

# The Sanitation Decision Support tool

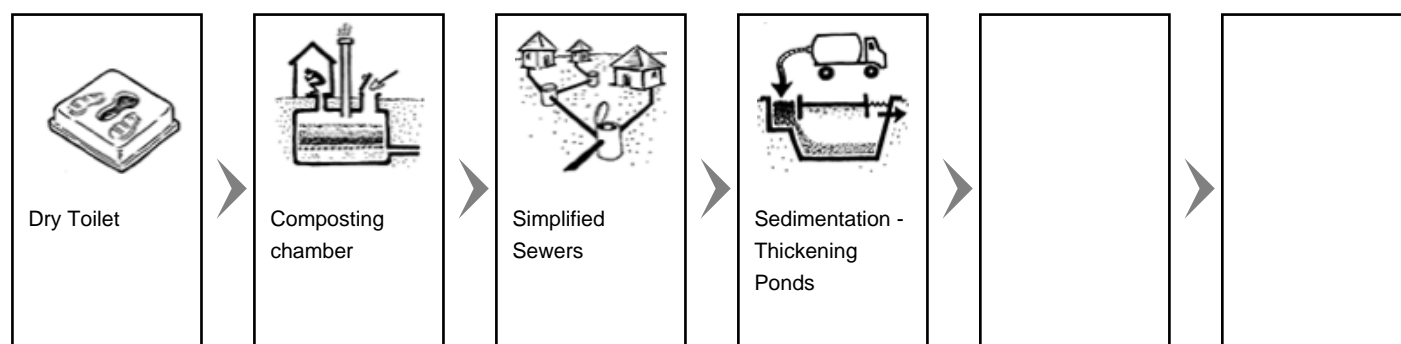
Results of the Sanitation Decision Support Tool. The tool was created by WASTE (www.waste.nl) and the Akvo Foundation (www.akvo.org), in order to assist people in choosing sanitation technologies. We hope this tool proves useful, any comments can be send to m.t.westra@akvo.org.

Session information  
Date: Mon Nov 30, 2020  
Time: 01:22:09

## Options chosen

<b>Water supply (one possible)</b> <ul style="list-style-type: none"> <li>• none</li> <li>• fetched / hand-pump / standpipe / tanker</li> <li>• <u>connection</u></li> </ul>	<b>Groundwater table (one possible)</b> <ul style="list-style-type: none"> <li>• shallow</li> <li>• medium</li> <li>• <u>deep</u></li> </ul>	<b>Soil type (one possible)</b> <ul style="list-style-type: none"> <li>• clayey</li> <li>• silty</li> <li>• sandy / gravelly</li> <li>• <u>rocky</u></li> </ul>
<b>Space availability (one possible)</b> <ul style="list-style-type: none"> <li>• large</li> <li>• <u>medium/large</u></li> <li>• medium</li> <li>• small/medium</li> <li>• small</li> </ul>	<b>Terrain / Topography / Slope (one possible)</b> <ul style="list-style-type: none"> <li>• flat</li> <li>• <u>slope</u></li> </ul>	<b>Anal cleansing method (more possible)</b> <ul style="list-style-type: none"> <li>• <u>water</u></li> <li>• soft paper</li> <li>• hard or bulky</li> </ul>
<b>Flood prone (one possible)</b> <ul style="list-style-type: none"> <li>• <u>not affected</u></li> <li>• frequent (low-lying area)</li> </ul>	<b>Vehicular accessibility (one possible)</b> <ul style="list-style-type: none"> <li>• <u>no access</u></li> <li>• limited / narrow access</li> <li>• full access</li> </ul>	

## Selected technologies



## Links to Akvopedia articles

- Dry Toilet:  
[http://www.akvo.org/wiki/index.php/Dry\\_Toilet](http://www.akvo.org/wiki/index.php/Dry_Toilet)
- Composting chamber:  
[http://www.akvo.org/wiki/index.php/Composting\\_Chamber](http://www.akvo.org/wiki/index.php/Composting_Chamber)
- Simplified Sewers:  
[http://www.akvo.org/wiki/index.php/Simplified\\_Sewers](http://www.akvo.org/wiki/index.php/Simplified_Sewers)
- Sedimentation - Thickening Ponds:  
[http://www.akvo.org/wiki/index.php/Sedimentation\\_-\\_Thickening\\_Ponds](http://www.akvo.org/wiki/index.php/Sedimentation_-_Thickening_Ponds)

## Short descriptions

### Dry Toilet



A Dry Toilet is a toilet that operates without water. The Dry Toilet may be a raised pedestal that the user can sit on, or a squat pan that the user squats over. In both cases, excreta (both urine and faeces) fall through a drop hole. A Dry Toilet here refers specifically to the device that the user sits or squats over. In other literature, a Dry Toilet may refer to a variety of technologies, or combinations of technologies (especially pits). The Dry Toilet is usually placed over a pit; if two pits are used, the pedestal or slab should be designed in such a way that it can be lifted and moved from one pit to another. The slab or pedestal base should be well sized to the pit so that it is both safe for the user and prevents stormwater from infiltrating the pit (which may cause it to overflow).

#### Relevant options

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### Composting chamber



Composting refers to the process by which biodegradable components are biologically decomposed under aerobic conditions by microorganisms (mainly bacteria and fungi). A Composting Chamber converts excreta and organics into Compost. Compost is a stable, inoffensive product that can be handled safely and used as a soil conditioner. This technology usually requires four main parts: 1) a reactor (storage chamber); 2) a ventilation unit to provide oxygen and allow gases (CO<sub>2</sub>, water vapour) to escape; 3) a leachate collection system ; and 4) an access door to remove the mature product.

#### Relevant options

At option **Vehicular accessibility (one possible)** you have selected **no access**. This means that in your situation, Composting chamber might be a suitable technology. This depends on: **Special care in case of emptying and transport services requirement. Potential use of small vehicles**

At option **Anal cleansing method (more possible)** you have selected **water**. This means that in your situation, Composting chamber might be a suitable technology. This depends on: **Anal cleansing water must be diverted from the toilet to maintain dry conditions**

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## 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 **Soil type (one possible)** you have selected **rocky**. This means that in your situation, Simplified Sewers might be a suitable technology. This depends on: **Difficulties for excavation. Special attention to the costs**

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## Sedimentation - Thickening Ponds



Sedimentation or Thickening Ponds are simple settling ponds that allow the sludge to thicken and dewater. The effluent is removed and treated, while the thickened sludge can be treated in a subsequent technology. Faecal sludge is not a uniform product and therefore, its treatment must be specific to the characteristics of the specific sludge. In general, there are two types of faecal sludges: high strength (originating from latrines and unsewered public toilets) and low strength (originating from Septic Tanks). High strength sludge is still rich in organics and has not undergone significant degradation, which makes it difficult to dewater. Low strength sludge has undergone significant anaerobic degradation and is more easily dewatered.

### Relevant options