Dry toilet with a single pit

This document provides guidance for the operation and maintenance (O&M) of a dry toilet with onsite disposal.

Guidance for typical O&M activities is provided in Table 1 with suggested frequencies for each activity. These activities are important for maintaining a dry toilet with onsite disposal in a good working condition.

Table 2 lists potential issues associated with a dry toilet with onsite disposal and provides suggested corrective actions.

I. OPERATION AND MAINTENANCE

Operation and maintenance of an individual household dry toilet with onsite disposal is typically arranged by the users themselves; larger repairs may require skilled labour, which may be provided by local craftsmen.

Table 1. Operation and maintenance schedule guidance[a]

Frequency	Activity
Daily	• Inspect and clean the toilet pan or pedestal, clear squat-hole if blocked • Check sufficiency of anal cleansing facilities, repair/replace as necessary • Check the handwashing facilities, repair/replace as necessary • Check toilet is accessible for all intended users, e.g. access is clear and handrails (if fitted) are not loose
1 to 3 times per year	• Inspect and repair the toilet pan or pedestal, and cover slab checking for cracks, damage and leaks • Inspect and repair the superstructure, checking for cracks, damage and leaks • Inspect and repair/replace the squat-hole lid and/or ventilation pipe with fly screen • Check that the door, lock and light is working, repair/replace as necessary • Inspect the pit checking stability of side walls and any settlement, and estimate how full the pit is
As the need arises	• Carry out repairs and replace parts • Arrange emptying and transport of the pit contents to treatment, or cover over the pit and replace with a new toilet and pit

Notes:

1. The suggested frequencies in Table 1 represent a minimum requirement and may need to be increased depending on the local context.
2. Only persons with relevant training/skills should undertake the activities in Table 1. Care should be taken when handling disinfection products or undertaking any activity that requires entry into a pit (e.g. inspection, maintenance etc.).
3. For guidance on appropriate frequencies for monitoring refer to *WHO Guidelines for Sanitation and Health.*

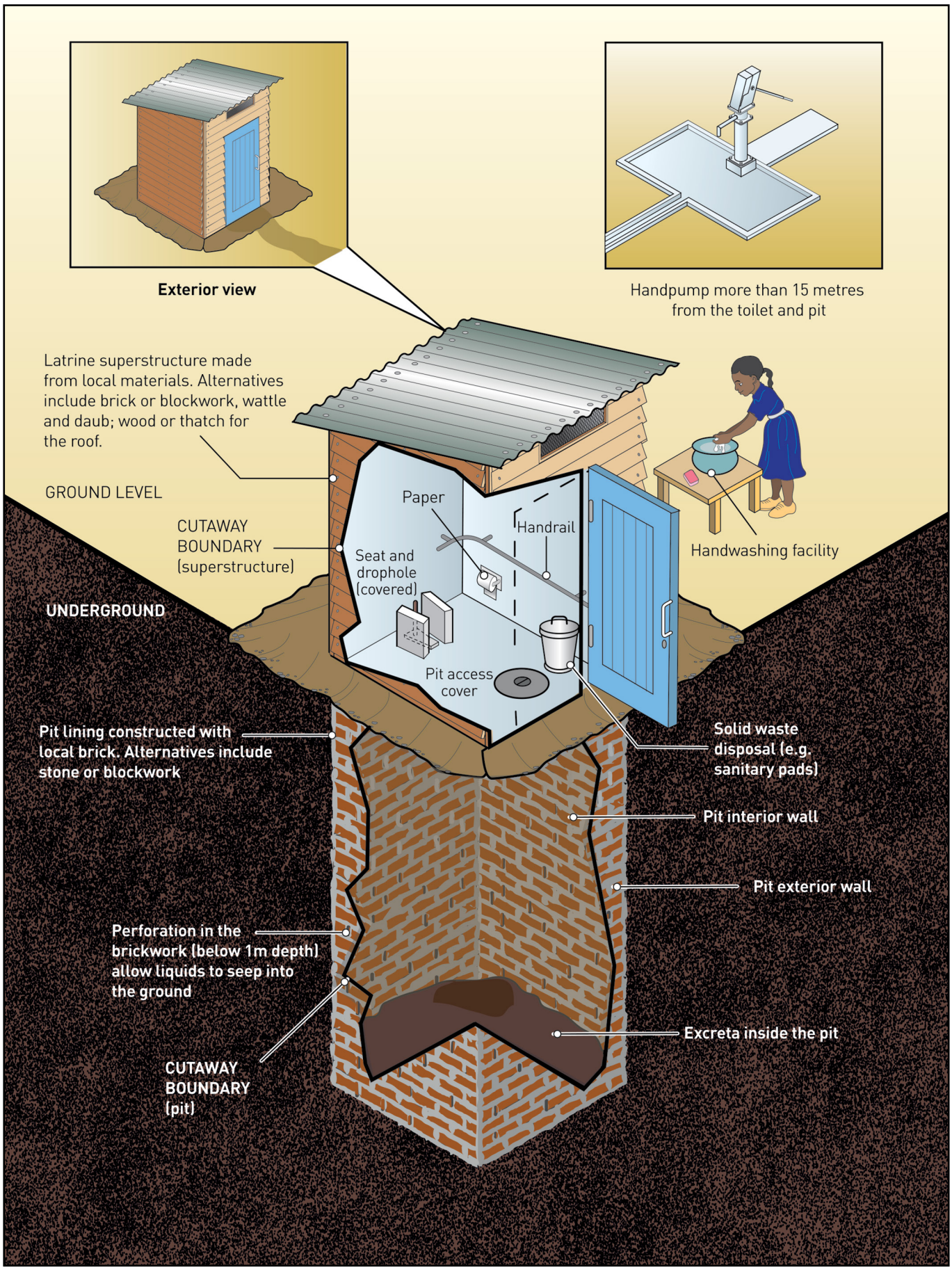
[a] Adapted from: Brikké, F. and Bredero, M. (2003). *Linking technology choice with operation and maintenance in the context of community water supply and sanitation: A reference document for planners and project staff.* World Health Organization, Geneva.

