

# Fecal Sludge Management Tools Data Collection Instruments

November, 2016



The Water and Sanitation Program is a multi-donor partnership, part of the World Bank Group's Water Global Practice, supporting poor people in obtaining affordable, safe, and sustainable access to water and sanitation services.



## Annex A Household Survey questionnaire

*[This Annex contains the generic household survey questionnaire used in the five-city study. It was adapted to each city. Certain key questions which will definitely need adaptation are flagged in this annex, with discussion of key things to think about.]*

# Diagnostics for Fecal Sludge Management Services in Urban Areas

## HOUSEHOLD SURVEY

Survey Component	PSU number		HH Number	
1				

Head of Household Name \_\_\_\_\_

Address (Complete) \_\_\_\_\_

\_\_\_\_\_

## A.1 Identification

<b>GPS Coordinates</b>	N <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
	E <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
<b>Respondent Name</b>	Name: _____ <input type="text"/> <input type="text"/>
<b>Contact Number</b>	Landline: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
	Cell: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

## A.2 Consent

Hello. My name is \_\_\_\_\_ and I am from [survey firm]. I am here today to conduct a survey on sanitation. Your household has been randomly selected for this survey. If you are interested to participate in this survey we would ask you some questions on your households, its members and characteristics and on sanitation aspects of your household. The interview would take approximately 60 minutes. The information you will be providing us will be confidential and only the researchers who are involved in this will have access to it. Your participation is absolutely voluntary and you can withdraw from the survey any time you want. You may also choose not to answer any questions. You will not have to pay to participate in this survey; nor will we pay you. You will not directly benefit from this survey, however the information that you will provide us may give some important information to the policy makers to improve the overall water, sanitation and hygiene condition of this country and you may have an indirect benefit from that.

<b>B.1</b>	Do you want to participate in our survey?	Yes..... 1
		No ..... 2

### A.3 Survey Information

<b>C.1 Interviewer</b>	Name _____ Code <input type="text"/> <input type="text"/> Signature _____
<b>C.2 Date of Interview</b>	Day <input type="text"/> <input type="text"/> Month <input type="text"/> <input type="text"/> Year <b>2014</b>
<b>C.3 Interview Start Time</b>	In 24 Hours Format ____:____
<b>C.4 Supervisor</b>	Name _____ Code <input type="text"/> <input type="text"/> Signature _____
<b>C.5 Data Editor</b>	Name _____ Code <input type="text"/> <input type="text"/>
<b>C.6 Data Editing Date</b>	Day <input type="text"/> <input type="text"/> Month <input type="text"/> <input type="text"/> Year <b>2014</b>
<b>C.7 Data Entry</b>	Name _____ CODE <input type="text"/> <input type="text"/>
<b>C.8 Data Entry Date</b>	Day <input type="text"/> <input type="text"/> Month <input type="text"/> <input type="text"/> Year <b>2014</b>

**D – Household members**

1. Please list the people who usually live and eat in your household and their ages, starting from the youngest child.

age	Number of persons
<1	
1-5	
5-15	
15-50	
>50	

2. What is the gender of the household head?
- a. Male – the respondent is head
  - b. Male – not the respondent
  - c. Female – the respondent is head
  - d. Female – not the respondent
3. What is the highest level of education of the household head?
- a. No formal education 00
  - b. Class 1 01
  - c. Class 2 02
  - d. Class 3 03
  - e. Class 4 04
  - f. Class 5 05
  - g. Class 6 06
  - h. Class 7 07
  - i. Class 8 08
  - j. Class 9 09
  - k. Class 10 10
  - l. Class 12 12
  - m. Graduate 13
  - n. Masters 16
  - o. Don't know 98

4. (*Enumerator explains what diarrhoea is, using local terms*) Have children under five in the household had diarrhoea in the past 2 weeks?

#	Circle answer		
Child A	Yes	No	n/a
Child B	Yes	No	n/a
Child C	Yes	No	n/a
Child D	Yes	No	n/a

5. For any of these occurrences of diarrhoea in children in the last 2 weeks, did you seek advice or treatment from any source?
  - Yes, hospital or health centre
  - Yes, shop or pharmacy
  - Yes, traditional healer
  - No
  
6. (*Enumerator explains what an episode is*) Have you yourself had any episodes of diarrhoea in the past 2 weeks?
  - None
  - One
  - Two
  - Three
  - More than three
  
7. How much did you spend in total on treatment for diarrhoea for all household members during the last 2 weeks, in each of these categories?

	Fees	Medicines	Transport to facility
Expenditure in local currency			

8. Do you consider that any household members have disabilities?
  - a. Yes
  - b. No --> skip
  
9. How would you describe the main disability of the most disabled household member?
  - c. 01 = Hearing impairment
  - d. 02 = Deafness
  - e. 03 = Visual impairment
  - f. 04 = Blindness
  - g. 05 = Mobility Impairment
  - h. 06 = Housebound
  - i. 07 = Upper Limb Impairment
  - j. 08 = Speech Impairment
  - k. 09 = Learning Difficulties
  - l. 10 = Mental Impairment

**E - Household Characteristics**

*[Many of these variables in this section are used in the construction of a wealth index (i.e. wealth quintiles) if such an analysis is required. The variables used in the most recent Demographic and Health Survey should be taken as a guide, and the same methodology ideally followed as the gold standard.]*

<b>E 01</b>	How many rooms in this household are used for sleeping?	<div style="text-align: center;"> <input style="width: 30px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 30px; height: 20px; border: 1px solid black;" type="text"/> </div> <p style="text-align: center;"><b>Enter the Number of Rooms that are used for Sleeping</b></p>
<b>E 02</b>	What kind of building does the household occupy?	private residence (single-storey) ..... 1 private residence (multi-storey) ..... 2 shared residence (in single-storey building) ..... 3 shared residence ( in multi-storey building) ..... 4 Other (specify) ..... 5
<b>E 03</b>	Is this house/residence owned, rented, rent-free, or mortgaged by a member of the household?	Owned ..... 1 Rented ..... 2 Rent Free ..... 3 Mortgaged ..... 4 Others (Specify) ..... 7
<b>E 04</b>	If rented, how much is the rent, calculated per calendar month? <b>WORK IT OUT IF NECESSARY</b>	<div style="text-align: center;"> <input style="width: 30px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 30px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 30px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 30px; height: 20px; border: 1px solid black;" type="text"/> </div> <p style="text-align: right;">Don't know.....9998</p>
<b>E 05</b>	How long have you/ members of your household been living on this location/plot?	<div style="text-align: center;"> <input style="width: 30px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 30px; height: 20px; border: 1px solid black;" type="text"/> </div> <p style="text-align: center;"><b>Record in Completed Years If under one year write 00</b></p>
<b>E 06</b>	What is the main material of / on the floor in the main room?  <b>RECORD OBSERVATION</b>	Earth/ sand/ mud..... 01 Stone chips in concrete (terrazzo) .. 02 Ceramic tiles ..... 03 Marble ..... 04 Cement ..... 05 Carpet ..... 06 Bricks ..... 07 Mats ..... 08 Others (Specify) ..... 77
<b>E 07</b>	What is the main material of the roof?  <b>RECORD OBSERVATION</b>	Thatch/ bamboo/ wood/ mud ..... 01 Cardboard/ plastic ..... 02 Iron sheets/ asbestos ..... 03 T-iron/ wood/ brick ..... 04 Reinforced brick/ cement ..... 05 Others (Specify) ..... 77

