation infrastructure is unable to cope with the demand.

These are issues that should be discussed often in the Gram Sabha and other community meetings. People may be encouraged to support each other in carrying out these tasks and also counsel those who do not.

A village scene

10 Quiz on Sanitation and Hygiene

Namaskar, listed below are a set of questions to assess how much you now know about sanitation and hygiene. Circle all correct answers (on a separate sheet so that the test may be taken up again). After you have finished, you can check the answers given on the next page. So honestly try the quiz and motivate others to take the test and learn.

1. A Village Water and Sanitation Committee is

a. A committee of government employees appointed to look after sanitation
b. A committee elected by villagers
c. A committee of voluntary workers in the village
d. A sub-committee of the Gram Panchayat

2. Proper sanitation in a village is the responsibility of

a. Villagers
b. Gram Panchayat
c. Health workers
d. All the above

3. Which of the following is true?

a. A child's faeces is not harmful
b. A child's faeces is less harmful
c. A child's faeces is as harmful as an adult's faeces

4. The most importance objective of having a latrine is

a. To provide comfort
b. To have status
c. To prevent human contact with faecal matter

5. Which type of latrine is most suitable and economical for Indian villages?

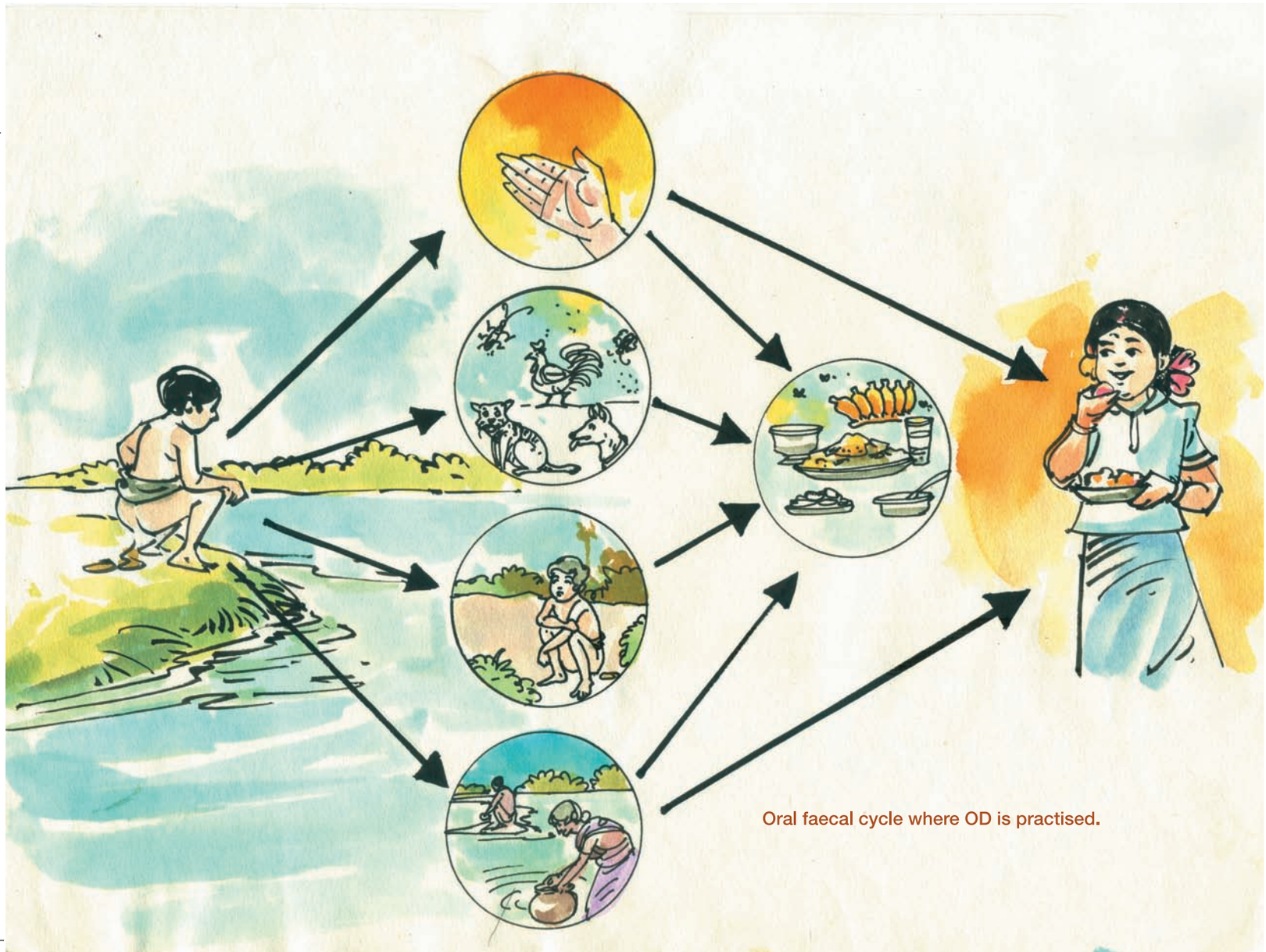
a. Eco-sanitation toilet
b. Pit latrine
c. Septic tank latrine

