

The image features a central white circle containing the word "SANITATION" in bold, blue, uppercase letters. Surrounding this circle are four cartoon children of diverse backgrounds. At the top left is a girl with long brown hair wearing a yellow patterned shirt. At the top right is a boy with black hair wearing a grey shirt and a black headband with white patterns. At the bottom left is a girl with black hair wearing a purple top. At the bottom right is a girl with black hair wearing glasses, a red shirt, and a black headband with white patterns. The background is a dark blue grid with a pattern of white dots forming starburst shapes.

# SANITATION

## What is sanitation?

## How to undertake safe utilization of human waste?

**Sanitation** is a safe utilization of human waste, in other words it's toilets and everything related to them.

Toilets existed always and their purpose is to separate human waste from other processes of human life. Human waste was buried, people used to go far from their houses, far from water sources and away from places of livestock grazing for these natural purposes.

The principles of modern toilets and the standards of their safety are still based on the thousand-year history of using toilets.

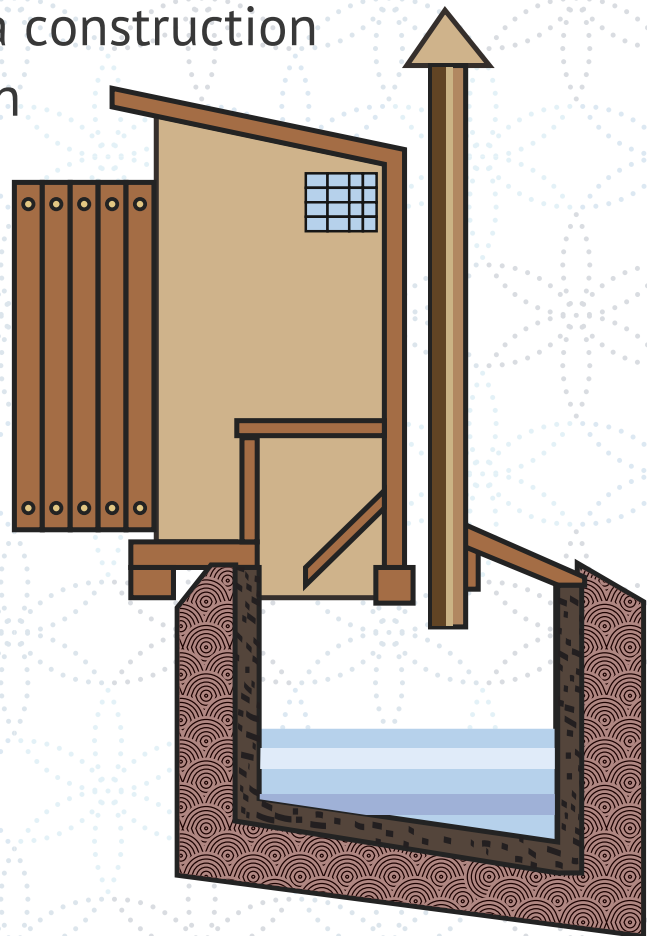


## What types of toilets do we know?

Even though there are a lot of types of toilets, they can be divided into toilets with drainage system and toilets without it. However, using water for drainage can be made centralized or not centralized. So, here are some main forms of toilets:

### Cesspools.

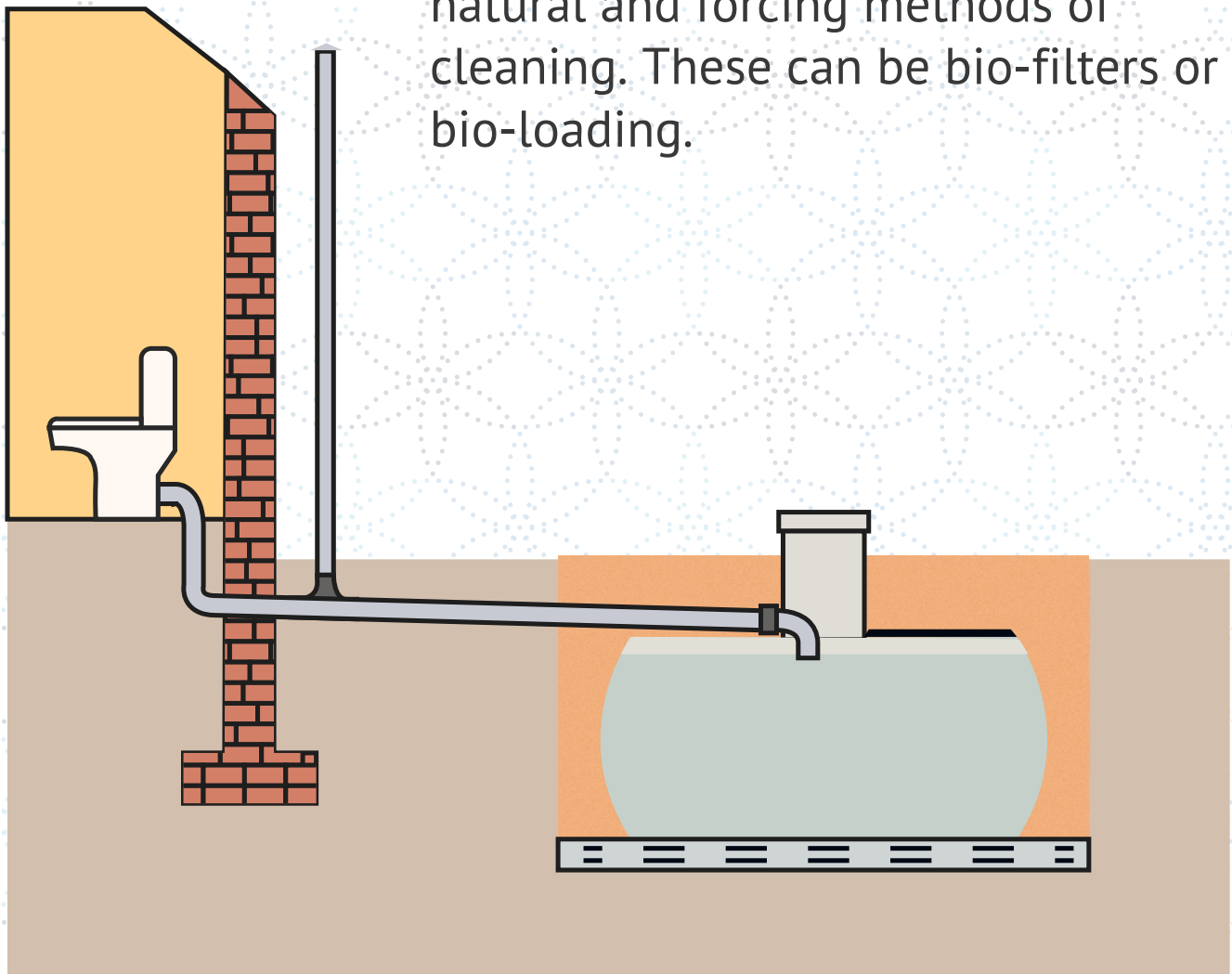
Majority of the toilets in Tajikistan are built based on the simplest way. Often it is an excavated pit with a cover on the top; after filling, the pit is usually buried. Cesspools may serve both for simple toilets that represent just a construction over the pit with a whole in the middle or for toilets with bowls with flushing water where the drainage pipe goes directly into the pit (in case of absence of the sewage system).