<p><b>E 08</b></p>	<p>What is the main material of the walls?</p> <p><b>RECORD OBSERVATION</b></p>	<p>Mud/ stones ..... 01</p> <p>Bamboo/ stick/ mud..... 02</p> <p>Unbacked bricks/ mud ..... 03</p> <p>Plywood sheets ..... 04</p> <p>Carton/ plastic ..... 05</p> <p>Stone blocks ..... 06</p> <p>Baked bricks ..... 07</p> <p>Cement blocks/ cement..... 08</p> <p>Tent..... 09</p> <p>Others (Specify) ..... 77</p>																																															
<p><b>E 09</b></p>	<p>Does your household have the following?</p>	<table border="1"> <thead> <tr> <th data-bbox="976 586 1347 676">Item</th> <th data-bbox="1347 586 1525 676">Yes.....No</th> </tr> </thead> <tbody> <tr> <td data-bbox="976 676 1347 757">a. Electricity</td> <td data-bbox="1347 676 1525 757">1 .....2</td> </tr> <tr> <td data-bbox="976 757 1347 819">b. Radio</td> <td data-bbox="1347 757 1525 819">1 .....2</td> </tr> <tr> <td data-bbox="976 819 1347 882">c. Television</td> <td data-bbox="1347 819 1525 882">1 .....2</td> </tr> <tr> <td data-bbox="976 882 1347 945">d. Refrigerator</td> <td data-bbox="1347 882 1525 945">1 .....2</td> </tr> <tr> <td data-bbox="976 945 1347 1008">e. Telephone (Landline)</td> <td data-bbox="1347 945 1525 1008">1 .....2</td> </tr> <tr> <td data-bbox="976 1008 1347 1070">f. Room Cooler</td> <td data-bbox="1347 1008 1525 1070">1 .....2</td> </tr> <tr> <td data-bbox="976 1070 1347 1133">g. Air Conditioner</td> <td data-bbox="1347 1070 1525 1133">1 .....2</td> </tr> <tr> <td data-bbox="976 1133 1347 1196">h. Washing Machine</td> <td data-bbox="1347 1133 1525 1196">1 .....2</td> </tr> <tr> <td data-bbox="976 1196 1347 1258">i. Water Pump</td> <td data-bbox="1347 1196 1525 1258">1 .....2</td> </tr> <tr> <td data-bbox="976 1258 1347 1321">j. Bed</td> <td data-bbox="1347 1258 1525 1321">1 .....2</td> </tr> <tr> <td data-bbox="976 1321 1347 1384">k. Chairs</td> <td data-bbox="1347 1321 1525 1384">1 .....2</td> </tr> <tr> <td data-bbox="976 1384 1347 1447">l. Cabinet</td> <td data-bbox="1347 1384 1525 1447">1 .....2</td> </tr> <tr> <td data-bbox="976 1447 1347 1509">m. Clock</td> <td data-bbox="1347 1447 1525 1509">1 .....2</td> </tr> <tr> <td data-bbox="976 1509 1347 1572">n. Sofa</td> <td data-bbox="1347 1509 1525 1572">1 .....2</td> </tr> <tr> <td data-bbox="976 1572 1347 1635">o. Sewing Machine</td> <td data-bbox="1347 1572 1525 1635">1 .....2</td> </tr> <tr> <td data-bbox="976 1635 1347 1697">p. Camera</td> <td data-bbox="1347 1635 1525 1697">1 .....2</td> </tr> <tr> <td data-bbox="976 1697 1347 1760">q. Personal Computer</td> <td data-bbox="1347 1697 1525 1760">1 .....2</td> </tr> <tr> <td data-bbox="976 1760 1347 1823">r. Watch</td> <td data-bbox="1347 1760 1525 1823">1 .....2</td> </tr> <tr> <td data-bbox="976 1823 1347 1886">s. Bicycle</td> <td data-bbox="1347 1823 1525 1886">1 .....2</td> </tr> <tr> <td data-bbox="976 1886 1347 1948">t. Motorcycle / Scooter</td> <td data-bbox="1347 1886 1525 1948">1 .....2</td> </tr> <tr> <td data-bbox="976 1948 1347 2011">u. Animal Drawn Cart</td> <td data-bbox="1347 1948 1525 2011">1 .....2</td> </tr> <tr> <td data-bbox="976 2011 1347 2074">v. Car</td> <td data-bbox="1347 2011 1525 2074">1 .....2</td> </tr> </tbody> </table>	Item	Yes.....No	a. Electricity	1 .....2	b. Radio	1 .....2	c. Television	1 .....2	d. Refrigerator	1 .....2	e. Telephone (Landline)	1 .....2	f. Room Cooler	1 .....2	g. Air Conditioner	1 .....2	h. Washing Machine	1 .....2	i. Water Pump	1 .....2	j. Bed	1 .....2	k. Chairs	1 .....2	l. Cabinet	1 .....2	m. Clock	1 .....2	n. Sofa	1 .....2	o. Sewing Machine	1 .....2	p. Camera	1 .....2	q. Personal Computer	1 .....2	r. Watch	1 .....2	s. Bicycle	1 .....2	t. Motorcycle / Scooter	1 .....2	u. Animal Drawn Cart	1 .....2	v. Car	1 .....2	
Item	Yes.....No																																																
a. Electricity	1 .....2																																																
b. Radio	1 .....2																																																
c. Television	1 .....2																																																
d. Refrigerator	1 .....2																																																
e. Telephone (Landline)	1 .....2																																																
f. Room Cooler	1 .....2																																																
g. Air Conditioner	1 .....2																																																
h. Washing Machine	1 .....2																																																
i. Water Pump	1 .....2																																																
j. Bed	1 .....2																																																
k. Chairs	1 .....2																																																
l. Cabinet	1 .....2																																																
m. Clock	1 .....2																																																
n. Sofa	1 .....2																																																
o. Sewing Machine	1 .....2																																																
p. Camera	1 .....2																																																
q. Personal Computer	1 .....2																																																
r. Watch	1 .....2																																																
s. Bicycle	1 .....2																																																
t. Motorcycle / Scooter	1 .....2																																																
u. Animal Drawn Cart	1 .....2																																																
v. Car	1 .....2																																																



		<b>w.</b> Truck	1 .....2
		<b>x.</b> Boat with Motor	1 .....2
<b>E 10</b>	What type of fuel does your household mainly use for cooking?	Electricity ..... 01 Cylinder gas ..... 02 Natural gas ..... 03 Solar power ..... 04 Biogas ..... 05 Kerosene ..... 06 Charcoal ..... 07 Wood ..... 08 Straw/ Shrubs/ Grass ..... 09 Agricultural crop ..... 10 Animal dung ..... 11 No food cooked in household ..... 12 Others (Specify) ..... 77	
<b>E 11</b>	Does any member of this household have a bank account?	Yes ..... 1 No ..... 2	

## F - Use of water and sanitation infrastructure

1. What is the main source of drinking-water for members of your household?
  - Piped into dwelling
  - Piped to yard/plot
  - Public tap/ standpipe
  - Tube well/ borehole
  - Protected dug well
  - Unprotected dug well
  - Protected spring
  - Unprotected spring
  - Rainwater collection
  - Bottled water /gallon container and dispenser
  - Refilled bottled water
  - Cart with small tank/ drum
  - Tanker-truck
  - Surface Water (river, dam, lake, pond, stream, canal, irrigation channels)
  - Others (specify)

*[F1 should ideally follow the latest guidance of the WHO/UNICEF Joint Monitoring Programme, adapted to the country if necessary but still allowing combination or separation of categories so as to be reconciled to the JMP categories. This is crucial for ease of comparison to other data (e.g. DHS, MICS, census)]*

2. On average, how long does it take to travel to this water point?  
[Record time to travel (one way) to WP in minutes]  
[skipped if on premises]
3. On average, how long do you / the household member have to wait in the queue to get water?  
[Record waiting time in minutes]  
[skipped if on premises]
4. What kind of toilet facility do members of your household usually use?
  - Automatic cistern Flush
  - Pour/manual flush
  - Ventilated improved pit latrine
  - Pit latrine with slab
  - Pit latrine without slab/open pit
  - Composting toilet
  - Bucket
  - Hanging toilet/hanging latrine
  - Others (specify)
  - No facilities or bush or field, --> skip to xx

*[See note on question F1. In addition, skipping patterns are to be devised by the survey designer in each city]*

5. Where do the contents of this toilet discharge to?
  - Piped sewer system
  - Fully-lined septic tank with soakaway
  - Fully-lined septic tank with overflow to drain / open ground / other
  - Partially-lined septic tank (bottom and/or sides unlined)
  - Fully-lined pit
  - Pit with unlined bottom or sides

- Directly to open drain / ditch
- Directly to sea, lake or river
- Directly to open ground
- Others (specify)
- DK

**[F5 is the most crucial question in the survey. It aims to establish two things: (i) whether the technology is “emptiable” (e.g. toilets which discharge directly to drains do not contain excreta and are not emptiable), and (ii) whether the technology safely contains excreta or allows it to leach into the environment via unlined bottom/sides or an overflow. It is highly context-specific as to which categories are seen as acceptable/unacceptable in a given city, depending on many variables (e.g. population density, groundwater levels, whether anyone is drinking groundwater etc.) The categories used will be highly context-specific, depending on the prevalent septic tank or pit technologies in the city. It will be important not to have too many categories, however, to avoid confusing the enumerators, who are unlikely to be sanitation experts. Extensive debate within the study team should take place about how different categories are to be interpreted, with use of pictures, before the enumerators are trained.]**

6. At home, where do you dispose of waste water from kitchen, bathing and/or laundry?
- a. Piped sewer system
  - b. Fully-lined septic tank with soakaway
  - c. Fully-lined septic tank with overflow to drain / open ground / other
  - d. Partially-lined septic tank (bottom and/or sides unlined)
  - e. Fully-lined pit
  - f. Pit with unlined bottom or sides
  - g. Directly to open drain / ditch
  - h. Directly to sea, lake or river
  - i. Directly to open ground
  - j. Others (specify)
  - k. DK

