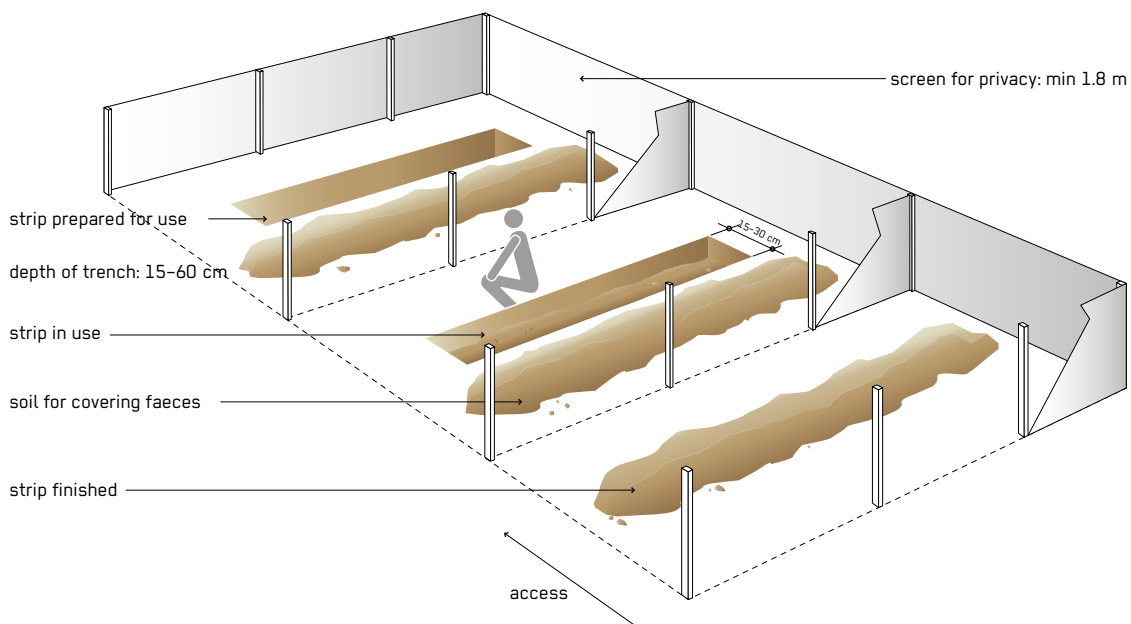


# Shallow Trench Latrine

Phase of Emergency	Application Level / Scale	Management Level	Objectives / Key Features
★★ Acute Response Stabilisation Recovery	Household ★★ Neighbourhood ★ City	Household Shared ★★ Public	Minimising immediate public health risk, Prevention of random open defecation, Fast implementation
Space Required	Technical Complexity	Inputs	Outputs
★★★ High	★ Low	● Faeces, ● Excreta (+ ● Dry Cleansing Materials) (+ ● Anal Cleansing Water)	● Excreta



A Shallow Trench Latrine is a simple improvement of a defecation field (U.5). It consists of one or several shallowly dug trenches into which people defecate.

Faeces are covered after each use with the dug-out soil, thereby improving overall hygiene and convenience compared to that of defecation fields. A Shallow Trench Latrine is only recommended for the immediate emergency response.

**Design Considerations:** Shallow trenches should be around 20–30 cm wide and 15 cm deep, and shovels may be provided to allow each user to cover their excreta with soil. If several trenches are foreseen they should be divided into strips of around 1.5 m width with associated access paths. Trenches furthest from the entrance should be used first. When a section of trench has its bottom layer fully covered with excreta it is filled in. Only short lengths of a trench should be opened for use at any

one time to encourage the full utilisation of the trench in a short time. It may be appropriate to have a number of trenches open at the same time. Shallow Trench Latrines are very land use intensive. The area needed is approximately 0.25 m<sup>2</sup>/person/day. For 10,000 people nearly two hectares per week are needed. The area chosen should be at a safe distance from food and water sources, but close enough to population centres to assure the safety and dignity of users. Shallow Trench Latrines should include screening for privacy and should be gender segregated. Where possible, screening should be higher than a standing person (> 2 m) to promote privacy. Furthermore, there should be an attendant at all times, ensuring security and order. The important design difference between a Deep Trench Latrine (S.1) and a Shallow Trench Latrine is that the shallow version is not as deep, and therefore no lining is required.

**Materials:** Simple digging tools are needed for Shallow Trench Latrines, such as shovels and picks. In order to assure privacy screening should be provided. This can be done with plastic canvas or materials such as bamboo, fabrics and others. Shovels for users can be provided to allow each user to cover their excreta with soil.

**Applicability:** A Shallow Trench Latrine is only recommended as temporary solution for the acute emergency response and is not a suitable long-term sanitation solution. It is not considered an improved sanitation technology and should be stopped as soon as other improved emergency sanitation solutions are in place.

**Operation and Maintenance:** After each defecation, faeces should be covered with soil. After one trench section is full, the soil with excreta should be treated with on-site disinfection such as lime treatment or should be taken away to a treatment facility. When closing one defecation trench section, privacy screens and simple slabs (if applicable) need to be moved to the next trench section. In order to ensure security, proper use and the opening and closing of defecation trenches there should be an attendant at all times.

**Health and Safety:** Although a Shallow Trench Latrine minimises indiscriminate open defecation and faeces are covered with soil the technology is not an improved sanitation option. It should only be implemented to bridge the gap in the acute response phase. Shallow Trench Latrine technology requires continuous user orientation and needs to be managed well in order to keep the public health risk low. In addition, the facility needs to be gender segregated, illuminated at night and sufficiently staffed to ensure a minimum level of security. Shallow Trench Latrines have to be equipped with Handwashing Facilities (U7). Solid waste containers (X.8) at the entrance/exit can further promote public health and can be an important measure for menstrual hygiene management.

**Costs:** The technology itself does not require substantial financial investment. The materials needed usually can be obtained locally. For the operation, a full-time staff member is required to ensure correct use of the trenches. Staff can be volunteers; no engineering knowledge is needed. Major costs associated with Shallow Trench Latrines could arise from renting or acquiring the land. If the contaminated soil is treated off-site there will be transport costs and costs for sanitising the land after use.

**Social Considerations:** Shallow Trench Latrines should be located where they are less likely to be public health hazards, where costs for acquiring land are relatively low, and where they are accessible enough for people to use them. Gender segregation of facilities is critical. Having separate entrances and exits, not entirely exposed to the public, can help improve privacy. Full time attendants can promote privacy, security and correct use of the facility. Attendants can also train parents on how children should use the facility. In addition, intensive awareness raising and hygiene promotion measures are needed to ensure that the Shallow Trench Latrines are used and random open defecation is avoided.

**Strengths and Weaknesses:**

- ⊕ Can be built and repaired with locally available materials
- ⊕ Low (but variable) capital costs depending on land availability
- ⊕ Can be built immediately
- ⊖ Flies and odours are noticeable
- ⊖ Limited privacy
- ⊖ Short lifespan
- ⊖ Big land area required and costs to rehabilitate the land may be significant

→ **References and further reading material for this technology can be found on page 190**