

8.3 Operation and maintenance of toilet facilities

Regular O&M of individual and community toilet facilities in rural areas require understanding of the issues, reasons, solutions and technical options for O&M of the system.

A. Maintenance of toilets

Issue	Reasons for inadequate maintenance	Solutions
<ul style="list-style-type: none"> ▶ Daily and annual maintenance activities may not be done. ▶ Proper methodology is not followed. ▶ Required material for maintenance is not available. 	<ul style="list-style-type: none"> ▶ Insufficient technical information for daily and annual maintenance. ▶ Non-availability of service providers 	<ul style="list-style-type: none"> ▶ Organization of IEC/ BCC activities. ▶ Empanelment/ procurement of service providers

Important pointers for regular O&M

Regular maintenance

- ▶ Keep sufficient water stored near the toilet so that every user can get the required quantity of water at any time.
- ▶ Instruct people on how to use toilets efficiently. For example, tell them to pour a little water into the pan before use to ensure that the excreta does not stick to the pan.
- ▶ Do not use too much water to flush down the excreta.
- ▶ Keep the door of the toilet properly greased and painted to increase its durability.
- ▶ Ensure that water is not accumulated inside the toilet squatting area.
- ▶ Use a long-handled brush with bristles on both sides for cleaning the toilet pan.
- ▶ Do not use acid/ detergent for cleaning the pan.
- ▶ Keep the area around the pit clean.
- ▶ Make sure that the door opens on the outside to avoid rotting of the wooden door.
- ▶ Ensure that the finishing of toilet chamber is done properly to avoid clogging of excreta.
- ▶ Do not install a vent pipe for twin-pit latrines. Vent pipes are to be installed only for septic tank latrines and for DRDO's bio-digester latrines.
- ▶ Make provision for a second pit in case of a single pit toilet. Ensure that the water seal is fixed properly to prevent foul odour.

A. Annual maintenance

- ▶ Make sure that the door, lock, roof, walls, pit, chamber, window, etc. are in good condition.
- ▶ Open the pit after wearing gloves and mask and check how much of the pit is filled.
- ▶ In case of single pit toilets, dig a second pit and fix chamber for diversion of waste to the second pit.
- ▶ Make sure that the rainwater does not enter the pit.
- ▶ Repaint faded walls.
- ▶ Use sufficient water to avoid a foul smell.

B. Filling of pit

Issue	Reasons for non-emptying	Solutions
<ul style="list-style-type: none"> ▶ Inadequate awareness about pit emptying methods. ▶ Non-use of a filled up pit. 	<ul style="list-style-type: none"> ▶ Inadequate technical information about pit emptying ▶ Misconceptions/stigma about pit emptying ▶ Inadequate service providers for pit emptying 	<ul style="list-style-type: none"> ▶ Convincing the concerned families of the necessity of a second pit construction (in case of single pit latrines) ▶ Spread of technical information through IEC/IPC activities. ▶ Demonstration of correct pit emptying method

Methodology to empty the pit

- ▶ Empty the first pit one year after the changeover of pits.
- ▶ Take out the manure in summer.
- ▶ First remove the cover of the filled leach pit.
- ▶ Observe the manure carefully.
- ▶ Remove any roots of a nearby tree that may be growing in the pit.
- ▶ Take out the manure with a spade and a ghamela (tray container).
- ▶ Do not remove the manure from the ground level when the manure level decreases. Safely get inside the pit and remove the manure. While doing so, wear shoes and gloves.
- ▶ Fix the pit lid properly after emptying the pit and spread soil over it.

C. Filling of a soak pit

Issue	Reasons for inefficient management	Solutions
<ul style="list-style-type: none"> ▶ Septage from septic tanks is discharged into the open 	<ul style="list-style-type: none"> ▶ Less awareness regarding the impact of inappropriate septage management ▶ Inadequate technical information ▶ Negative mindset of people 	<ul style="list-style-type: none"> ▶ Organization of IEC/BCC activities ▶ Digging soak pits for septage management by engaging the GPs

Construction of soak pit

1. The dimensions of the soak pit should be 3ft breadth, 3 ft length and depth of 2.5 ft near the toilet and 3 ft on opposite side
2. Fill 1/3 of the pit by small stones and then medium size stones. The topmost layer should again be of small stones. Do not fill the soak pit completely
3. Bring the pipe from chamber till the center of the pit and cover it with stones
4. Fix a pot having a hole of 6-8 inch diameter in the top most layer
5. Fill the pot with grass and coconut peels and make sure that the waste from the pipe falls directly into this pot

Desludging of septic tanks

Issue	Reasons for non-desludging	Solutions
<ul style="list-style-type: none"> ▶ Inadequate information about Maintenance and Repair of septic tank type toilets ▶ Technically inappropriate construction ▶ No desludging, transportation and treatment 	<ul style="list-style-type: none"> ▶ Non-availability of van for desludging ▶ Non-availability of affordable services of desludging ▶ Non-availability of facilities for end treatment of sludge 	<ul style="list-style-type: none"> ▶ IEC activities for maintenance and desludging of septic tanks ▶ Necessary repairs of tanks ▶ Availability of affordable services for faecal sludge management

Regular maintenance of the septic tank

- ▶ Use bleach based mixture for cleaning the toilet pan.
- ▶ Use a brush having two side bristles for cleaning the toilet pan.
- ▶ Make sure that water from bathroom, domestic water and rainwater does not enter the septic tank.
- ▶ Cover the vent cap with a net to prevent mosquitoes from entering the tank, which can be troublesome for the people.

Methodology and system of desludging

- ▶ The septic tank needs to be desludged every 3-5 years based on the size of tank
- ▶ Sludge pump/vacuum pump is necessary for desludging
- ▶ Such facilities are not available in rural areas as they are costly
- ▶ Technologies like Gulper, MAPET are available in the market and can be used for emptying septic tanks
- ▶ A Vacuum pump may be purchased if the number of septic tank type toilets are high