[this should be the same categories as the previous question]

7. How are the stools of children < 3 years usually disposed of?
- Child used toilet/latrine
  - Put/rinsed into toilet or latrine
  - Put/rinsed into drain or ditch
  - Thrown into garbage
  - Buried
  - Left in the open
  - Others (Specify)
  - No Child under-3 / Don't Know

## G – Use of the toilet

1. Consider the toilet you mentioned in the last section, do you share this toilet with other households?
- Yes
  - No
  - Open Defecation --> skip
2. How many other **households** share this toilet?
- [enter number]
  - DK

3. How many **people** use this toilet regularly?
  - 1-5
  - 6-10
  - 11-15
  - 16-20
  - 21-30
  - >30
  - DK
  
4. Can any member of the public use this toilet?
  - Yes
  - No
  
5. Where is this toilet located?
  - Inside the household or compound
  - Outside the household or compound
  
6. Do you have to pay to use this toilet?
  - No --> skip
  - Yes, pay per use (public)
  - Yes, weekly payment (communal not public)
  - Yes, monthly payment (communal not public)
  - Others (specify)
  
7. How much do you pay in this frequency?  
[Insert number]
  
8. How long does it take on average, to use the toilet (walk there, queue, use, walk back)?
  - [insert time in minutes]
  
9. How many times do **you** do this per day?
  - [insert number]
  
10. Who manages this toilet?
  - This Household
  - Neighbour
  - Landlord
  - NGO / CBO
  - Private provider
  - Government
  - Nobody in charge
  - Other
  - DK
  
11. Enumerator - place the toilet in one of these categories based on the answers
  - On plot – Household private --> carry on
  - On plot – Shared --> carry on
  - Off plot – Communal --> skip to X
  - Off plot – Public --> skip to X

## H – Usability and observation

1. Is it currently operational / useable?
  - Yes
  - No
2. If no, why is it not operational / useable?
  - Full / waiting to be emptied
  - Collapsed (fully or partially)
  - Blocked
  - Other
  - DK
3. May I see the toilet?
  - Yes
  - No --> skip
  - Public/neighbour's toilet --> skip
4. OBSERVATION (ask Q if not possible) – Is the toilet operational / useable?
  - Yes
  - No --> skip to xx
5. OBSERVATION (ask Q if not possible) – Does it have a water seal?
  - Yes/no
6. OBSERVATION (ask Q if not possible) – Does it have a cleanable slab?
  - Yes/no
7. OBSERVATION (ask Q if not possible) – What is the material of the superstructure?
  - Brick – or other permanent material
  - Wood / bamboo / cloth – or other semi-permanent materials
  - No superstructure
8. OBSERVATION (ask Q if not possible) – Does it have a roof?
  - Yes/no
9. OBSERVATION (ask Q if not possible) – Does it have a curtain, door or other materials that provides privacy?
  - Yes/no
10. OBSERVATION (ask Q if not possible) – Is the floor or slab contaminated with faeces or urine?
  - Feces only, or feces and urine, visible
  - Urine only visible (no feces)
  - No feces or urine visible
11. OBSERVATION (ask Q if not possible) – Can emptying equipment get access?
  - Poor access, only accessible to hand-carried emptying equipment
  - Reasonable access for small (manual or mechanised) emptying equipment
  - Good access for medium/large size (mechanised) emptying equipment
12. OBSERVATION (ask Q if not possible) – Is there an access point/hatch for emptying?
  - Yes, purpose built hatch for easy access
  - Yes, but squatting plate must be removed
  - No, slab must be broken for access

[for toilets no longer in use]

13. OBSERVATION (ask Q if not possible) – has the pit been sealed and covered?

- Yes
- No
- DK

### I - Satisfaction and planning

1. Please rate your satisfaction level for the following aspects of the sanitation facilities of your household?

	Very satisfied	Satisfied	Dissatisfied	Very dissatisfied
Quality of construction				
Ease of access				
Privacy				
Cleanliness				

2. Are you planning to improve your sanitation arrangements in the next 1 year?

- No, we have no plans
- Yes, plan to build a new toilet
- Yes, plan to upgrade a toilet
- Yes, others (Specify)
- DK

3. What is the biggest challenge to improving your sanitation arrangements in this way?

- Lack of finance
- Lack of knowledge on how to do this
- Lack of interest of other household members
- Lack of skilled people to construct
- Landlord does not want to invest
- Others (Specify)
- Don't Know

4. How many years ago was this toilet built?

- [Enter Number of Years]
- DK

5. If your household spent money to build the toilet, how much did you spend at the time when it was built? (include materials and labour)

- [Enter amount in local currency]
- No expenses
- DK

### J – Payment for other services

1. Do you pay for your water supply?

- Yes
- No --> skip
- DK

2. Whom do you pay for water?

- Local government

- Utility company
  - Standpipe manager
  - Tanker truck manager
  - Water vendor
  - Neighbour
  - Others (Specify)
3. How often do you pay for water?
- Daily / On delivery
  - Weekly
  - Monthly
  - Quarterly
  - Biannually
  - Yearly
  - Others (Specify)
4. How much do you usually pay for water in this frequency?
- [Enter Amount in Local Currency]
  - [if on delivery, e.g. by the jerry can, then put the total paid per day, on average]
5. How would you rate the cost of the water for your household?
- Very cheap
  - Inexpensive
  - Expensive
  - Very expensive
  - DK/ No comment
6. In the last year, did your household have expenses to pay in relation to the toilet discussed in the previous section?
- Yes
  - No
  - DK
7. What were the expenses for?
- Repairs to toilet bowl / mechanism / plumbing / slab
  - Repairs to toilet room / superstructure
  - Fixing drainage problems
  - Emptying of septic tank/pit
  - Others (specify)
  - DK
8. How much were total expenses during the last 12 months?
- [amount in local currency]
9. What is the primary means of solid waste disposal for your household?
- Stored at household and collected by a company, the community or others
  - Stored at a public place and collected by a company, the community or others
  - Kept within the compound – put in a hole
  - Kept within the compound – put on the ground
  - Kept within the compound – put into pit latrine
  - Burned within or outside the compound
  - Taken outside the compound to a disposal site by household members
  - Taken outside the compound to river/stream/canal/pond
  - Taken outside the compound to gutter/ditch/along the road
  - Taken outside premise elsewhere

10. If any, how much do you pay per month for solid waste collection?
- [enter local currency] – put zero if nothing
  - DK
11. Coming back to your toilet, we have questions about where the faeces and urine go, and pit/tank emptying – can you answer these or can someone else?
- Me --> continue to next section
  - Someone else who is nearby --> go and find the person accompanied by respondent
  - Someone else who is not nearby --> END

### **K – Filling up and emptying**

1. Who is now responding?
- a. Same respondent
  - b. Neighbour
  - c. Landlord
  - d. Caretaker of building
  - e. Other (specify)
2. If this toilet empties to a pit or septic tank, has it ever filled up?
- Yes
  - No --> skip
  - DK --> skip
  - N/A --> skip
3. In the last 5 years, how many times has it filled up?
- [enter number]
  - DK
4. Has the toilet ever overflowed?
- Yes
  - No
  - DK
5. If yes, what was the reason for this? (circle all that apply)
- Blocked
  - Flooded with rising water table (from below ground)
  - Flooded by surface water / storm water (from above ground)
  - No money to empty
  - Emptiers not available when needed
  - Others
  - DK
6. What did you do when the pit or septic tank filled-up last time?
- Emptied and reused pit/tank
  - Abandoned and pit/tank unsealed --> skip to xx
  - Abandoned with sealed cover on pit/tank
  - Covered and used alternative pit --> skip to xx
  - Others (Specify) --> skip to xx
  - DK--> skip to xx



7. Has the pit or septic tank been emptied in the last 5 years?
  - Yes
  - No --> skip to xx
  - DK --> skip to xx
  
8. On average, how many years does it take for the emptied toilet to be full again?
  - [Enter number, 0 for less than 1 year, 99 for DK]
  
9. Next time the toilet fills up, what do you intend to do?
  - Empty by member of household
  - Empty by private individual or company
  - Cover and seal pit
  - Abandon toilet without covering / seal

**L - Last time emptying**

1. Last time it was emptied, who did the emptying?
  - Member of household
  - Neighbour
  - Informal provider (individual)
  - Formal provider (company / NGO)
  - Formal provider (utility)
  - Others (specify)
  
2. How was it emptied?
  - By hand, using buckets or similar
  - By hand, using manual pump
  - Mechanically, using small machine
  - Mechanically, using tanker truck
  