6. Manual scavenging is

a. Inhuman
b. Unhygienic
c. Illegal and an offence
d. All the above

7. A Rural Sanitary Mart is

a. The sanitary materials wing of the Gram Panchayat
b. A block level sanitary store established by the government
c. An outlet selling sanitation materials in rural areas



Oral faecal cycle where OD is practised.

8. Use of plastics has to be reduced because it

a. Leads to environmental pollution
b. Effects sanitation efficiency
c. Causes skin diseases

9. The best way of disposing of rural waste is

a. To throw it in the river/lake
b. To ask all households to burn it
c. To segregate it scientifically and adopt the suitable technical option

10. The best way of disposing of animal dung is by

a. Composting
b. Processing it in a bio-gas plant
c. Incineration

11. The main reason for entrusting water and sanitation to Gram Panchayats is

a. Administrative departments are over burdened
b. Reduction of cost
c. Best results will come if villagers and their representatives prepare a development plan for their area, implement and monitor it.

12. Which of the following, when used correctly, makes water safe to drink?

a. Boiling it
b. Adding chlorine
c. Filtering it
d. Disinfecting it in sunlight
e. Letting particles in the water settle to the bottom
f. All of the above

13. What is the best definition of diarrhoea?

a. Passing loose or watery stools three or more times a day
b. Passing loose or watery stools once a day
c. Passing loose or watery stools at least 10 times a day

14. Which of the following water sources may be contaminated?

a. River
b. Lake
c. Piped water
d. Covered, hand-dug well
e. Borehole
f. Rain catchment
g. All of the above

15. What is the safest way to store drinking water?

a. In a clay pot
b. In a clean oil drum
c. In a bucket
d. In a container with narrow mouth and lid
e. In a container with a tight lid, narrow-neck, and tap

16. What are the essential things that anyone needs to wash their hands with?

a. Water
b. Soap or ash or sand
c. Running water
d. Towel

17. If soap is not available, what other products can be used as soap substitutes to wash your hands?

a. Only water
b. Ash
c. Sand
d. Bleach

18. When should you wash your hands?

a. Before preparing or eating food
b. After using the latrine
c. After helping a young child use the latrine
d. When attending to someone who is sick
e. After scratching your head
f. After changing a baby's diaper/napkin
g. All of the above

19. Which of these can help germs go from person to person?

a. Flies
b. Cup/ gourd used for scooping water out of storage container
c. Touching
d. Uncovered containers
e. All of the above

20. What is the safest way of disposing of faecal waste?

a. Leaving the waste in the open air
b. Putting the waste in a covered latrine
c. Dumping it in a stream
d. Leaving the waste out in the rain

21. How far should a pit latrine be from a well?

a. At least 3 metres
b. At least 6 metres
c. At least 15 metres downhill
d. It doesn't matter

Answers

1. d
2. d
3. c
4. c
5. b
6. d
7. c
8. a
9. c
10. b
11. c
12. f
13. a
14. g
15. e
16. a, b
17. b, c
18. g
19. e
20. b
21. c

Abbreviations

ANM	Ancillary Nurse Midwife
APL	Above Poverty Line
ASHA	Accredited Social Health Activist
AWW	Anganwadi Worker
BPL	Below Poverty Line
BRC	Block Resource Centre
CATS	Community Approach to Total Sanitation
CLTS	Community Led Total Sanitation
CT	Community Toilet
DIA	District Implementation Agency
DRDA	District Rural Development Agency
DWSM	Drinking Water and Sanitation Mission
GP	Gram Panchayat
HH	Household
IAY	Indira Awaas Yojana
IEC	Information, Education and Communication
IHHL	Individual Household Latrine
IMIS	Integrated Management Information System
kg	kilogram
MSB	Mission Swachh Bharat
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MGNREGS	Mahatma Gandhi Nation Rural Employment Guarantee Scheme
mm	millimetre
MoU	Memorandum of Understanding

