

Factsheet on Sanitation and Hygiene Practices in Yei Municipality



Background

In March 2015, a household sanitation survey in Yei was carried out within the framework of the GIZ Development of the Urban Water and Sanitation Sub-Sector in South Sudan (GIZ DUWSS) Programme. Applying a random cluster sample method, quantitative data was collected from a total of 1,284 households within the urban boundaries of Yei. The sample size covered approx. 4% of the urban population in Yei.

On behalf of BMZ, GIZ has been active in the water sector since 2006. Today GIZ (and KfW) assist the national and local administrative structures with the implementation of programmes with the objective to improve access to clean drinking water and sanitation services for the urban poor.

This factsheet summarizes the main information on water, sanitation and hygiene practices in Yei.

Survey results in brief

Socio-economic findings



- The average household size in Yei is 7.4. This is slightly higher than the national urban average of 7.1.
- On average, there is only one household per plot.
- 97% of the households in Yei are Christian.
- Men and women (including boys and girls) are equally represented within the households.
- 25% of all households are headed by a woman.
- 85% of the households in Yei own at least one mobile phone.

- More than 70% of the households have been staying on their plot for at least 4 years.
- Nearly 90% of the households stated that they will stay in Yei for the foreseeable future and have no plans to leave their plot or Yei.

Sanitation



- 35% of the households use improved, and
- 59% of the households use unimproved sanitation.
- The majority of households use traditional pit latrines (mud floor).
- On average 8.2 people are sharing one toilet.
- 76% of the households have their own toilets.
- 47% of the households share their own toilet with other households/individuals.
- 40% of the households are not satisfied with the toilet they use.

Water



- Households in Yei use multiple sources to satisfy their demand.
- Hand pumps are the most common source for drinking and cooking water. 40% of the households get at least part of their drinking and cooking water from private and public hand pumps.
- 62% of the households stated that they use some kind of improved water source.
- 86% of the households in Yei pay for (at least part of) their drinking and cooking water.
- There is a lack of regulation/control of water vendors/resellers.

Hygiene and health



- Only 4% of the households have access to a hand washing facility in close proximity to their toilet.
- Self-reported hand-washing rates appear to be highly exaggerated.
- Most people in Yei use dry (partly bulky) materials to clean themselves after using the toilet.

Water supply, health and hygiene practices



Water supply

- Households in Yei use multiple water sources to satisfy their demand. 40% of the households get at least part of their drinking and cooking water from private and public hand pumps.
- 62% of the households stated that they use some kind of improved water source. However, the proportional consumption of water from different water source could not be evaluated. Nor it is known if households mix water from improved and unimproved sources during storage at home.
- Water purchased from water vendors is considered an unimproved source, even many of the frequent water kiosks of YTWSS or the public hand pumps in Yei. Due to their informal business character the vendors are not regulated and/or controlled and thus the quality of the water provided by them cannot be assured.
- 86% of the households in Yei pay for (at least part of) their drinking and cooking water.

Hygiene behaviour

Experience suggests that when being asked a “behavioral question” people tend to give socially acceptable answers. Therefore, self-reported rates are considered unreliable assessing actual hand washing practices. Proxy indicators such as the presence of hand washing facilities (HWF), and water and soap at the HWF, are regarded more appropriate to establish the actual hand washing practices of households:

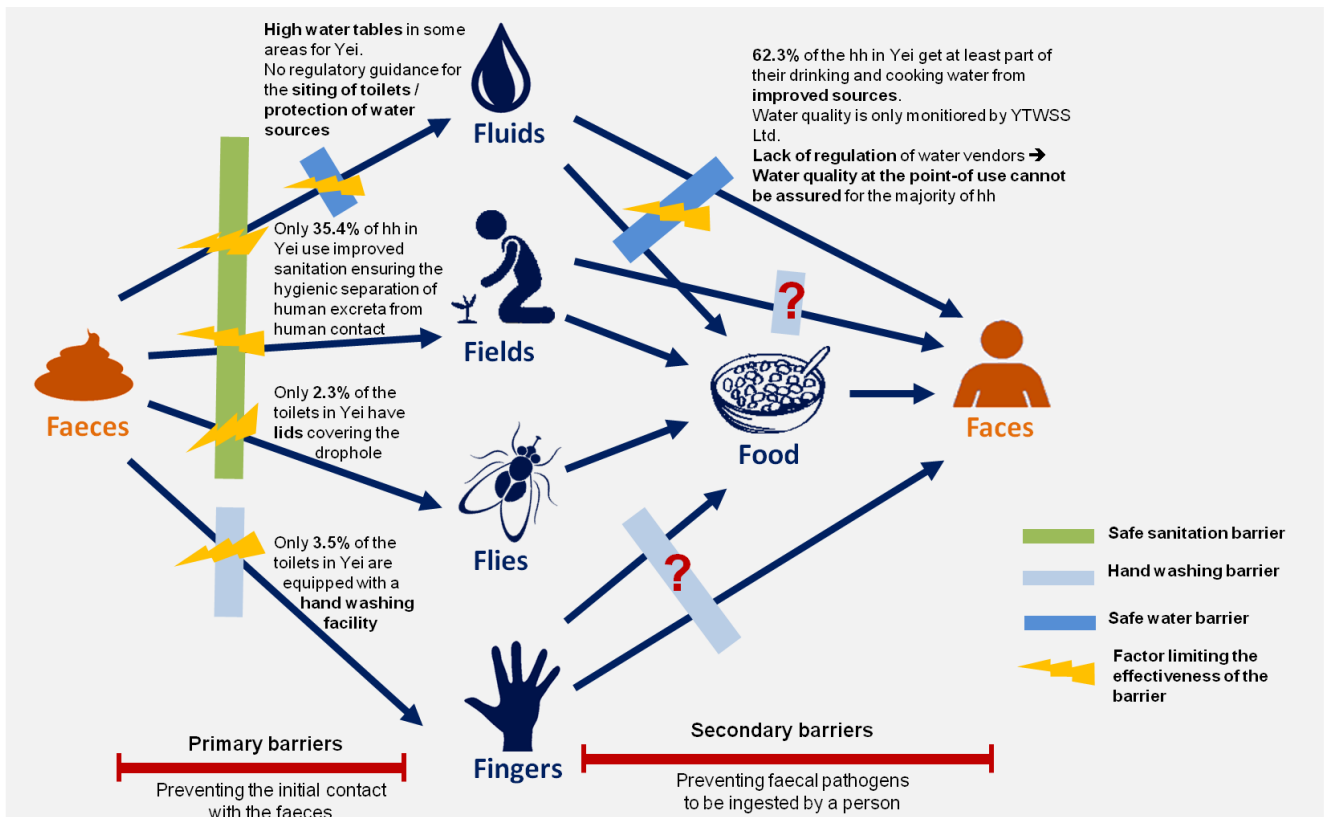
- 86% of the respondents claimed that they would wash their hands after using the toilet.
- However, only 3.5% of the toilets assessed during the household survey were equipped with a HWF.
- Soap for washing the hands after toilet use was only provided in about 3% of the assessed households.

Health

The population in Yei town has been exposed to several cholera outbreaks in the past decade. Diarrhoeal diseases are a permanent problem.

While it is evident that improved water supply, sanitation and hygiene break the faecal-oral transmission route of many diseases, a number of factors influence the degree to which disease protection is provided.

For Yei, the results of the household survey suggest several factors that weaken the potential of the transmission barriers: Safe water, improved sanitation and hand washing (see below).



Sanitation practices

Number of people per toilet



On average, **8.2** people share one toilet in Yei. This figure is higher than the average household size and average number of people per plot. Men and women commonly use the same toilet.

Sharing of toilets

- 23% of the households in Yei do not have their own toilet and sharing of household toilets is very common.
- Almost half (47%) of the households who have their own toilet share their facility with other households or individuals.
- Charging money for the use of private toilets is not a common practice in Yei.

Types of toilets used

- Only around 35% of the households in Yei use improved sanitation facilities while 59% use traditional pit latrines with a mud floor.
- Water based systems (flush toilets or pour flush toilets) are used by less than 1% of the households in Yei .
- Open defecation is not common in Yei.

