Republic of Rwanda
City of Kigali

AN EMPTIABLE LATRINE

A latrine that is appropriate for our City

Instructions for construction

September 2023

water for people
RWANDA

unicef
kuri buri mwana

FOREWORD

This booklet has been developed with the aim of giving guidance to the residents of the City of Kigali on how to build their own improved and emptiable latrines. Emptiable latrines will support in addressing different negative effects related to poor hygiene in the communities and environmental pollution.

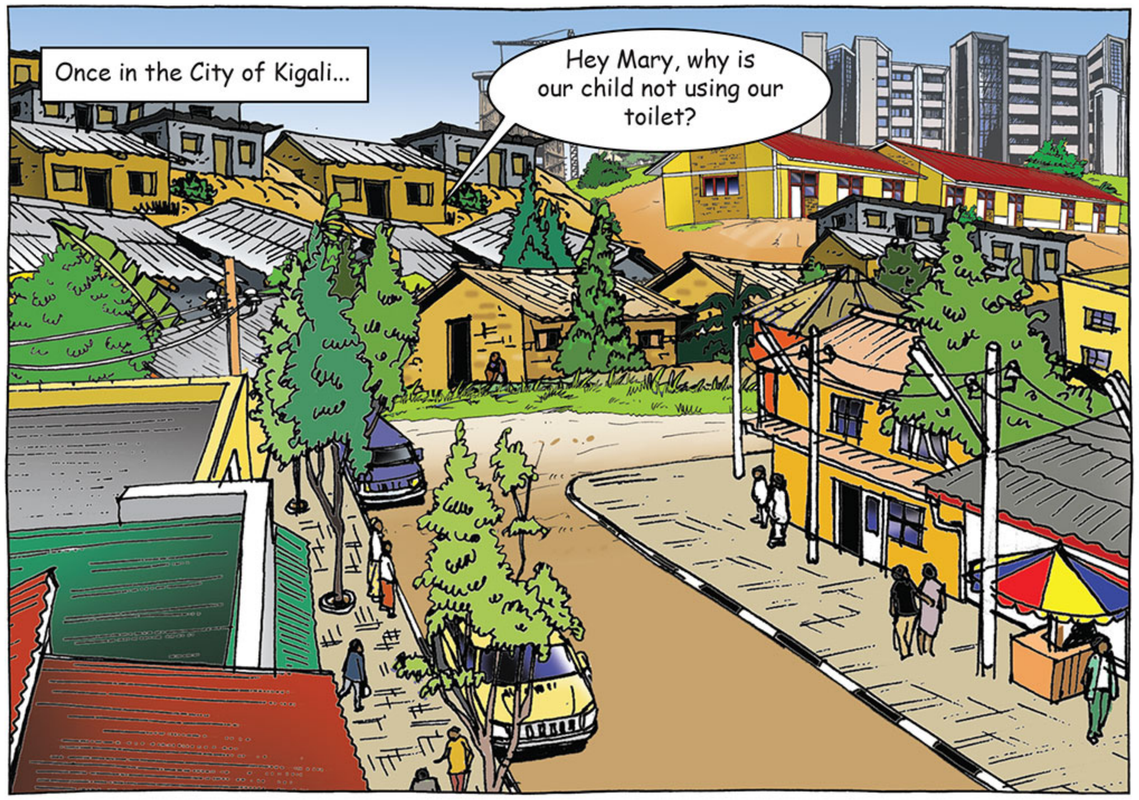
This booklet provides detailed explanations of construction techniques and advises community members on building improved and affordable emptiable latrines that are suitable for the City of Kigali. Most households in the City of Kigali use ordinary pit latrines. These ordinary pit latrines are generally constructed in such a way that they are difficult to empty, and you will often find that they must be damaged when the toilet is full and needs emptying.