II. ISSUES AND REMEDIAL ACTIONS

Table 2. Common issues associated with a dry toilet with onsite disposal, and suggested remedial actions

	Risk	Remedial action
TOILET	Access route to the toilet is blocked or not manageable for some intended users	• Clear the access route and/or carry out repairs/ improvements so that the toilet is accessible for all intended users (e.g. fitting a handrail or building an access ramp).
	The toilet superstructure is damaged or absent	• Repair or replace the superstructure so that it provides privacy for the intended users, prevents ingress of rainwater, and prevents animals, rodents and insects from entering the toilet room and/or pit. • To provide security for the users: repair or replace the door and lock, repair or replace the light inside the toilet room.
	Toilet is dirty with visible excreta on the surface	• Clean the toilet pan or pedestal and the surfaces of the toilet room (e.g. bathroom, washroom, rest room, cubicle etc.) so that they are clean and free of excreta.
	No anal cleansing material or inappropriate for the type of technology/system	• Replace and/or provide sufficient appropriate material. • Ensure that where required there is a receptacle for disposal of used anal cleansing products and menstrual products, and that this is regularly emptied, and the contents is disposed of safely.
	Handwashing facilities absent inside or next to the toilet	• Replace and/or provide sufficient, appropriate handwashing facilities. This includes water and soap.
	Flies can easily enter and leave the pit	• Dry toilets should include a tight-fitting lid or cover that fits over the squat-hole/pedestal seat; or the pit is fitted with a ventilation pipe with a fly screen.
	Excreta overflowing from the squat hole, pan or pedestal; and/or are there ponds of effluent visible on the ground outside the toilet	• If there is a treatment plant available where the contents can be taken, arrange for the pit to be emptied and the contents transported to treatment. If not, then arrange for the superstructure to be dismantled, for the pit contents to covered over, and for a new toilet and pit to be constructed.

CONTAINMENT	Pit poorly maintained such that the cover slab is cracked or damaged, and/or the side walls are not stable	• Consider what remedial actions should be taken to minimize the risk to public health. • Consider appropriate steps to eliminate the hazard in the long term including repairs and replacing parts. • The toilet should be constructed in a way that minimises risk of collapse. • Slab and seat/pedestal or pan/squat-hole should be made from durable material (e.g. concrete, fibreglass, stainless steel etc.) that are easier to clean which helps minimizing risks to the users.
	Bottom of the pit less than 1.5m* from the water table where groundwater supply is used for drinking	• Consider what remedial actions should be taken to minimize the risk to public health (e.g. alternative pit design, use of alternative water sources, drinking-water treatment etc.).
	Toilet and pit located within 15m* of a well or hand-pump that is used for drinking	• Consider what remedial actions should be taken to minimize the risk to public health (e.g. alternative pit location/ design, use of alternative water sources, drinking-water treatment etc.).
	Pit/septic tank located on higher ground from the drinking water source	• Consider what remedial actions should be taken to minimize the risk to public health. • Consider appropriate steps to eliminate the hazard in the long term.
	Effluent flowing from the tank outlet to an open drain, water body or to open ground	• Consider what remedial actions should be taken to minimize the risk to public health (repair, design modifications, operation and maintenance).
	Toilet and cartridges poorly maintained with broken components, visible cracks or defects in the side walls	NA
	Container/pit/septic tank not accessible for emptying	• The technique used will determine if emptying and transport is required or not. • Where it is required, consider what remedial actions should be taken to minimize the risk to public health (e.g. design modifications/ improvements, etc.). • Where emptying and transport is not required, close or cover the pit appropriately. If the superstructure is mobile the pit can be filled with soil and a fruit or ornamental tree can be planted.
	The pit is almost full	• Ensure the waste is managed following safe practices.



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