Table 1: Toilet types currently used

Improved sanitation facility			Unimproved sanitation facility		
	No.	%		No.	%
Flush toilet connected to septic tank	5	0.4	Traditional pit latrine (mud floor)	766	58.7
Pit latrine with cement slab	349	26.7	Plastic bag	1	0.1
VIP	104	7.9	Open defecation	3	0.2
Pour flush toilet	4	0.3	Total	769	59.0
Total	462	35.4	Unspecific	74	5.7

User satisfaction

- Around 40% of the households are not satisfied with the toilet they currently use (which might be their own facility or a toilet shared with another household).
- Toilet owners tend to be more satisfied with the sanitation facility they are using than non-owners.
- Approximately 47% of all households using a traditional latrine with mud floor are either “dissatisfied” or “very dissatisfied” whilst only around 30% of all users of pit latrines with cement slabs expressed dissatisfaction with their toilet.

Emptying of toilets

- Emptying of household latrines is not common in Yei. Only about 7% of the households empty their sanitation facility. 75% of the households construct a new sanitation facility if the old one fills up.



Preferred toilet types / construction materials

- Over 80% of the households with a concrete intention to construct a new toilet and over 75% of all households opt for the construction of an improved sanitation facility.
- A latrine with a cement slab was the preferred latrine type for the majority of both groups.
- Households explain their choice with reasons of convenience of use and maintenance as well as durability, affordability and improved hygiene.

- People in Yei prefer durable materials for toilet construction.
- The preferred material for roofing for 88% of the households is iron sheets.
- For the walls households in Yei prefer burnt bricks and for the floor cement slabs.

Challenges for toilet construction & maintenance

- The most commonly faced technical problems for the construction of an on-site sanitation facility in Yei are (i) rocky soils, (ii) high water tables and (iii) sandy soils. Toilet solutions therefore need to include options that minimize the infiltration into the ground, are durable in unstable soils and minimize the effort of digging deep pits in hard soils.
- As common problems with their current toilets households complained about poor roofing, destruction of the toilet by termites, collapsing of the pit due to heavy rains or the entire structure due to poor construction quality.
- Lack of financial resources is the most common non-technical challenge for toilet construction.
- There is a supply gap with regard to pit / septic tank emptying services in Yei. Less than 5% of the respondents are aware of emptying services operating in the area on a regular or irregular basis.

Test construction of different household sanitation technologies in Yei



The results of the household sanitation survey show a clear demand for improved household sanitation in Yei. Therefore, the GIZ Development of the Urban Water and Sanitation Sub-Sector (DUWSS) Programme considers piloting a household sanitation programme in Yei with the objective of providing sustainable sanitation for the people in Yei.

urban area in a demand responsive manner In March/April 2015, as a precursor to this potential future pilot programme, test / demonstration toilets were constructed with the aim to support the preparation of a workable sanitation implementation concept.

Technology selection

For the test construction different technologies have been selected according to the following selection criteria:

- Suitable for areas without piped water supply;
- On-site solutions;
- Suitable for (peri-)urban settings;
- Different levels of improved toilets (in accordance with the sanitation ladder approach).

In accordance to these selection criteria the following technology solutions were selected for the testing construction:

- Double Vault Ventilated Improved Pit Latrines (DV-VIP);
- Urine Diversion Dehydrating Toilets (UDDT); and
- Pour Flush toilets connected to a cesspit.

For the DV-VIP latrines four different superstructure options (bamboo, timber, wood and concrete) were tested.



Selection of test sites and households

In order to limited the logistic effort it was decided that the testing construction should take place in a maximum of three areas within Yei.



After consultation with representatives from the Yei Town Block administration, it was decided that only areas where plots have already been demarcated would be considered. Finally Lomuku 1, Hai Thatcher and Jigomoni were selected as areas for the testing construction.

The households for the testing construction were selected in close consultation with the local leaders in the selected urban areas. Strong emphasis was put on selecting vulnerable households with urgent need for improved sanitation. The households were sensitized about the O&M requirements of their future toilet.

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