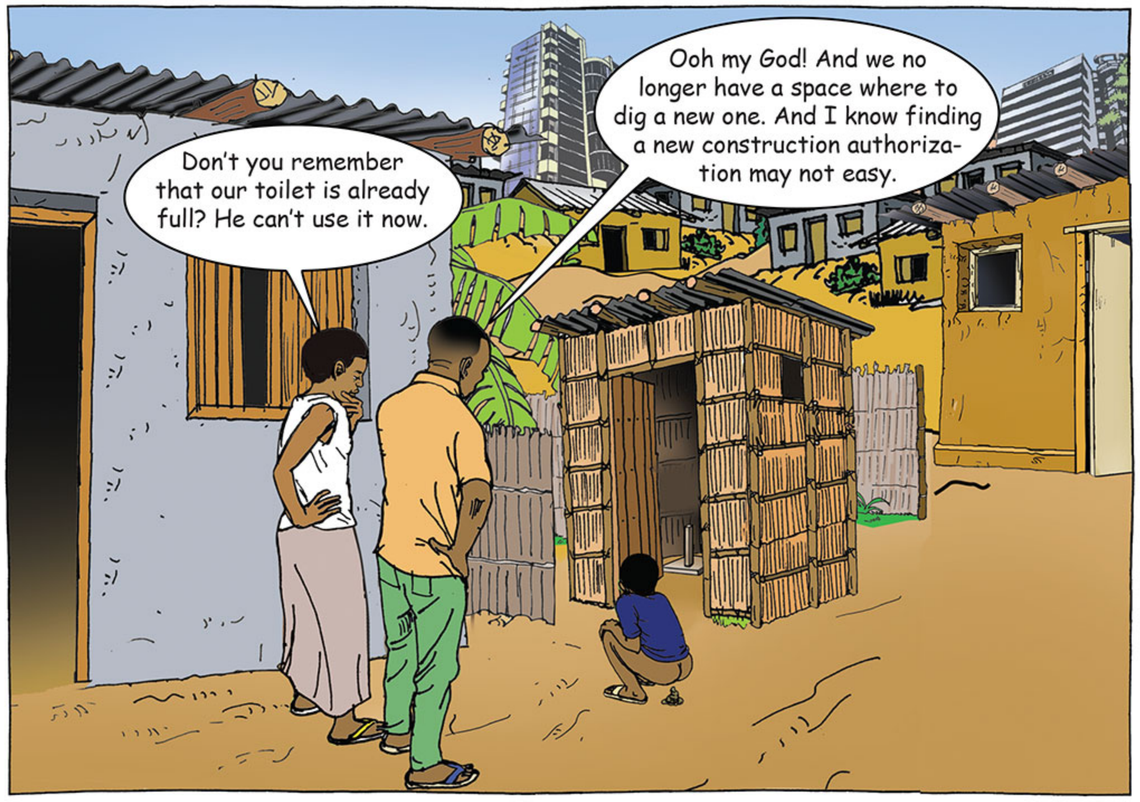
The proposed new emptiable latrines come as a solution to the problem of potential ground water pollution and to the challenges of land scarcity mainly in informal settlements of the urban communities of the City of Kigali. Therefore, every resident of the City of Kigali is encouraged to build an improved latrine that can easily be emptied contributing to a safely managed sanitation in the city.