## Septic

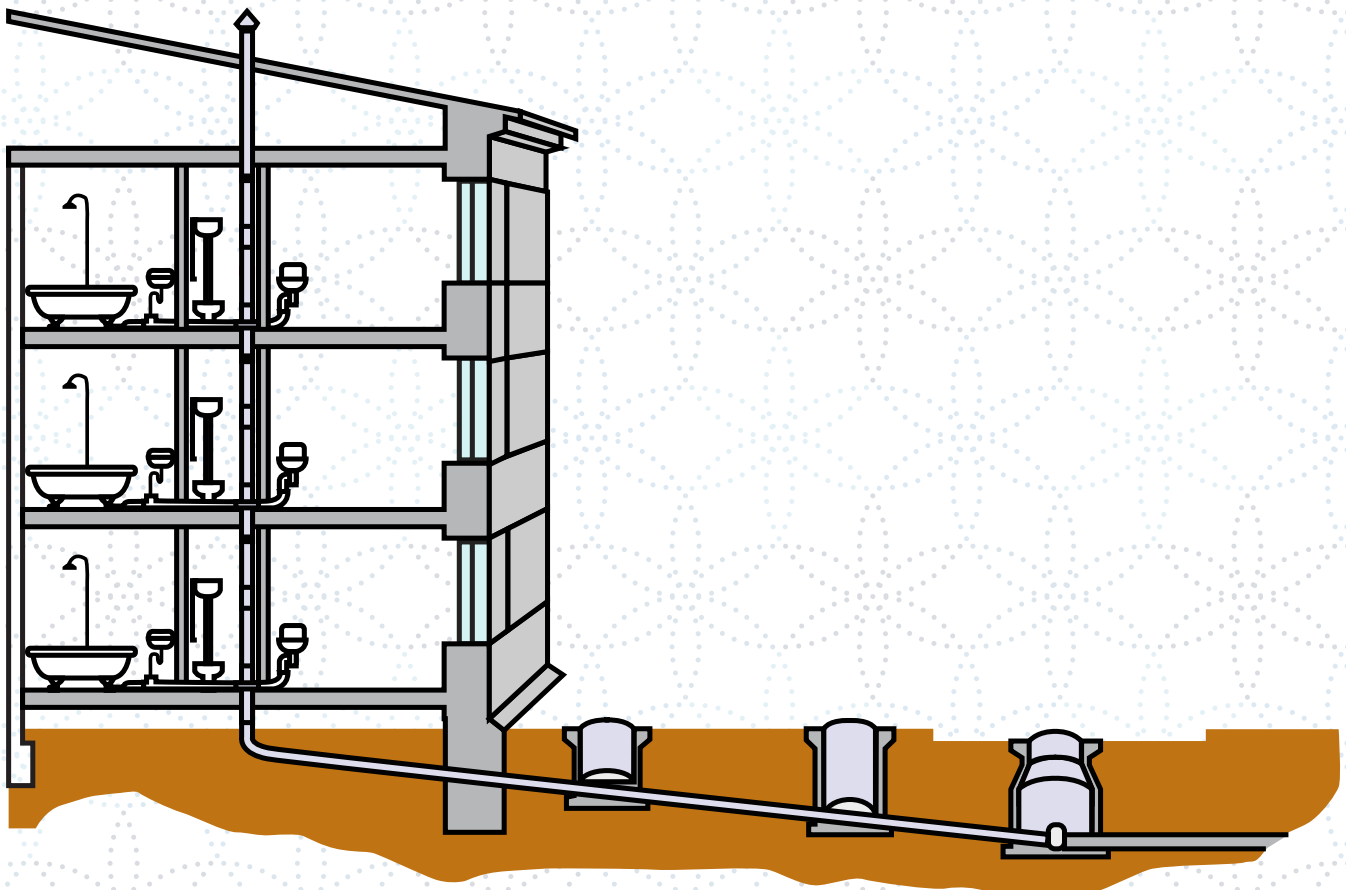
We often have situations when there is water system in the house but there is no sewage system built in the area. Septic tanks are often built in these cases. The word septic (taken from Greek 'septikos') translates as rotting, decomposing etc. Septic is a tank consisting of a single sealed container divided into three sections, branch pipe to provide initial sewage water, tapping of clean water and interlocks between the sections. Water along with the waste moves to the septic and it maintains the cleaning process. The work of the septic includes gravity settling of the waste and biological cleaning using the bio-fermenter devices as well as

natural and forcing methods of cleaning. These can be bio-filters or bio-loading.