3. What was it emptied into?
  - Directly into drain / water body / field
  - Into a pit on the compound that is then covered
  - Into a pit on the compound that is left open
  - Directly into drum / open container
  - Directly into machine / tanker
  
4. Please rate your satisfaction level with that service provider in terms of:

	Very satisfied	Satisfied	Dissatisfied	Very dissatisfied
Price				
Overall service quality				
Safety				
Ease of obtaining service				

5. Did you pay for the pit to be emptied?
  - Yes
  - No
  - DK
  
6. How much did you pay in total?
  - [Insert number]

7. How was the payment calculated?
  - Flat rate
  - Cost per volume removed
  
8. Did you pay in instalments?
  - No, paid full amount
  - Yes, two
  - Yes, three
  - Yes, more than three
  
9. Was this was a fair price?
  - Too high
  - About fair
  - Quite cheap
  
10. Did the emptier face difficulties in getting their equipment to your toilet, such as lack of space, poor road conditions etc.?
  - Yes
  - No --> skip
  - DK
  
11. What kind of difficulties did they face? [circle all that apply]

	Reason
Street	<ul style="list-style-type: none"> <li><input type="radio"/> Lack of space</li> <li><input type="radio"/> Poor road condition</li> <li><input type="radio"/> Night-time working</li> <li><input type="radio"/> Others</li> </ul>
Compound	<ul style="list-style-type: none"> <li><input type="radio"/> Entrance / gate too narrow</li> <li><input type="radio"/> Lack of space for equipment once inside</li> <li><input type="radio"/> Poor surface conditions</li> <li><input type="radio"/> Night-time working</li> <li><input type="radio"/> Others</li> </ul>
Toilet	<ul style="list-style-type: none"> <li><input type="radio"/> Distance too far for equipment to reach the toilet</li> <li><input type="radio"/> Access point too small to get equipment into the pit</li> <li><input type="radio"/> Had to break/damage the slab to gain access</li> <li><input type="radio"/> Had to remove/damaged latrine pan, or seat</li> <li><input type="radio"/> Collapsed pit</li> <li><input type="radio"/> Others</li> </ul>

## A.4 End of Interview

<b>O.1</b> <b>Interview End Time</b>	<b>In 24 Hours Format</b> ____:____
-----------------------------------------	-------------------------------------

<b>O.2</b> <b>Interview Result</b>	Completed .....1 Incomplete .....2 Refused .....3 No household member at home .....4 Household not found .....5 Others (Specify) .....7
<b>O.3</b> <b>Interviewer's Comments</b>	

## Annex B Observation of service providers

### General household information

General household information							
City: _____		Location: _____		Date: _____			
GPS coordinates: _____							
Economic status:	High-income	<input type="checkbox"/>	Type of service provided:	Mechanised	<input type="checkbox"/>		
	Middle-income	<input type="checkbox"/>		Manual	<input type="checkbox"/>		
	Low-income	<input type="checkbox"/>					
Condition of access to the property:	Accessible to hand-carried emptying equipment only	<input type="checkbox"/>	Type of latrine / containment:	Dry latrine with pit	<input type="checkbox"/>	Latrine with septic tank	<input type="checkbox"/>
	Reasonable access for small (manual or mechanised) emptying equipment	<input type="checkbox"/>		Pour-flush latrine with pit	<input type="checkbox"/>	WC connected to sewer	<input type="checkbox"/>
	Good access for medium/large size (mechanised) emptying equipment	<input type="checkbox"/>		Twin-pit:	<input type="checkbox"/>	Other (specify):	

### B.1 Containment

#### Risks associated with storage or containment of fecal sludge at the household level

Identifying Code:	
City: _____	Location: _____
GPS coordinates: _____	Date: _____

Nº	Question	Response	Comment
1	Are there flying or crawling insects (e.g. flies, maggots) in the super structure?	<input type="checkbox"/> Many insects visible <input type="checkbox"/> Only a few insects visible <input type="checkbox"/> No insects visible <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK	
2	Are there flying or crawling insects (e.g. flies, maggots) visible outside of the latrine - in the compound?	<input type="checkbox"/> Many insects visible <input type="checkbox"/> Only a few insects visible <input type="checkbox"/> No insects visible <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK	
3	Is feces or urine visible on the ground around the latrine?		

		<input type="checkbox"/> Feces only, or feces and urine, visible around the latrine <input type="checkbox"/> Urine only visible (no feces), around the latrine <input type="checkbox"/> No feces or urine visible around the latrine <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK
4	Is the pit/ tank/ soakaway covered and the cover slab sealed well?	<input type="checkbox"/> Not covered <input type="checkbox"/> Covered but not sealed well <input type="checkbox"/> Covered and sealed well <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK
5	Is the pit/ tank/ soakaway full, overflowing or allowing waste to leak onto the ground?	<input type="checkbox"/> Overflowing or leaking <input type="checkbox"/> Full, but not overflowing or leaking <input type="checkbox"/> Not full or leaking <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK
6	Is the discharge from the latrine pan contained (e.g. in a pit/ tank/ soakaway), or is there visible discharge in the immediate environment (e.g. on open land in the property, or in an open channel)?	<input type="checkbox"/> Discharge not contained - visible discharge on the property <input type="checkbox"/> Discharge not contained - visible discharge to an open channel <input type="checkbox"/> Discharge contained - no visible discharge <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK
7	Is the connecting pipework blocked or damaged, with signs of effluent leaking into the immediate environment (e.g. on open land in the property, or in an open channel)?	<input type="checkbox"/> Pipework damaged or blocked and signs of leaking <input type="checkbox"/> Pipework damaged or blocked but no sign of leaking <input type="checkbox"/> Pipework not damaged or blocked and no sign of leakage <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK
8	Is there evidence that the septic tank needs desludging?	<input type="checkbox"/> Septic tank full/ overflowing and in need of desludging immediately <input type="checkbox"/> Septic tank not full/overflowing but likely to need desludging soon

	<input type="checkbox"/> Septic tank not full/overflowing and unlikely to need desludging soon <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK
9	Is there evidence that the latrine has overflowed before?  <input type="checkbox"/> Strong evidence of overflow, with excreta still visible <input type="checkbox"/> Some evidence of overflow, but excreta not that visible <input type="checkbox"/> No evidence of overflow <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK

## B.2 Emptying

### Risks associated with removing fecal sludge

<b>Identifying Code:</b>	
City: _____	Location: _____
GPS coordinates: _____	Date: _____

Nº	Question	Response	Comments
1	Does the emptying procedure leave fresh fecal sludge exposed in the compound?	<input type="checkbox"/> Getting access results in significant amounts of fecal contamination of the surrounding area <input type="checkbox"/> Getting access results in small amounts of fecal contamination of the surrounding area <input type="checkbox"/> Getting access does not result in fecal contamination of the surrounding area <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK	
2	How close are the emptying activities to a groundwater source?	<input type="checkbox"/> Close enough (less than 5 metres) to present a direct risk from any spillages <input type="checkbox"/> Close enough (between 5 and 10 metres) to present an indirect risk from any spillages <input type="checkbox"/> Far enough (more than 10 metres) to present negligible or no risk, or no source present <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK	

3	<p><b>If fecal sludge <u>is not</u> transported away</b> (e.g. it is buried on-site or discharged into a drain), how safely is this done?</p>
	<ul style="list-style-type: none"> <li><input type="checkbox"/> Fecal sludge is disposed on-site, with direct exposure (e.g. to an open pit, blocked drain)</li> <li><input type="checkbox"/> Fecal sludge is disposed on-site, with possible re-exposure (e.g. to a partially covered pit, damaged drain, watercourse)</li> <li><input type="checkbox"/> Fecal sludge is disposed on-site, with no direct risk of re-exposure (e.g. to a fully covered/ sealed pit, covered drain)</li> <li><input type="checkbox"/> Other (specify):</li> <li><input type="checkbox"/> DK</li> </ul>

### B.3 Transportation

#### Risks associated with transport practices

<b>Identifying Code:</b>			
	City: _____	Location: _____	
	GPS coordinates: _____	Date: _____	
Nº	Question	Response	Comments
1	During the transport of fecal sludge, does sludge spill into the surrounding environment?	<ul style="list-style-type: none"> <li><input type="checkbox"/> Sludge spillage occurs along the route at various times</li> <li><input type="checkbox"/> Slight sludge spillage occurs at specific times (e.g. going down slopes or over rough ground)</li> <li><input type="checkbox"/> No spillage occurs: equipment contains all of the sludge during transport</li> <li><input type="checkbox"/> Other (specify):</li> <li><input type="checkbox"/> DK</li> </ul>	
2	<b>If spillage occurs</b> , does it contaminate a water source?	<ul style="list-style-type: none"> <li><input type="checkbox"/> Spillage occurs directly into, or immediately next to, a water source</li> <li><input type="checkbox"/> Spillage occurs within 10m of a water source</li> <li><input type="checkbox"/> Spillage occurs more than 10m from a water source</li> <li><input type="checkbox"/> Other (specify):</li> <li><input type="checkbox"/> DK</li> </ul>	

3 **If spillage contaminates a water source:**  
what type of water source is it?

