The Sanitation Decision Support tool

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See it happen

Results of the Sanitation Decision Support Tool. The tool was created by WASTE (www.waste.nl) and the Akvo Foundation (www.akvo.org), in order to assist people in choosing sanitation technologies. We hope this tool proves useful, any comments can be send to m.t.westra@akvo.org.

Session information
Date: Wed Jul 10, 2019
Time: 22:43:07

Options chosen

Water supply (one possible)
- none
- fetched / hand-pump / standpipe / tanker
- **connection**

Space availability (one possible)
- large
- medium/large
- **medium**
- small/medium
- small

Flood prone (one possible)
- not affected
- frequent (low-lying area)

Groundwater table (one possible)
- shallow
- medium
- **deep**

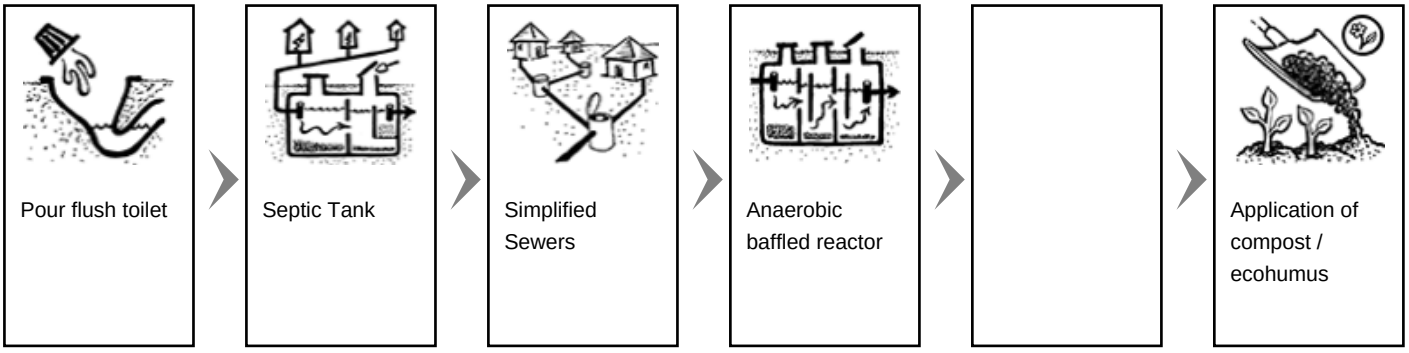
Terrain / Topography / Slope (one possible)
- **flat**
- slope

Vehicular accessibility (one possible)
- no access
- limited / narrow access
- **full access**

Soil type (one possible)
- clayey
- silty
- **sandy / gravelly**
- rocky

Anal cleansing method (more possible)
- **water**
- soft paper
- hard or bulky

Selected technologies



Links to Akvopedia articles

- Pour flush toilet:
  http://www.akvo.org/wiki/index.php/Pour_Flush_Toilet
- Septic Tank:
  http://www.akvo.org/wiki/index.php/Septic_Tank
- Simplified Sewers:
  http://www.akvo.org/wiki/index.php/Simplified_Sewers
- Anaerobic baffled reactor:
  http://www.akvo.org/wiki/index.php/Anaerobic_Baffled_Reactor
- Application of compost / ecohumus:
  http://www.akvo.org/wiki/index.php/Application_of_Compost_-_Eco-Humus

Short descriptions

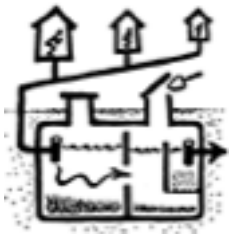
Pour flush toilet

A Pour Flush Toilet is like a regular Flush Toilet except that instead of the water coming from the cistern above, it is poured in by the user. When the water supply is not continuous, any cistern Flush Toilet can become a Pour Flush Toilet. Just like a traditional Flush Toilet, there is a water seal that prevents odours and flies from coming back up the pipe.

Relevant options

Septic Tank

A Septic Tank is a watertight chamber made of concrete, fibreglass, PVC or plastic, for the storage and treatment of blackwater and greywater. Settling and anaerobic processes reduce solids and organics, but the treatment is only moderate. A Septic Tank should typically have at least two chambers. The first chamber should be at least 50% of the total length and when there are only two chambers, it should be 2/3 of the total length. Most of the solids settle out in the first chamber. The baffle, or the separation between the chambers, is to prevent scum and solids from escaping with the effluent. A T-shaped outlet pipe will further reduce the scum and solids that are discharged. Liquid flows into the tank and heavy particles sink to the bottom, while scum (oil and fat) floats to the top. With time, the solids that settle to the bottom are degraded anaerobically. However, the rate of accumulation is faster than the rate of decomposition, and the accumulated sludge must be removed at some point. Generally, Septic Tanks should be emptied every 2 to 5 years, although they should be checked yearly to ensure proper functioning. The design of a Septic Tank depends on the number of users, the amount of water used per capita, the average annual temperature, the pumping frequency and the characteristics of the wastewater. The retention time



should be designed for 48 hours to achieve moderate treatment.

Relevant options

At option **Space availability (one possible)** you have selected **medium**. This means that in your situation,Septic Tank might be a suitable technology. This depends on: **Just possible as a community block or public facility**

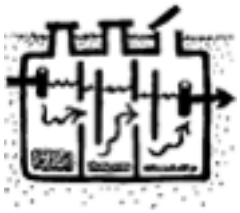
Simplified Sewers

Simplified Sewers describe a sewerage network that is constructed using smaller diameter pipes laid at a shallower depth and at a flatter gradient than conventional sewers. The Simplified Sewer allows for a more flexible design associated with lower costs and a higher number of connected households. Expensive manholes are replaced with simple inspection chambers. Each discharge point is connected to an interceptor tank to prevent settleable solids and trash from entering the sewer. As well, each household should have a grease trap before the sewer connection.

Relevant options

At option **Terrain / Topography / Slope (one possible)** you have selected **flat**. This means that in your situation,Simplified Sewers might be a suitable technology. This depends on: **Requires a minimum slope of 0.5 %. If long distances are required, a pumping station might be needed.**

Anaerobic baffled reactor



An Anaerobic Baffled Reactor (ABR) is an improved septic tank because of the series of baffles over which the incoming wastewater is forced to flow. The increased contact time with the active biomass (sludge) results in improved treatment.

Relevant options

At option **Space availability (one possible)** you have selected **medium**. This means that in your situation,Anaerobic baffled reactor might be a suitable technology. This depends on: **Depending on the size of the reactor, space availability could be a problem.**

Application of compost / ecohumus

Composting is the term used to describe the controlled aerobic degradation of organics into a soil-like substance called compost. ‘EcoHumus’ is a term taken from Peter Morgan (see references) and is a more appropriate word to use for the material removedfrom a Fossa Alterna because it is produced passively underground and has a slightly differ-ent composition.

Relevant options