## Sewage or centralized drainage system.

The most modern and the safest way for the consumer is, of course, to connect to the centralized water and waste disposal system or the sewage system. The use of a sewage systems and central water and waste disposal systems contribute to reducing the risk of the water-borne infectious diseases from spreading. The centralized water and waste disposal system was preceded by the invention of a modern toilet bowl. It's peculiarity was the presence of a siphon tube – that curved tube that allows to hold a water "stopper" inside the toilet bowl, which prevents sewage smell from coming out into the house.



# Standards for toilets: What do the laws cover on toilets?

## CESSPOOL

SanPiN (СанПиН) 42-128-4690-88 "Sanitary rules for maintaining territories of populated areas" (approved by the Ministry of Health of USSR 5 August 1988 г. N 4690-88)

- distance from living facilities, children's institutions, schools, playgrounds and recreation areas for the population to the toilets must be at least **20** metres, but not more than **100** metres.



- on the territory of the private houses this distance can be reduced to **8-10** meters.



- if there is no centralized water supply in your area, and drinking water is used from wells, individual manual pumping stations and springs, then toilets must be built at a distance of not less than **50** meters from these sources of drinking water.



- outside toilet premises should be kept clean. Cleaning should be undertaken on a daily basis.

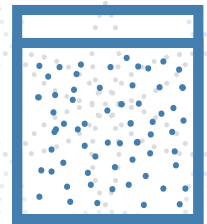


## SEPTIC

### SNiP RT (MKC ЧТ) 40.02-2009 Construction rules and regulations «Drainage. Outdoor Networks and Structures»

Based on these standards the following factors need to be considered in choosing construction areas.

- if possible, it is better to plan the installation of a septic tank in the area where the soil is soft. This will make the digging work easier, and this is important, especially if the work is planned to be done manually



- it is important to remember that the distance to the foundation of any constructions should not be less than a metre. This is necessary to ensure that in case of the septic tank leakage the foundation settlement was not under the risk of damage.



- the sections should be emptied from solids time to time. Hence, while constructing the septic it is necessary to make sure that waste cleaning machines can have access to it



## SEWAGE SYSTEM

Equip yourself with two main standards:

- **SNiP 2.04.01-85\* Construction rules and regulations «Indoor water pipe and building's sewage system».** SNiP 2.04.01-85\* regulates the technical parameters of the internal infrastructure of the water supply and sewage system of the buildings. The second part of this SNiP, sections 15 to 21 discussed various technical regulation of projection and construction of internal sewage systems.
- **SNiP RT (MKC ЧТ) 40.02-2009 Construction rules and regulations «Drainage systems. Outdoor networks and constructions».** SNiP was approved by the decision of the Director of the Agency on Construction and Architecture under the Government of RT on 16 August 2010, registered by the Ministry of Justice on 1 April 2011, № 604 .