River

Drain

Well (used as a water source)

Pond

Other (specify):

DK

## B.4 Treatment

### Risks associated with the treatment process

<b>Identifying Code:</b>	
City: _____	Location: _____
GPS coordinates: _____	Date: _____

Nº	Question	Response	Comments
1	During discharge or unloading at the treatment works, does the fecal sludge splash or spill onto the surrounding environment?	<input type="checkbox"/> Splashing or spillage of sludge <b>occurs frequently</b> during discharge or unloading <input type="checkbox"/> Splashing or spillage of sludge <b>occurs occasionally</b> during discharge or unloading <input type="checkbox"/> Splashing or spillage of sludge <b>does not occur</b> during discharge or unloading <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK	
2	How close are the emptying activities to a groundwater source?	<input type="checkbox"/> Close enough (less than 5 metres) to present a direct risk from any spillages <input type="checkbox"/> Close enough (between 5 and 10 metres) to present an indirect risk from any spillages <input type="checkbox"/> Far enough (more than 10 metres) to present negligible or no risk, or no source present <input type="checkbox"/> Other (specify):	



		<input type="checkbox"/> DK
3	How close are the emptying activities to a stormwater drainage channel?	<input type="checkbox"/> Close enough (less than 5 metres) to present a direct risk from any spillages <input type="checkbox"/> Close enough (between 5 and 10 metres) to present an indirect risk from any spillages <input type="checkbox"/> Far enough (more than 10 metres) to present negligible or no risk, or no source present <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK
4	Are precautions in place to contain liquid or solid wastes (e.g. leachate or dust) from FS treatment, and to prevent their release into the surrounding environment?	<input type="checkbox"/> No precautions in place to contain liquid and/or solid wastes, or to prevent their release into the environment. <input type="checkbox"/> Some precautions in place to contain liquid and/or solid wastes. Release into the environment may occur. <input type="checkbox"/> Precautions in place to contain liquid and/or solid wastes, and to prevent their release into the environment. <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK
5	Could treatment result in liquid or solid wastes (e.g. leachate or dust) being released into the surrounding environment?	<input type="checkbox"/> Liquid and/or solid wastes may regularly be discharged into the environment. <input type="checkbox"/> Liquid and/or solid wastes may occasionally be discharged into the environment. <input type="checkbox"/> Liquid and/or solid wastes cannot be discharged into the environment. <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK

## B.5 Disposal

### Risks associated with disposal sites

#### Identifying Code:

City: \_\_\_\_\_

Location: \_\_\_\_\_

GPS coordinates: \_\_\_\_\_

Date: \_\_\_\_\_

Nº	Question	Response	Comments
1	If fecal sludge is disposed of without treatment, (e.g. it is buried or discharged into a drain), how is this done?	<input type="checkbox"/> Fecal sludge is disposed with direct risk of re-exposure (e.g. to an open pit, blocked drain) <input type="checkbox"/> Fecal sludge is disposed with possible re-exposure (e.g. to a partially covered pit, damaged drain, watercourse) <input type="checkbox"/> Fecal sludge is disposed with no direct risk of re-exposure (e.g. to a fully covered/ sealed pit, covered drain) <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK	
2	Do people, animals or insects come into direct contact with fecal sludge following disposal?	<input type="checkbox"/> People, animals and insects come into direct contact with fecal sludge <input type="checkbox"/> People, animals and insects may come into contact with fecal sludge - but limited <input type="checkbox"/> No people, animals or insects are likely to come into contact with faecal sludge <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK	
3	How close is the disposal area to a groundwater source or waterpoint?	<input type="checkbox"/> Close enough (less than 5 metres) to present a direct risk from the disposal point <input type="checkbox"/> Close enough (between 5 and 10 metres) to present an indirect risk from the disposal point <input type="checkbox"/> Far enough (more than 10 metres) to present negligible or no risk, or no groundwater source/waterpoint present <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK	
4	How close is the disposal area to a river or stream?		

	<ul style="list-style-type: none"> <li><input type="checkbox"/> Close enough (less than 5 metres) to present a direct risk from the disposal point</li> <li><input type="checkbox"/> Close enough (between 5 and 10 metres) to present an indirect risk from the disposal point</li> <li><input type="checkbox"/> Far enough (more than 10 metres) to present negligible or no risk, or no surface water source present</li> <li><input type="checkbox"/> Other (specify):</li> <li><input type="checkbox"/> DK</li> </ul>
<p>5 Do people come into direct contact with surface water contaminated by the disposal of fecal sludge?</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> People come into direct contact with the contaminated surface water (e.g. swimming, washing clothes, bathing)</li> <li><input type="checkbox"/> People have indirect exposure to contaminated surface water (e.g. washing vehicles away from the water course)</li> <li><input type="checkbox"/> No people are likely to come into contact with contaminated surface water</li> <li><input type="checkbox"/> Other (specify):</li> <li><input type="checkbox"/> DK</li> </ul>
<p>6 Is there evidence that liquid or solid wastes from FS disposal are released into the surrounding environment?</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> There is evidence that liquid and/or solid wastes are regularly discharged into the environment.</li> <li><input type="checkbox"/> There is evidence that liquid and/or solid wastes are occasionally discharged into the environment.</li> <li><input type="checkbox"/> There is evidence that liquid and/or solid wastes are not discharged into the environment.</li> <li><input type="checkbox"/> Other (specify):</li> <li><input type="checkbox"/> DK</li> </ul>

## B.6 End use

### Risks associated with end-use processes/practices

**Identifying Code:**

City: \_\_\_\_\_

Location: \_\_\_\_\_

GPS coordinates: \_\_\_\_\_

Date: \_\_\_\_\_

Nº	Question	Response
1	If fecal sludge is applied to agricultural land, is it treated first?	<input type="checkbox"/> Fecal sludge is fully treated before being applied to land <input type="checkbox"/> Fecal sludge is partially treated before being applied to land <input type="checkbox"/> Fecal sludge is not treated before being applied to land <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK
2	If fecal sludge is applied to agricultural land, how is it applied?	<input type="checkbox"/> The treated sludge is spread over the ground surface <input type="checkbox"/> The treated sludge is spread over the ground surface, and then ploughed into the soil <input type="checkbox"/> The treated sludge is applied below the ground surface, or covered over with a layer of soil <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK
3	If fecal sludge is applied to agricultural land, what type of crops are grown?	<input type="checkbox"/> Salad crops that are eaten uncooked <input type="checkbox"/> Vegetable crops that are cooked before eating <input type="checkbox"/> Fruit trees, cereal crops, and crops not for human consumption (e.g. flowers, grass, crops for animal feed) <input type="checkbox"/> Other (specify): <input type="checkbox"/> DK
4	If fecal sludge is applied to agricultural land, at what stage during the growing season is it applied?	

- Shortly before crops are harvested
- During the crop growing period
- Shortly before or just after the crop is planted
- Other (specify):
- DK

## Annex C Transect walk record sheet

In Table 1, the final “score” for each of the categories will be the average of the general conditions found in the community. As you walk around, place ticks against the descriptions that best describe examples of what you see. At the end of the transect walk, decide what the average of all the ticks should be for each of the categories and mark this clearly with a score of 1 to 5.

When a particularly high risk situation (conditions 4 or 5) is seen, make a note of this in Table 1 (column on the right) for relevant categories (1, 4, 5a, 5b and 8). In each case, ask local people how frequently this situation occurs. Make a note of the frequency in Table 1 (far right column) and complete details in Table 2 for the most significant locations and risks.

When you have finished the transect walk, ask some community members the questions in Table 3.

<b>City:</b> _____	<b>Location:</b> _____
<b>GPS coordinates at start:</b> _____	<b>Date:</b> _____
<b>Economic status (Tick the appropriate response) of the area</b>	High-income <input type="checkbox"/> Middle-income <input type="checkbox"/> Low-income <input type="checkbox"/>
<b>Is the area at risk of flooding?</b> _____	<b>Weather conditions on the day:</b> _____

<b>Brief description of the community <sup>1</sup></b>	
--------------------------------------------------------	--

<sup>1</sup> In less than 100 words, summarise:

- relatively recent changes (in the last 10 years) in the development of the area,
- the extent of residential, commercial/private and public infrastructure (i.e. residential housing, shops, businesses, schools, mosques, markets, etc.),
- the main types of housing found in the area,
- the main types of economic activity that take place in the area and the main employment of people living in the area.