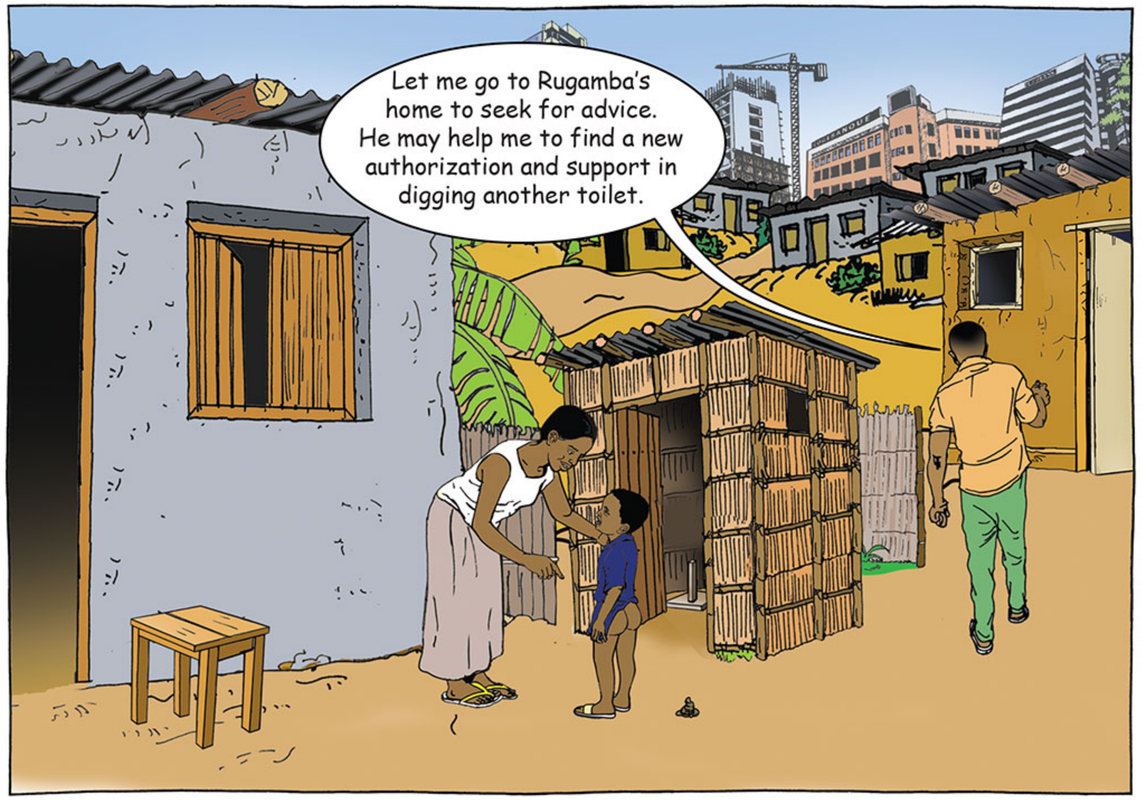
The sanitation achievement will be possible if each household upgrades or constructs an improved emptiable latrine that meets all requirements. The support of government, households, development partners and private sector is key for our sanitation targets. Behaviour change and communication is also vital.

The city of Kigali requires whoever reads this booklet to share this information with others especially those living in densely populated areas, where latrines cause the problem of overflowing quickly. This booklet will be distributed for free starting September 2023.

Wishing you a healthy life.


Once in the City of Kigali...
Hey Mary, why is our child not using our toilet?


Don't you remember that our toilet is already full? He can't use it now.
Ooh my God! And we no longer have a space where to dig a new one. And I know finding a new construction authorization may not easy.


Let me go to Rugamba's home to seek for advice. He may help me to find a new authorization and support in digging another toilet.

Hello Everyone!
Welcome to our home dear Mugabo. Is everything okay? You look stressed.

Mugabo immediately took a seat...
My pit latrine is full, and I don't have enough space at home to dig a new one!

Even though I find some space to dig a new one, I am not sure if in the next time will be able to get a new construction permit.

Oooh that'no longer a problem. Our authorities thought about better solutions to your problem.

Could you please show him the new emptiable latrines technology proposed by the City of Kigali.

Rugamba immediately accompanied Mugabo to his new toilet...

The good thing is that it does not require water for flushing. And once the pit is full, you just need to call the emptying service provider.

This is really wonderful.

Look, this new emptiable latrine technology is called: **"SAFI DRY"**. It has a covered hole on the slab behind the house that make the emptying easy.

You only need to remove this cover; the emptying machine starts its work.

The emptying machines are operated with well skilled and equipped service providers...

Even though the Household is not located near the road, there are different technologies that can perform the emptying services...

This is the PVC ventilation pipe behind the toilet superstructure.

If you look from the inside, there is a slab with a squatting plate. Always remember to have a cleansing material.

It is advised to always have a hand washing facility outside each toilet...

This is how you proceed when constructing the SAFI Dry Latrine...

By the time you are digging the pit, let me proceed with the preparation of where to put the slab.

1m

1m

75 cm

Please, remember not to dig beyond six meters of depth.

6 m

1 m

In case you face one of these obstacles, you are advised to dig new pit...

Some soils are too sandy to dig with collapsing risks....

In some places you can reach the underground water before reaching the 6m: Dig a new pit...

Some soil is too rocky to dig 6 meters: For this case you would increase the diameter of the pit...

Unfortunately, I can't go beyond 2 meters. Let me look for a better place.