### Within these standards:

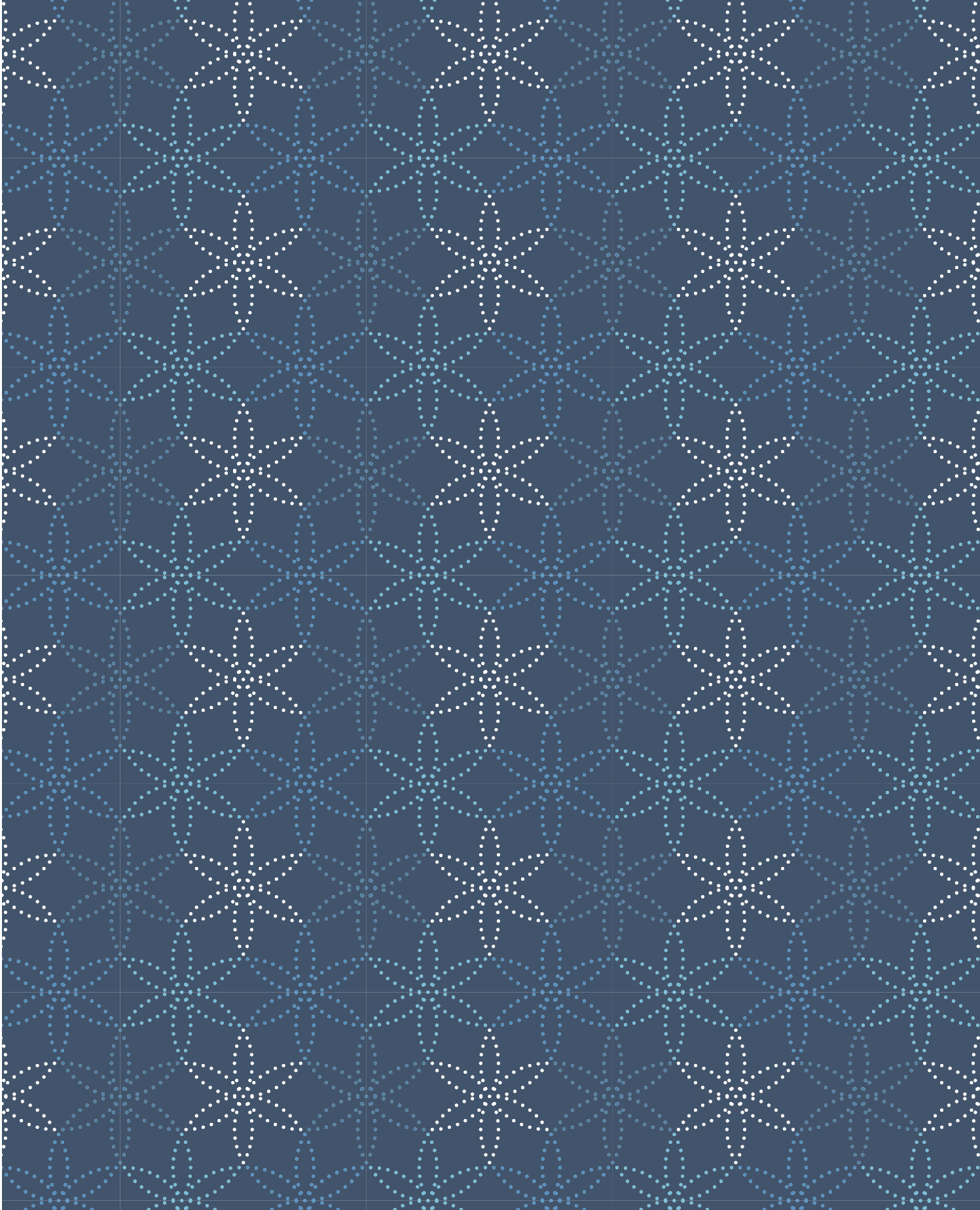
- Annex № 70 to SNiP 40.02-2009 contains related terminology and their definitions. Along with other definitions there is a term «drainage», or sewage that means **«a complex of engineering structures (pipelines, pumping stations waste cleaning facilities and sanitary devices, standpipes, etc.), that serves to receive, collect**



and diverse the sewage from the settlement areas, industrial enterprises and other facilities, as well ensures their cleaning and neutralization before disposal or discharge into the water»

- **The SNIP 40.02-2009** and its section 2, paragraph 19 also contains explanations of the norms of water and waste drainage (specific average daily water and waste disposal). This paragraph refers to Annex 3, which sets out the following norms: 350 dm<sup>3</sup> per day for residents of the cities (per resident) , and 125 dm<sup>3</sup> for rural settlements. The same as in the drinking water supply system, this norm is used in the projection, construction and reconstruction of sewage and water and waste disposal systems. Consequently, the systems must be in proper condition in order to process the mentioned amount of water for diversion.





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