**Table 1: General conditions**

Category	Description of observed risks	Score	Location(s) where high risk is seen  Complete details in Table 2	How often does this risk occur? <i>(Ask the community for information)</i>  Annually = 1 Monthly = 2 Weekly = 3 Daily = 4
<b>1. Drainage (storm water and greywater<sup>1</sup>).</b>  <b>Describe the condition of the drainage structure</b>	Limited drainage infrastructure. Standing storm water and/or greywater is visible on the ground, close to homes or water points	5		
	Limited drainage infrastructure, with signs of storm water and/or greywater having overflowed recently close to homes or water points	4		
	Limited drainage infrastructure,, but with no signs of having overflowed close to homes or water points	3		
	Drainage channels in a poor condition directing storm water and/or greywater away from homes and water points	2		
	Drainage channels, well maintained and adequate to take flows.	1		
<sup>1</sup> Note: Greywater is domestic wastewater that does not include toilet wastes, and does not contain visible fecal materials.				
<b>2. Sewerage (blackwater<sup>2</sup>)</b>  <b>Describe where you see, or identify, that blackwater is entering into the environment</b>	Limited sewer infrastructure with visible standing blackwater close to homes or water points.	5		
	Broken sewer pipes close to homes or water points, with signs of having overflowed recently.	4		
	Broken sewer pipes close to homes or water points, but with no signs of having overflowed	3		
	Piped sewers with signs of some leakage or blockages.	2		
	Adequate and well maintained piped sewers, with no signs of leakage or blockages.	1		
<sup>2</sup> Note: Blackwater is domestic wastewater that includes toilet wastes, and contains visible fecal materials.				

<b>3. Access to water points</b>	No piped water supply to households or public water points are identified	5	
	No piped water supply to households, but water is available from public standposts, vendors, private wells or boreholes.	4	
	Some piped water supply to households, or boreholes. Other water is available from public standposts or vendors.	3	
	Intermittent piped water supply to all or most households. Water from vendors may also be available.	2	
	Continuous piped water supplies to public standposts, on-plot or in-house. Water from vendors may also be available.	1	
<b>4. Evidence of solid wastes</b>	Piles of solid waste are accumulating in many sites, close to where people live and work, and at times are obstructing drainage or irrigation channels.	5	
	Piles of solid waste are accumulating in three or more sites, close to where people live and work, but are not obstructing drainage or irrigation channels.	4	
	Piles of solid waste are accumulating in one or two sites, but away from where people live and work.	3	
	Waste bins or enclosures are provided for solid waste collection, but the number of bins is inadequate and overflow is evident.	2	
	An adequate number of waste bins or enclosures are provided, with no overflow evident.	1	
<b>5a. Evidence of human fecal materials – through open defecation<sup>4</sup></b>	Frequent visible, widespread evidence of human feces is seen.	5	<i>If people will be offended by this question, do not ask it</i>
	Visible evidence of human feces is seen, but limited to a few locations.	4	<i>If people will be offended by this question, do not ask it</i>
	Human feces are seen one or two times, but in places away from the population.	3	
	Possible evidence of human feces is seen, mixed with solid waste.	2	
	No visible evidence of human feces through open defecation is seen.	1	
<sup>4</sup> Note: Open defecation is when people defecate directly in the environment, rather than defecating in a latrine with a pit or septic tank.			



<b>5b. Evidence of human fecal materials – through dumped fecal sludge<sup>5</sup></b>	Frequent visible and widespread evidence of dumped fecal sludge is seen.	5		
	Visible evidence of dumped fecal sludge is seen, but limited to a few locations.	4		
	Dumped fecal sludge is seen one or two times, but in places away from the population.	3		
	Possible evidence of fecal sludge is seen, mixed with solid waste.	2		
	No visible evidence of dumped fecal sludge is seen.	1		
<sup>5</sup> Note: Fecal sludge may be dumped into the environment when the contents of septic tank/ pit waste is emptied manually.				
<b>6. Evidence of animal fecal materials</b>	Frequent visible and widespread evidence of animal feces is seen.	5		
	Visible evidence of animal feces is seen, limited to a few locations.	4		
	Animal feces are seen one or two times, but in places away from the population.	3		
	Possible evidence of animal feces is seen, mixed with solid waste.	2		
	No visible evidence of animal feces is seen.	1		
<b>7. Coverage of household toilets (individual, or shared with known families)</b> <i>(You will need to ask people for information to be able to complete the correct response)</i>	Less than 25% of households have access to a household toilet. <i>The majority (more than 75%) appear to be poorly maintained.</i>	5		
	Between 25% to 75% of households have access to a household toilet. <i>Most (more than 50%) appear to be poorly maintained.</i>	4		
	Between 25% to 75% of households have access to a household toilet. <i>Most (more than 50%) appear to be well maintained.</i>	3		
	More than 75% of households have access to a household toilet. <i>They are in various conditions of maintenance and cleanliness.</i>	2		
	More than 75% of households have access to a household toilet. <i>Most (more than 75%) appear to be clean and well-maintained.</i>	1		

<b>8. Presence of public sanitation facilities</b>  <i>Note: This category includes “pay-per-use” facilities (including at markets, bus stations, etc.) but does not include institutional facilities at schools, offices, etc.</i>	Where public facilities are present, they are all poorly maintained with evidence of fecal contamination in the local environment.	5		
	Where public facilities are present, most (more than 50%) are poorly maintained with some evidence of fecal contamination in the local environment.	4		
	Where public facilities are present, they are in various conditions of maintenance and cleanliness.	3		
	Where public facilities are present, most (more than 50%) are generally clean and well-maintained.	2		
	Where public facilities are present, they are in frequent use, clean and well-maintained. OR There are no public facilities present.	1		
<i>Note: You may need to ask people for information to be able to complete the correct response.</i>				
<b>9. Presence of wastewater and/or fecal sludge treatment facilities<sup>3</sup> inside the area</b>	Wastewater and/or fecal sludge treatment facilities (e.g. composting of wastes) are present, poorly-maintained and insecure.	5		
	Wastewater and/or fecal sludge treatment facilities are present, poorly-maintained, secure but with possible direct risks –such as from overflow	4		
	Wastewater and/or fecal sludge treatment facilities are present, and are well-maintained, but with some possible indirect risks – such as from scavenging animals or waste pickers	3		
	Wastewater and/or fecal sludge treatment facilities are present, and are well-maintained with no evident risks	2		
	No wastewater and/or fecal sludge treatment facilities present.	1		
<sup>3</sup> Note: In many cities, it is very unlikely that you will see any treatment facilities.				
<b>10. Housing and public space arrangement</b>	Less well or poorly organized development, with highly restricted access for public service vehicles and no clearly defined public spaces.	5		
	Less well organized development, with mostly temporary housing, limited access for public service vehicles and very few clearly defined public spaces.	4		
	Well organized development, with semi-permanent and/or temporary properties, limited access for public service vehicles and only a few clearly defined public spaces.	3		
	Well organized development, with permanent and/or semi-permanent properties, but restricted access for public service vehicles and public spaces, including some open spaces	2		

	Well organized development, with permanent and/or semi-permanent properties, good access for public service vehicles and public spaces, including open spaces.	1	
<b>11. Paths</b>  <b>Routes wide enough for pedestrians and possibly motorbikes</b>	Very narrow paths that can be used by pedestrians only (too narrow for motorbikes)	5	
	Poorly maintained dirt paths wide enough for motorbikes	4	
	Well-maintained dirt paths wide enough for motorbikes	3	
	Gravel or paved paths, in poor condition, wide enough for motorbikes	2	
	Gravel or paved paths, in good condition, wide enough for motorbikes	1	
<b>12. Roads</b>  <b>Routes wide enough for vehicles (cars, 3-wheelers, donkey carts, etc.)</b>	Unsurfaced roads, wide enough for small carts or 3-wheeler, but not for car access.	5	
	Unsurfaced roads wide enough for cars to pass	4	
	Gravel or paved roads, wide enough for small carts or 3-wheeler, but not for car access	3	
	Gravel or paved roads, wide enough to allow two cars to pass	2	
	Well maintained gravel or paved road, wide enough for two cars to pass	1	

**Table 2: High-risks observed - for categories 1, 4, 5a, 5b and 8 in Table 1**

Where areas of high-risk of contamination are identified (scoring 4 or 5), complete further details as appropriate and to the extent possible