Once there are no obstacles in the 6 meters depth, it is recommended to line the pit bottom with bricks and cement mixed with sand...

6 m

1 m

The pit should be lined from the bottom to the top, to avoid collapsing risks and potential groundwater contamination...

For those with increased financial capabilities, it is advised to use concrete or cement lining....

1m

6 m

The pit must be covered by a light concrete slab having three different holes:...

The hole for the ventilation pipe

An emptying hole

A spatting hole with the feet indications

The emptying hole cover made from cement.

In case the slab in made from light concrete, while the other parts are made of bricks....

All the parts can also be made from light concrete and cement...

Once the slab is fixed, the next step is to construct the superstructure using durable materials like bricks or cement blocks...

1,50 m

0,70 m

0,75 m

2,10 m

0,50 m

2,80 m

After completion of Mugabo's new toilet...

Hi Mugabo, I have heard the good news from the neighbours that you have just completed a new emptiable latrine.

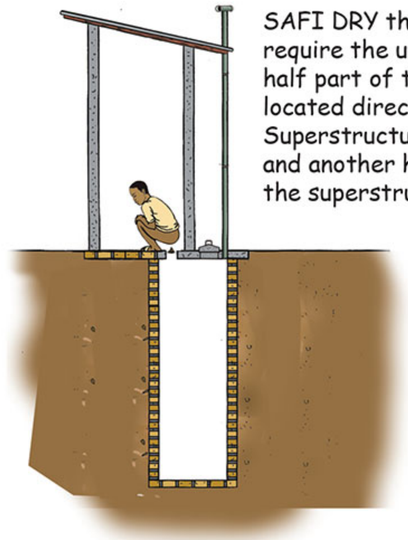
Hi Khalim, welcome to our home.

Mugabo proudly explained to his neighbour Khalim about the new latrine technology...

this technology is good. But on my side, I always need water in the latrine.

There is another emptiable latrine that I can recommend. It is also noy expensive. The technology is called: **SAFI WET**...

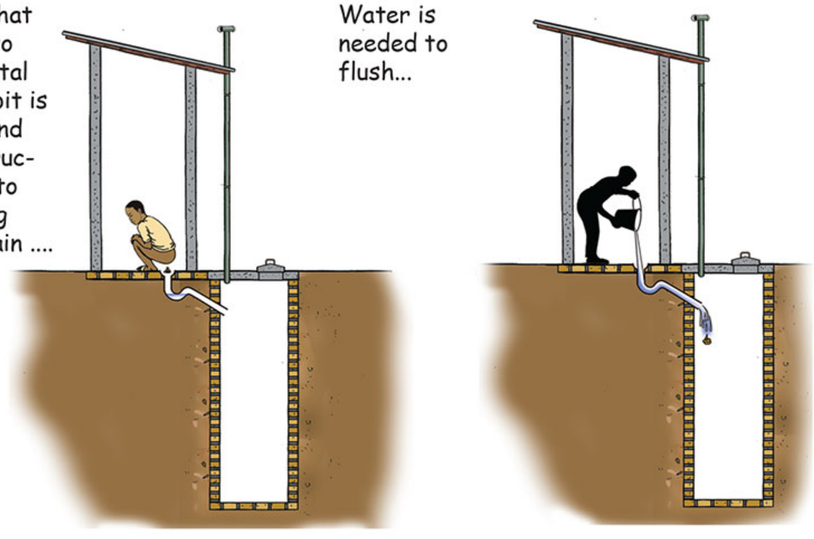
Here is the difference between SAFI DRY and SAFI WET...



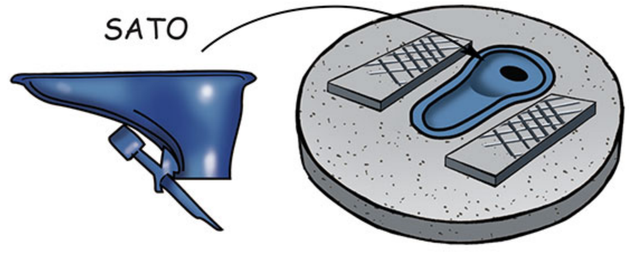
SAFI DRY that does not require the use of water, half part of the pit is located directly under the Superstructure (the house) and another half is behind the superstructure...

