Timely emptying, scheduled emptying, or no emptying at all
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SNV

We were founded in 1965

We work in 30+ countries across three continents

In 2017 we implemented 180 projects

We focus on 3 sectors which are fundamental to human development

With annual turnover of 110 million Euros

With a global team of over 1200 experts

87% of our professionals are nationals of the country in which they work
Urban sanitation and hygiene for health and development

City-wide approach in 20 cities across 5 countries

Populations from 20,000-1,2 million

A total of 6 million people
Background

April 2018 baseline in 16 cities, only four (4) cities with partial sewer

Household survey sample
- 17,254 households
- 95% on-site sanitation

When do we consider something “safely managed” if pits/tanks are not emptied?
Annual use rate of services

What percentage of households (and other premises) use the service in any given year?

How does this translate into volume? (Seasonality?)

What are the implications for the organisation of the service?

<table>
<thead>
<tr>
<th>/Emptying Frequency (years)</th>
<th>1</th>
<th>2</th>
<th>4</th>
<th>5</th>
<th>10</th>
<th>Never</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equivalent annual use rate</td>
<td>1</td>
<td>0.5</td>
<td>0.25</td>
<td>0.2</td>
<td>0.1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Number of premises</td>
<td>5</td>
<td>10</td>
<td>10</td>
<td>20</td>
<td>15</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td>Actual annual use = annual use rate x number of premises</td>
<td>5</td>
<td>5</td>
<td>2.5</td>
<td>4</td>
<td>1.5</td>
<td>0</td>
<td>18</td>
</tr>
</tbody>
</table>
Demand for emptying is low

Legend: BA-Bangladesh | ID-Indonesia | NP-Nepal | TZ-Tanzania | ZA-Zambia
Does this mean that the remaining 82% is safely managed?

To what extent is the response from households sufficient?

What other options do we have to determine whether this is safely managed?
Emergency emptying: the other side of the coin

- Ad-hoc service delivery
- Non-functional/ polluting containments

Figures, Mills, F. 2013.
Consumer behaviour

Emergency emptying

Magic toilets (designs/ construction that you never need to empty)

No need to consider solid waste in pits

Illegal discharge
Could the concept of “timely emptying” help?

Not emptied?

Toilet age < timely emptying threshold = safer

Toilet age > timely emptying threshold = unsafe
Could the concept of “timely emptying” help?

And what are the options to define timely emptying intervals?

1. Each individual premises?
2. Flat interval? (3 years, 5 years, 10 years…)?
3. The imperfect middle way by country or zone?
   - Average household size (or users*)
   - Share factor
   - Type of containment (linked to accumulation rate)
   - Typical dimensions & volume of containment
   - Disposal of solid waste in the toilet
If all “timely emptied”, the annual use rate would be 24%
Limitations of the imperfect middle way

Reliability of user response on type of containment and age

Internal variability of containment dimensions and design

Lack of data about the quality of containment

Accumulation rates – value, decrease over time?

What level of sludge in a septic tank is acceptable before emptying?
Reflection

Timely emptying should be part of the analytical approaches determining the need for services. This will help to:

- Assess the extent of safely managed sanitation in a city
- Design desludging models
- Ultimately enforce timely emptying
Scheduled emptying services as an entry point for change

"The paper describes approaches to developing scheduled emptying services in Bangladesh, Indonesia and Nepal. It highlights evidence-based decision-making processes in urban sanitation programming in each country, offering insights to the complexities surrounding improving sanitation services in urban settings."

https://interactive.snv.org/snv-rural-sanitation-publications