<b>Category</b> Type of contamination seen	<b>Source of risk</b> Briefly state the problem that you have seen  Complete for each category (1, 4, 5a, 5b and 8) scoring 4 or 5 in Table 1	<b>Human interaction</b> State how humans are interacting (coming into contact) with the contamination (e.g. washing, playing, walking, scavenging)	<b>Route of contamination</b> State the main routes of contamination (e.g. hands, feet, flies, food, fields/crops, soil)	<b>Who is exposed?</b> Comment on who is exposed to the contamination (e.g. all people, adults only, children only, or identified vulnerable groups)	<b>GPS coordinates</b>	<b>Photographs</b> Details of any photos taken
1. Drainage (stormwater and/or greywater)						
4. Solid waste pile						
5a. Open defecation						
5b. Dumped fecal sludge						

<b>Category</b> Type of contamination seen	<b>Source of risk</b> Briefly state the problem that you have seen  Complete for each category (1, 4, 5a, 5b and 8) scoring 4 or 5 in Table 1	<b>Human interaction</b> State how humans are interacting (coming into contact) with the contamination (e.g. washing, playing, walking, scavenging)	<b>Route of contamination</b> State the main routes of contamination (e.g. hands, feet, flies, food, fields/crops, soil)	<b>Who is exposed?</b> Comment on who is exposed to the contamination (e.g. all people, adults only, children only, or identified vulnerable groups)	<b>GPS coordinates</b>	<b>Photographs</b> Details of any photos taken
8. Public latrines						

### Table 3: Practices in the community

The following questions are asked to a group of community members. Try to limit this to a maximum of 8 people in the group. All people in the group should live in the community and be aware of the conditions throughout the year. Consent must be sought by all participants before asking this short set of questions.

Topic area	Question	Response
Awareness of risk-free FSM practices: levels and causes of risk	<p><i>Read out or show the following list of activities that might happen in this community.</i></p> <ul style="list-style-type: none"> <li>○ Open defecation</li> <li>○ People throwing faeces out with solid waste</li> <li>○ Over-flowing latrines</li> <li>○ Latrines emptying into drains</li> <li>○ Uncontrolled latrine emptying by households</li> <li>○ Spills of fecal sludge during emptying or transport</li> <li>○ Uncontrolled dumping of fecal sludge</li> </ul>	
	<p>4. Of these activities, which 3 occur most frequently in your community if any?</p>	<p><i>Rank the top 3:</i></p> <ul style="list-style-type: none"> <li>○ Open defecation</li> <li>○ People throwing faeces out with solid waste</li> <li>○ Over-flowing latrines</li> <li>○ Latrines emptying into drains</li> <li>○ Uncontrolled latrine emptying by households</li> <li>○ Spills of fecal sludge during emptying or transport</li> <li>○ Uncontrolled dumping of fecal sludge</li> <li>○ Others (specify): _____</li> </ul>
	<p>5. Where is the contamination occurring?</p>	<p><i>Tick all that apply:</i></p> <p>Specific locations (specify)</p> <ul style="list-style-type: none"> <li>○ Household latrines</li> <li>○ Public latrines</li> <li>○ Drains</li> <li>○ Public water points (handpumps, standpipes, etc.)</li> <li>○ Rivers/streams</li> <li>○ Ponds</li> <li>○ Solid waste dump sites</li> </ul> <p>Generally scattered throughout the area</p>

Topic area	Question	Response
		Other (specify): _____ DK (Don't Know)
	5. How often does the <u>most significant</u> of these happen?	<i>Tick one:</i> <ul style="list-style-type: none"> <li><input type="radio"/> Every day (i.e. All the time)</li> <li><input type="radio"/> Most weeks (i.e. Most of the time)</li> <li><input type="radio"/> During certain months (i.e. Some of the time)Seasonally</li> <li><input type="radio"/> During the rainy season(s)</li> <li><input type="radio"/> During the dry season</li> <li><input type="radio"/> Other seasons (specify): _____</li> <li><input type="radio"/> Other (specify): _____</li> <li><input type="radio"/> DK</li> </ul>
	7. Has there been a diarrhoeal outbreak affecting large numbers of people in the past 1 year?	Yes No -> End DK -> End
	8. In which month did this start?	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec (circle the month)

**Names and signatures of participants:**

	Name	Signature	Date

## Annex D Fecal sludge (FS) characteristics record sheet

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Sample bottle identification number: \_\_\_\_\_

Location (description): \_\_\_\_\_

Stage of handling fecal sludge (tick one):

During removal	During discharge	After treatment
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Location (GPS co-ordinates): \_\_\_\_\_

Name of sample collector: \_\_\_\_\_

Name of latrine emptying service provider: \_\_\_\_\_

See excel spreadsheet: FS observed characteristics

**Table 1. Observed faecal sludge characteristics**

Description	Behaviour		Tick box
Dry Solid	Crumbles easily.	A deep vertical cut, widened to create a triangular wedge-shaped cut in the FS, holds its shape, with the cut edges appearing dry.	<input type="checkbox"/>
Wet Solid	Cohesive, with no evidence of free liquids.	A deep vertical cut, widened to create a triangular wedge-shaped cut in the FS, holds its shape, with the cut edges appearing damp but with no free liquid visible.	<input type="checkbox"/>
Solid and liquid mix	A mixture of solids and liquids.	A deep vertical cut, widened to create a triangular wedge-shaped cut in the FS, holds its shape, with liquids draining into the cut.	<input type="checkbox"/>
Viscous liquid	Liquid, but flowing slowly	A deep vertical cut, widened to create a triangular wedge-shaped cut in the FS, closes up after a few seconds.	<input type="checkbox"/>
Liquid	Liquid, flowing easily.	The FS is so liquid that it is not possible to widen a deep vertical cut and create a triangular wedge-shaped cut.	<input type="checkbox"/>

**Table 2. Solid waste content of faecal sludge**

Classification	Description	Tick box
Very high solid waste content	Contains more solid wastes than faecal material.	<input type="checkbox"/>
High solid waste content	Contains significant amounts of miscellaneous solid wastes.	<input type="checkbox"/>
Medium solid waste content	Contains small amounts of miscellaneous solid wastes.	<input type="checkbox"/>
Low solid waste content	Contains some paper materials used for anal cleansing.	<input type="checkbox"/>
No solid waste content	Contains no solid wastes.	<input type="checkbox"/>

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



## Annex E Key informant interviews

### E.1 KII indicators and questions

Before developing the set of interview questions, a preliminary “mapping exercise” may need to be carried out. This mapping can help identify which stakeholders/institutions and specific interviewees can address which topic-areas (and/or specific questions) from the full set of possible questions.

This mapping can also identify the extent to which relevant, adequate and reliable information is *already* available from other sources. For example, recent past studies or official reports addressing FSM services may be available, meaning certain questions do not need to be asked during interviews. However, it is important to consider whether gaining additional information on a given point will help to verify the existing information, or ensure different perspectives on a given issue are gathered.

Once this initial mapping has been done, tables can be drawn-up to indicate which questions, or topic-areas, should be asked to each of the selected key interviewees. This will help to build-up the full matrix of questions against stakeholders/interviewees and be the basis of developing interview question guides.

It is important to remember that for some questions, there may not be a ‘correct’ answer or information but it will be important to gather potentially different perspectives on the same question from different stakeholders and key informants. For these, and many other of the proposed example questions set out below, it will be important to ask “why” respondents have a particular perspective and probe into these issues.

## E.2 Institutional responsibility mapping and stakeholder analysis

### Initial institutional responsibility mapping

As a first step in the process, data for this will come primarily from more neutral observers and key informants, the researchers own knowledge, and secondary sources.

- Identify which actors / agencies have formal institutional responsibilities for particular aspects of FSM (e.g. containment, emptying, transport, etc.) as well as local FSM policy and strategy.
- Categorise these within broader groupings – e.g. national government ministries; local government agencies; private sector; etc.
- For each actor or agency, indicate whether they have formal responsibilities for particular aspects of FSM in the following table. This should be the formal responsibilities they have, not what actually happens in practice.
- Where there are any stakeholders who do not have formal responsibilities but in practice undertake particular activities of tasks, note these down for inclusion in subsequent mappings but also decide whether they should also be interviewed.

### Institutional mapping of formal responsibilities for local FSM

	Local policy and strategy	FSM infrastructure development and service delivery				
		Containment	Emptying	Transport	Treatment	End-use / disposal
<b>National government departments</b>						
<b>Local government departments</b>						
<b>Local government enterprises</b>						
<b>Non-government stakeholders</b>						
Private enterprises						
NGOs/CBOs/community groups						
Individuals / households						

This will feed into the initial stakeholder analysis below, and help identify key informants and stakeholders for subsequent interviews.

### Initial stakeholder analysis

Using the list of actors / agencies with formal responsibilities identified above, establish whether there are particular individuals or groups within each broader category who have particular responsibilities or levels of influence over FSM. Ensure that these stakeholder groups are broken down sufficiently in order to understand potentially different and competing interests and influence

within broader stakeholder groups. It is important that the analysis unpacks broad terms such as 'government', 'civil society', 'community' or 'private sector' and identifies relevant actors (individuals as well as groups or organisations) within these.