SAFI Wet that used water to flush, the total part of the pit is located behind the superstruc-ture, linked to the squatting hole by a drain ....

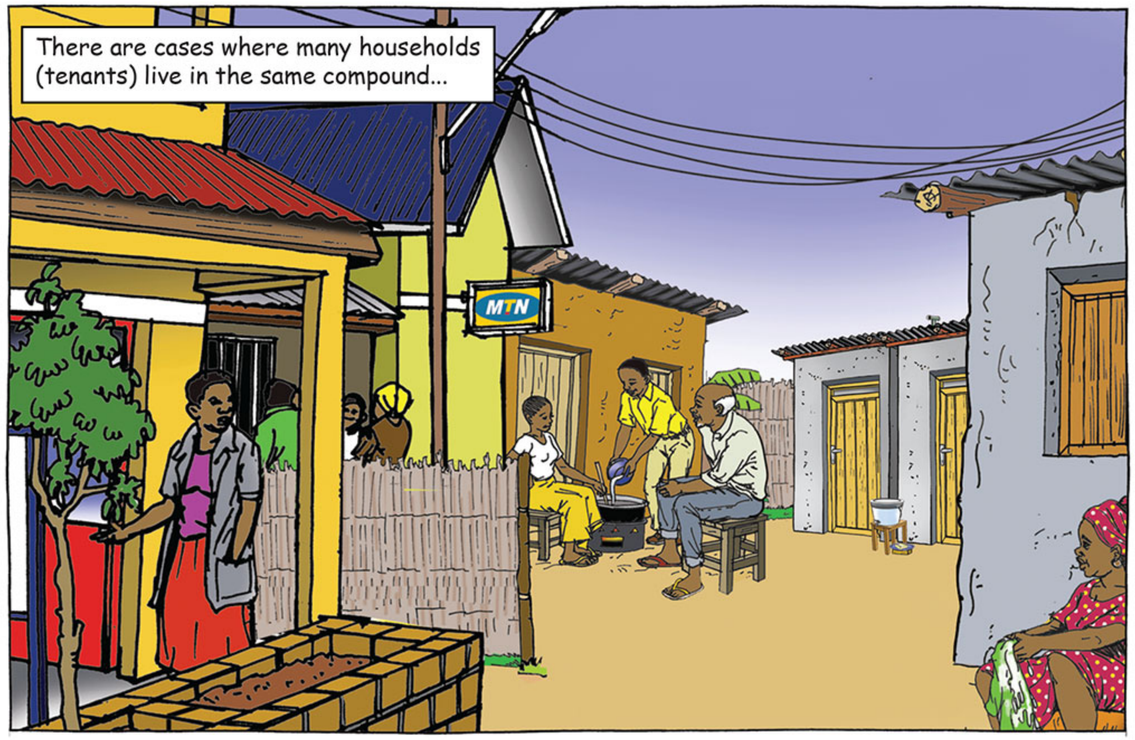
Water is needed to flush...