MPLADS	Members of Parliament Local Area Development Scheme
NBA/MSB	Nirmal Bharat Abhiyan/Mission Swachh Bharat
NGO	Non-Government Organisation
NGS	Nirmal Gram Puraskar
NRDWP	National Rural Drinking Water Programme
NRHM	National Rural Health Mission
NRLM	National Rural Livelihoods Mission
O&M	Operation and Maintenance
OD	Open Defecation
ODF	Open Defecation Free
PC	Production Centre
PRI	Panchayati Raj Institution
SC	Scheduled Caste
RSM	Rural Sanitary Mart
RTE	Right to Education
SHG	Self Help Group
SLWM	Solid and Liquid Waste Management
SMC	School Management Committee
SSA	Sarva Siksha Abhiyan
SSHE	School Water Supply, Sanitation and Hygiene Education
SSSC	State Scheme Sanctioning Committee
ST	Scheduled Tribe
U5MR	Under Five Mortality Rate
VIP	Ventilated Improved Pit
VWSC	Village Water and Sanitation Committee

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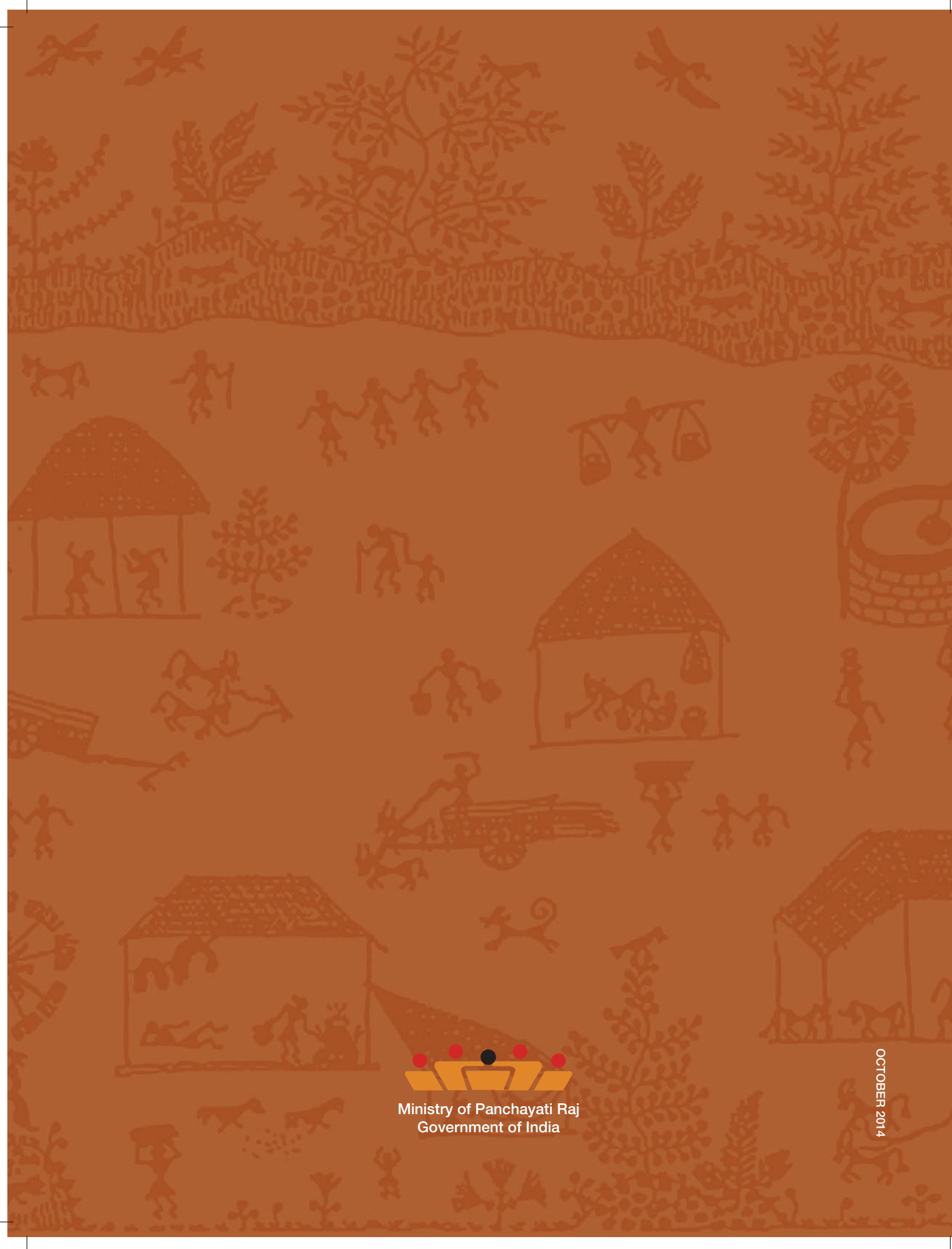

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