

LATRINE DESIGN AND CONSTRUCTION WORKSHOP

LENGTH: 5 days

WORKSHOP DESCRIPTION

Sanitation aims to protect and promote human health and well-being by safely managing human excreta and breaking the cycle of disease. Latrines are an essential component of sanitation, but sanitation is more than just building latrines. It is a system that addresses human excreta from the moment it is collected in a latrine, through to treatment and use or disposal of the sludge.

In this workshop, participants will learn how to design and construct latrines for low-income communities not connected to a sewerage system. The focus is on designing latrines that are technically and environmentally appropriate, and that people will actually want and use.

The workshop explores the relationship between sanitation, disease transmission and health. It gives participants experience selecting appropriate latrine parts, such as the toilet, slab, superstructure, and pit, tank or chamber. It also addresses technical and environmental topics including siting latrines and sizing latrine pits. Modifying latrines to make them accessible for different user groups, including children, women, and people with limited mobility, is discussed. Aspects of hygiene, such as handwashing and menstrual hygiene, are also discussed as they relate to sanitation. Finally, participants will learn a framework for implementing a sustainable and successful project.

The theory in the course is balanced with practical design exercises and hands-on construction work. Participants may work with concrete and construct basic latrine components and handwashing stations. However, this workshop is not intended to provide full training on the construction of latrines or masonry training.

OBJECTIVES

Upon completion of the workshop, participants will be able to:

- Discuss local and global issues and how sanitation is connected to the poverty cycle
- Identify pathogens related to sanitation and explain how to prevent disease transmission
- Discuss the five components of a sanitation system to properly manage human excreta
- Identify the parts of a latrine and describe their function
- Identify technology options for each latrine part and describe their basic design, advantages, and limitations
- Explain user-focused design and how it can be used to design latrines that people want and will use consistently and sustainably
- Calculate the required size of latrine pit
- Explain how to excavate and line a latrine pit
- Construct some basic latrine components, such as a slab, superstructure or pit lining
- Explain the factors to consider when siting a latrine

- Discuss different options to manage full latrines
- Describe how latrine sludge can be safely treated and used or disposed of
- Discuss the importance of handwashing with soap, describe the critical times and procedure for proper handwashing, and discuss the need for handwashing hardware and software
- Discuss latrine options for challenging environments such as areas with high groundwater, flooding, high population density, cold climates or fragile ecosystems
- Identify the materials required and basic costs to build a latrine
- Discuss the purpose of the project framework and describe the five components needed for a successful and sustainable sanitation project
- Establish a network of contacts with other project implementers

METHODS OF INSTRUCTION

The participatory workshop includes theory, activities, demonstrations, open discussion, case studies, design scenarios and hands-on construction. Active participant engagement in all learning activities is encouraged.

CONTENT

The following is a tentative list of the topics covered in the workshop. A specific agenda will be developed based on consultations with the organizer and participants. In general, one to two practical construction sessions listed below will be selected for each workshop.

Theory

- Local and global sanitation issues
- Pathogens and transmission of sanitation-related diseases
- Sanitation systems for managing human excreta
- User-focused latrine design
- Latrine parts and functions
- Selecting latrine technologies
- Designing latrine slabs
- Sizing, excavating and lining pits
- Siting latrines
- Emptying latrines and transporting sludge
- Treating, using and disposing sludge
- Handwashing with soap
- Estimating costs of building a latrine
- Introduction to the project framework

Practical

- Constructing latrine slabs
- Constructing a superstructure
- Constructing a toilet seat and pedestal
- Designing and sizing a latrine pit
- Excavating and lining a latrine pit
- Constructing a handwashing station
- Latrine design scenario exercises
- Next steps in project planning

Note: The following topics are outside the scope of this workshop:

- *Sludge treatment, use and disposal*
- *Animal excreta management, solid waste management, vector control and domestic wastewater management*
- *Implementation approaches for sanitation projects (for example, ways to create demand, supply products and services, or finance latrines)*

For more information on these topics, please see the following CAWST workshops:

- *Sludge Treatment, Use and Disposal*
- *Environmental Sanitation*
- *Latrine Project Implementation*

PARTICIPANTS

Participants may be individuals or groups who are:

- Working in water, sanitation and hygiene (WASH), community development or health projects seeking solutions for sanitation
- Program organizers or project managers with the responsibility for organizing projects and making decisions
- Engineers or technicians with responsibility for designing and constructing latrines
- Community liaison people or sanitation promoters who educate households about sanitation and selecting latrines
- Motivated to start or strengthen projects for improving sanitation

It is an advantage if participants have the following:

- Source of funding in place to begin implementation (as this will allow for immediate application of the knowledge and skills gained in the workshop)
- Support of their organization which recognizes that sanitation may be beneficial for the communities where they work

Participation by women is encouraged. Preferably, two or three people from each organization would attend to ensure that they learn together and benefit most from the workshop.

This is an introductory level workshop. It is NOT intended for people already trained in latrine design and construction. However, the workshop can be refresher training for those interested.

TRAINING MATERIALS

The following materials will be provided:

- Participant resources including Technical Briefs and Fact Sheets
- CD containing all material presented in the workshop and related resources