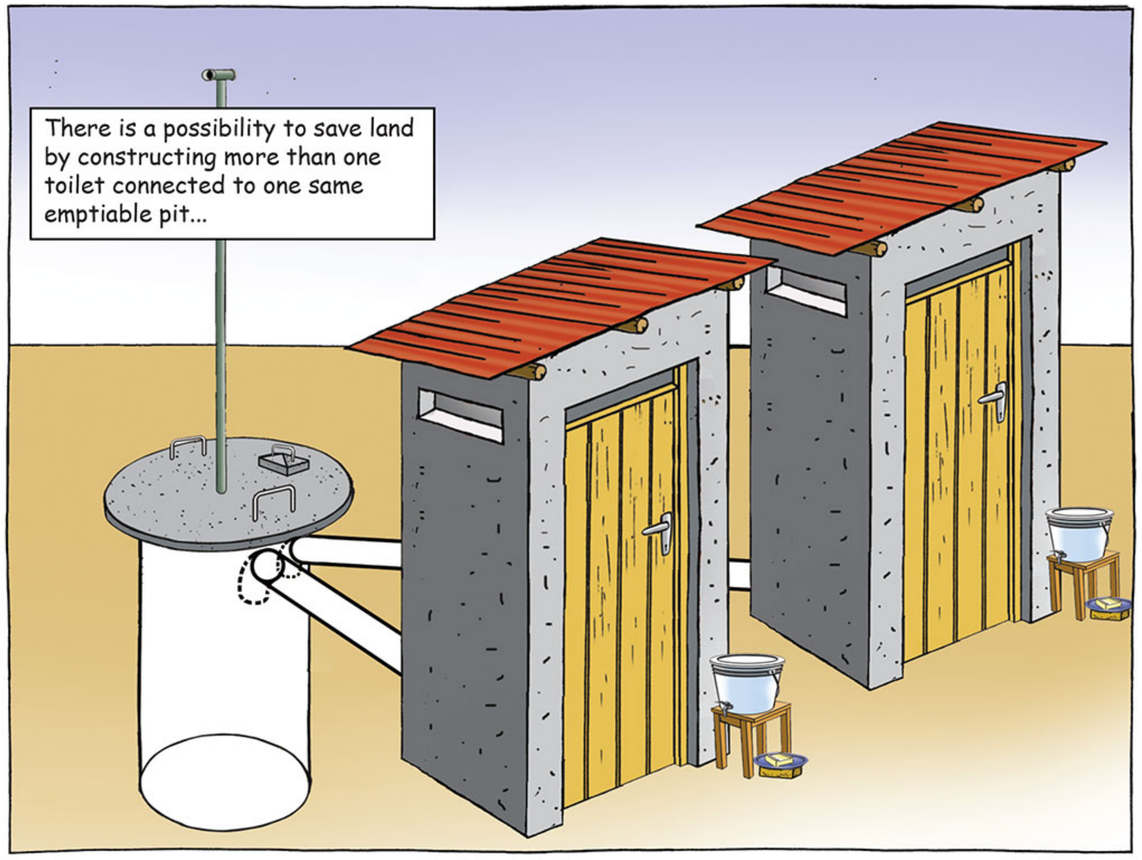
For SAFI WET, the slab should have a SATO Pan at the squatting hole....