Use the template below to present an initial stakeholder analysis. For each relevant stakeholder, outline the key points under each heading and the reasons respondents have stated particular points.

For this initial analysis, data will come from interviews with external key informants.

Refer to the Table on the following page.

Using these initial analyses or responsibilities, interests, characteristics and influence, etc., prioritise which individuals and/or agencies it will be most important to interview. The rationale for selecting an individual might include, for instance, high levels of responsibilities or high level of influence over a particular element of FSM, etc.

The particular responsibilities or interests will also help select questions that are relevant and also identify further questions to probe into the issues in more depth.

Based on these two stages and an analysis of data collected during interviews, the further stages of building-up a Stakeholder Matrix and the Process mapping can follow, to complete the PEA.

### Stakeholder mapping template

<b>Stakeholder categories</b>	<b>Relevant stakeholders</b>	<b>Characteristics</b> (social, geographical, organisational)	<b>Influence</b> (power to facilitate or impede FSM poor-inclusive policy and service provision)	<b>Interest</b> (what they gain or lose, how this affects their commitment to status quo / openness to change)	<b>Importance</b> (degree of priority needs and interests)
<b>National government</b>	Ministry of Public Works				
	Ministry of Finance				
	Ministry of Public Housing				
	National Legislators				
<b>Local level government</b>	Mayors				
	Local legislators				
	Local government department A				
	Local government department B				
<b>Civil society</b>	Consumer groups and advocacy NGOs				
	Media				
	Poor households				
<b>Private sector</b>	Septic tank contractors and emptiers				
	Large sewerage / treatment plant engineers (foreign and domestic)				
<b>International organisations or projects</b>	WSP				
	WB				

Source: Adapted from Holland (2007).

## Annex F Focus Group Discussion guide

FGDs provide an opportunity to gather qualitative data that will compliment, validate, or perhaps challenge responses made during the household survey. Questions are likely to focus on obtaining information relating to:

- the household sanitation practices of “others” – especially as individuals may not talk openly or honestly about their own, or their family, practices;
- peoples’ understanding of the risks associated with poor FSM services;
- issues affecting the community as a whole (service standards and costs, choice of technical and service options available, pollution, impacts of legal issues (insecurity of tenure), etc.);
- levels of support received/ perceived as being focused on the needs of poor areas of the city;
- what interventions have been conducted before – and the extent to which they have worked/ not worked, responded/ not responded to the needs of the community;
- what actions the community could take to improve FSM services;
- willingness-to-pay for improved services (see the note below the following table).

The full list of topics that can be discussed in FGDs members are shown in Table 14.

**Table 14 Topics for Focus Group Discussions with community members**

Component	Issue	Topics for discussion
Service Delivery Assessment (SDA)	Equity	- Range of technical options: available, etc. (formally offered vs. informal self-build solutions)
	Quality	- Extent to which risk-free and functioning services are provided: containment, emptying, transport
Political Economy Analysis (PEA)	Contextual factors affecting FSM services	- What people consider to be appropriate services (focussing on containment and emptying) and how this influences demand - Socio-cultural drivers for/ constraints to appropriate FSM services
	Stakeholder interests	- Electoral returns to FSM investments - What motivates communities or households to demand and use more appropriate FSM
	Equity	- Existence of subsidies/ effectiveness of targeting for the poor
Current FS Flows	Pathways of FS	- Population practicing open defecation
Public Health Risk	Risk-free FSM practices	- Awareness of risk-free FSM practices: levels and causes of risk
Intervention options	Potential solutions	- What has previously worked well, or not worked well (in the community)?
	Effective options	- What could households/ communities do to improve FSM? - What could the city council/Municipality/Utility do to improve FSM? - What could other stakeholders do in response?

As the number of topic areas is too many to cover in any one FGD, they will be divided into 2 sets of broad ‘themes’ to gather qualitative information during FGDs with specific focus areas. Each FGD will focus on **one** of the themes, which will address:

- FGD theme 1: Current FSM Services (and associated risks)
- FGD theme 2: Past, current and possible future improvements to services

These themes are to be allocated to the group types (indicated in section 3.6.3) to ensure representativeness while addressing practicalities, opportunities and limitations in the city context.

A number of questions that will result in quantitative data have been identified for use during the Transect Walk (see Annex C, Table 3 for more details).

**Table 15** Topic areas for discussion Theme 1: Current FSM Services

	Suggested primary questions and 'probing' questions: to stimulate discussion		
Topic areas for discussion	Primary questions	Secondary questions	Tertiary questions
Range of technical options available, etc. (formally offered vs. informal self-build solutions)	What types of latrines do people have that are <b>formally provided</b> in this area?	Who provides these latrines?	How much are formal latrines used by people in this area?
	What types of latrines do people have that are built by <b>households themselves</b> in this area?	Who, if anyone, helps families to build their own latrines?	How much are self-build toilets used by people in this area?
	Are the <b>different types</b> used differently by women and men, or other groups of people, in this area?	Can you explain what these differences are and why they occur?	
What people consider to be appropriate services (focussing on containment and emptying) and how this influences demand	What do you consider to be 'appropriate' ways to help households have good <b>latrines at home</b> ?	Who do you think should be responsible for providing this help?	If more help was provided, do you think people would want to invest more in their own latrine? Please explain.
	What do you consider are 'appropriate' services that do, or could, help households manage the <b>removal of fecal sludge</b> from their homes?	Who do you think should be responsible for providing this help?	If emptying services improved, do you think people would be prepared to pay more for them? Please explain.
Extent to which risk-free and functioning services are provided: containment, emptying, transport	Can families in this area of the city find suitable latrine <b>emptying services</b> , when they want to have their latrine emptied?	Do these emptying services introduce any risks?	If so, what are those risks, when and where do they occur?
	What are the functioning FS <b>transport services</b> available in this area of the city?	Do they introduce any risks?	If so, what are those risks, when and where do they occur?
What motivates communities or households to demand and use more appropriate emptying services	What motivates people to demand and use appropriate latrine emptying services?	For what proportion of households do these factors apply?	
Trade-offs for households from increased investment in FSM services	Where people pay more for emptying services, how does this affect	Are some financial needs more affected than others?	If so, which?

	other financial needs in their household?		
Existence of subsidies/ effectiveness of targeting for the poor	What subsidies (financial support) are available if a household needs help to improve their sanitation facilities (e.g. to build, repair or empty a latrine)?	Who are subsidies available for?	Who decides who can, or cannot, receive subsidies?

**Topic areas for FGD theme 2: Past, current and possible future improvements to services**

	Suggested primary questions and 'probing' questions: to stimulate discussion		
Topic areas for discussion	Primary questions	Secondary questions	Tertiary questions
Extent to which city's FSM systems serve low-income communities (containment, emptying, transport only)	Do families in this area get support to <b>build, or improve, household latrines</b> ?	How is that support provided and to whom?	What are the benefits, if any, of getting this support? What are the disadvantages, if any, of this support?
	Do families in this area get support to <b>empty latrines</b> ?	How is that support provided and to whom?	What are the benefits, if any, of getting this support? What are the disadvantages, if any, of this support?
Availability of funds, plans and measure to ensure FSM serves all users, specifically the urban poor	Are you aware of any recent improvements made to pit/septic tank emptying services in this area of the city?	If so, what has happened? What difference has this made to the services you see provided?	If not, are any improvements planned?
What has previously worked well, or not worked well (in the area)?	What previous actions to improve fecal sludge handling have worked well in your area?	Who was responsible for these actions?	How were local residents involved?
	What previous actions to improve fecal sludge handling have <u>not</u> worked well in your area?	Who was responsible for these actions?	How were local residents involved?
What could households/ communities do to improve FSM?	What do you think households could do to improve the management of fecal sludge in your area?		
What could the city council/ Municipality/ Utility do to improve FSM?	What do you think the City authorities could do to improve the management of fecal sludge in your area?		
What could other stakeholders do in response?	Could others be involved in improving the management of fecal sludge in your area?	Who do you suggest and what could they do?	

Electoral returns to FSM investments	Do politicians mention issues of sanitation/sludge handling during their campaigns?	Why do you think they do or don't?	Does it affect people's voting decisions if they do (or if the currently don't, would it if they did in the future)?
<i>Evidence of willingness/ ability to pay for FSM services (formal or informal)</i>	<i>Ask suitable questions to identify how much people are willing or able to pay for latrine emptying services</i>	<i>Ask suitable questions to identify how this varies depending on the type of service provided (formal or informal)</i>	