

Faecal Sludge Management Terminology Factsheet

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FAECAL SLUDGE
MANAGEMENT TWIG



WASH Cluster
Water Sanitation Hygiene

The Faecal Sludge Management (FSM) Technical Working Group (TWiG) of the Global WASH Cluster has been created to improve the quality of sanitation services in emergencies. But what do we mean by that? As FSM is a relatively new field for the emergency WASH sector, confusion exists on terminology. This overview explains the meaning of key terms.

SANITATION

There are many possible definitions of **sanitation**. For the purposes of this factsheet, the word 'sanitation' alone is taken to mean the access to and use of facilities and services for the safe disposal of **human urine and faeces** needed to reduce faecal-oral disease transmission. It encompasses too the re-use and ultimate disposal of human excreta. The term **environmental sanitation** is used to cover the wider concept of grey water management, solid waste management, drainage and vector control, but for the purpose of this document only the safe disposal of human urine and faeces is considered.



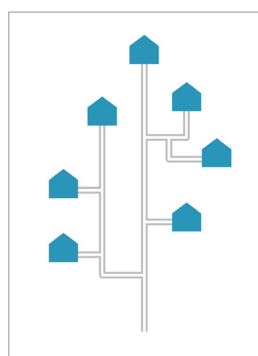
SANITATION SYSTEMS

A **sanitation system** is a multi-step process in which human faeces and urine, in the shape of wastewater or faecal sludge, are managed from the point of generation to the point of use or ultimate disposal. Under certain conditions, which are described under 'On-site Safe Sanitation Systems', all steps of a safe sanitation system can take place on-site, while in other contexts, a full **sanitation service chain** is required, including a sewer or the emptying, transport, treatment and final disposal or end use of faecal sludge or wastewater.

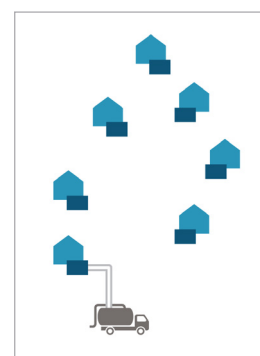
WASTE WATER VERSUS FAECAL SLUDGE

The term **wastewater** is generally used to refer to the mixture collected in and transported through a sewer system, using flushing water to transport faeces and urine. In addition to flushing water, wastewater generally also contains greywater, e.g. the water from showers and sinks.

Faecal sludge is the mixture of human urine and faeces, water and solid waste (such as toilet paper) that gets collected in onsite sanitation systems and is not transported through a sewer.







Wastewater



Faecal Sludge




ON-SITE SAFE SANITATION SYSTEMS

A safe sanitation system **does not necessarily include the transport and off-site treatment of faecal sludge or wastewater**. If the below three points apply, **the use of household latrines with a plan in place to safely decommission the system once full, is considered a safe sanitation system**. This is generally the case in rural contexts.

 <p>The ground water level is 1.5 meter or more deeper than the bottom of the pit or soak pit.</p>	 <p>The latrine or septic tank is 30 meter or more than away from a water source like a well or surface water.</p>	 <p>There is sufficient space to dig a new pit or construct a new septic tank once the used one is full, and material and knowledge are available to safely decommission.</p>	 <p>Households have access to their private toilet or latrine.</p>
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OFF-SITE SAFE SANITATION SYSTEMS AND FAECAL SLUDGE MANAGEMENT

In other contexts, when the above-mentioned conditions do not apply, a sanitation service chain is required for safe sanitation services in emergencies. This can be the case in:

 <p>Crowded refugee camps, with no space for new pits once used pits are full and many people use the same toilet or latrine, resulting in short filling-up times.</p>	 <p>Context where the groundwater table is high or where there is a flood risk</p>	 <p>Urban contexts</p>
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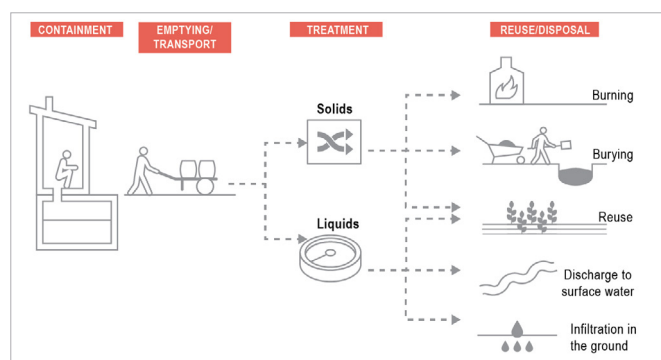
When toilets are connected to a sewer, the sanitation service chain consists of the toilets and the sewer network transporting the wastewater to the sewage treatment plant and all services required for the safe end use or disposal of the wastewater end products, both the liquid and the solids.

When there is no sewer system and on-site facilities like pit latrines and septic tanks are used, the sanitation service chain consists of the safe emptying, transportation, treatment and end use or disposal of faecal sludge. This is called **Faecal Sludge Management (FSM)**.

In case of faecal sludge, many different technologies exist for **each step of the sanitation service chain**. If all steps in the service chain are adequately managed, FSM can be a sustainable, long-term solution.

The faecal sludge treatment plant generally produces a treated **liquid flow/effluent** that can be disposed of through infiltration in the ground, discharge to surface water or reused as irrigation water.

The treatment plant also produces a more **solid fraction**, that can be burned, buried in the ground or reused as fertilizer or soil conditioner. Both the liquid and the solid fraction needs to be disposed of safely for a safe sanitation system.



REFERENCES

The FSM Handbook www.sandec.ch/fsm_book

Compendium of Sanitation Technologies in Emergencies <https://www.emersan-compendium.org/en/>

Guidelines on Sanitation and Health <http://apps.who.int/iris/bitstream/handle/10665/274939/9789241514705-eng.pdf>