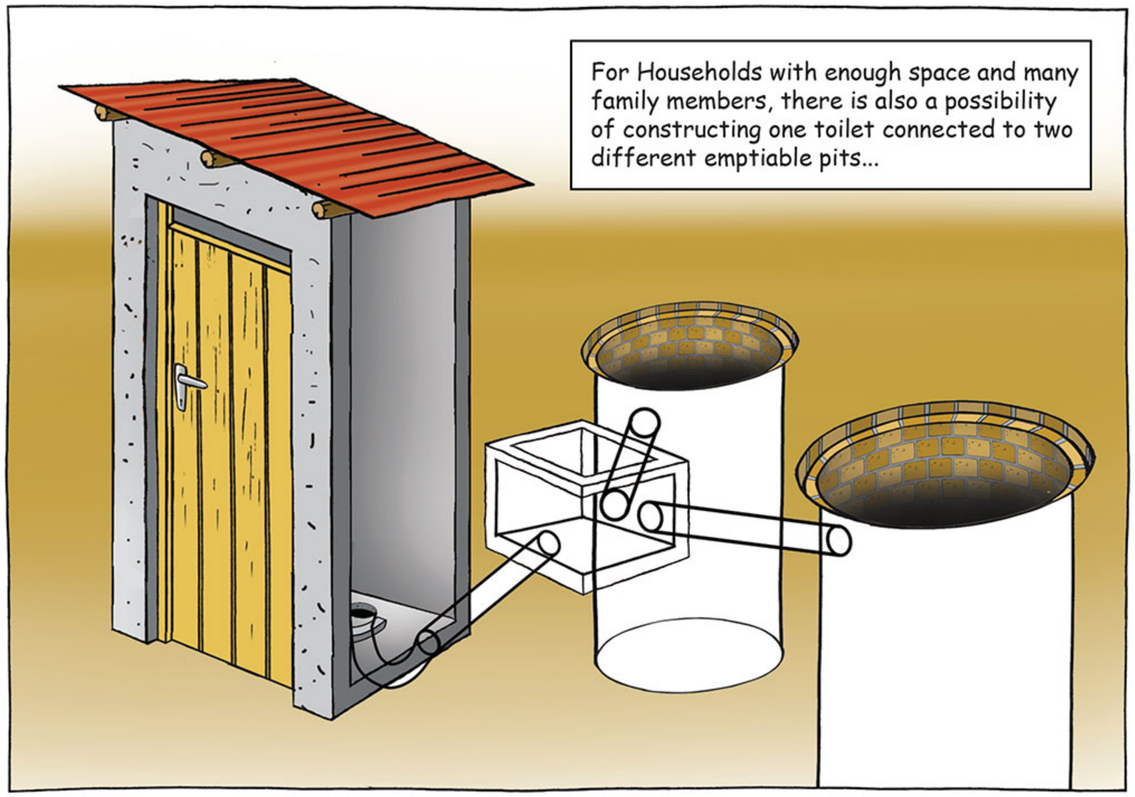
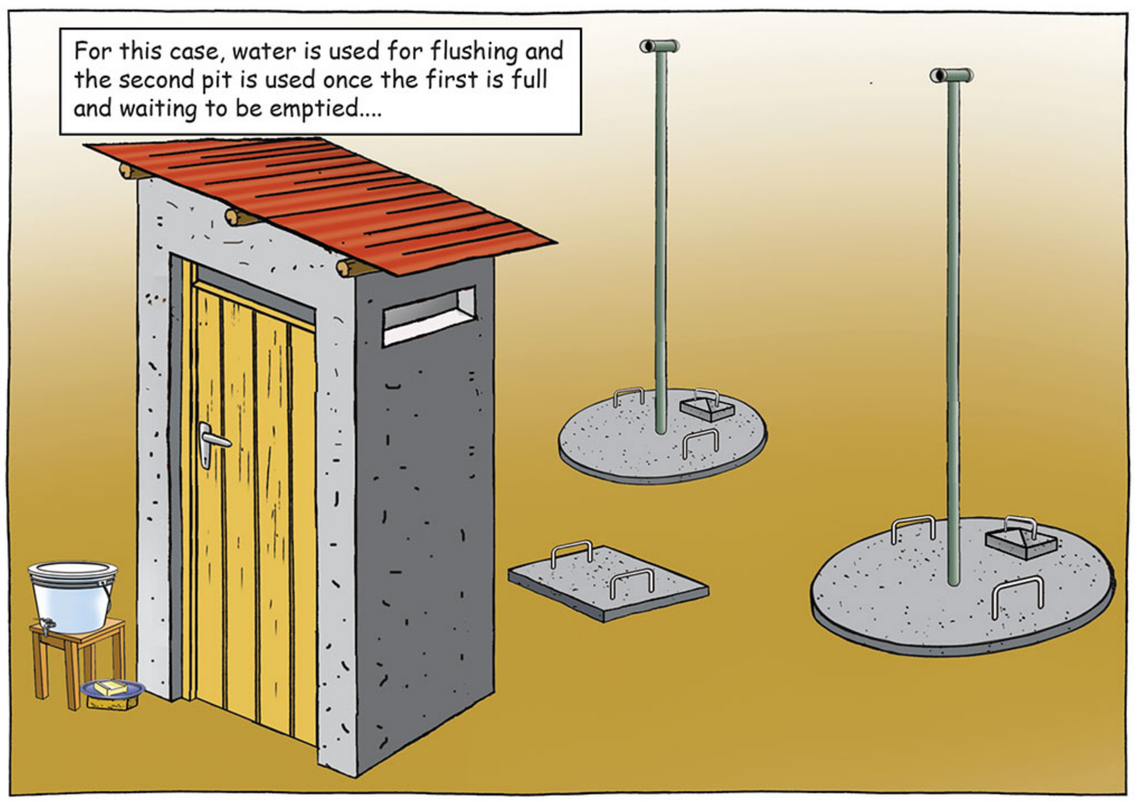
There are cases where many households (tenants) live in the same compound...



There is a possibility to save land by constructing more than one toilet connected to one same emptiable pit...



For Households with enough space and many family members, there is also a possibility of constructing one toilet connected to two different emptiable pits...



For this case, water is used for flushing and the second pit is used once the first is full and waiting to be emptied....