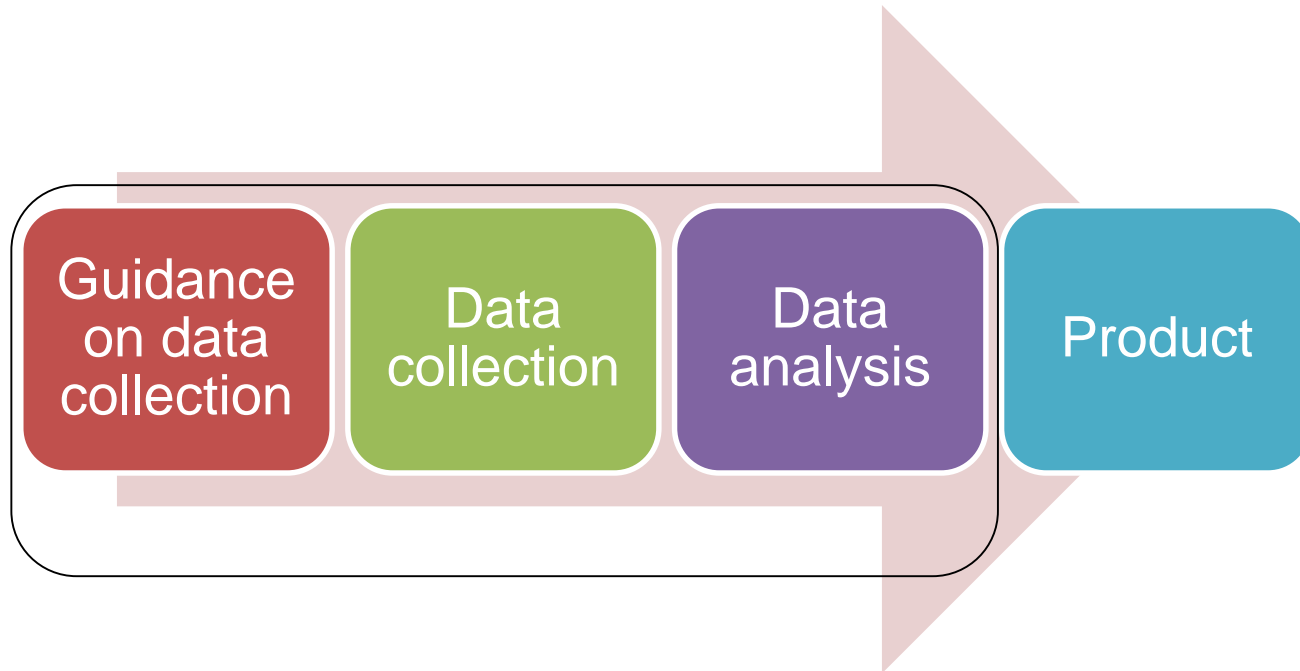


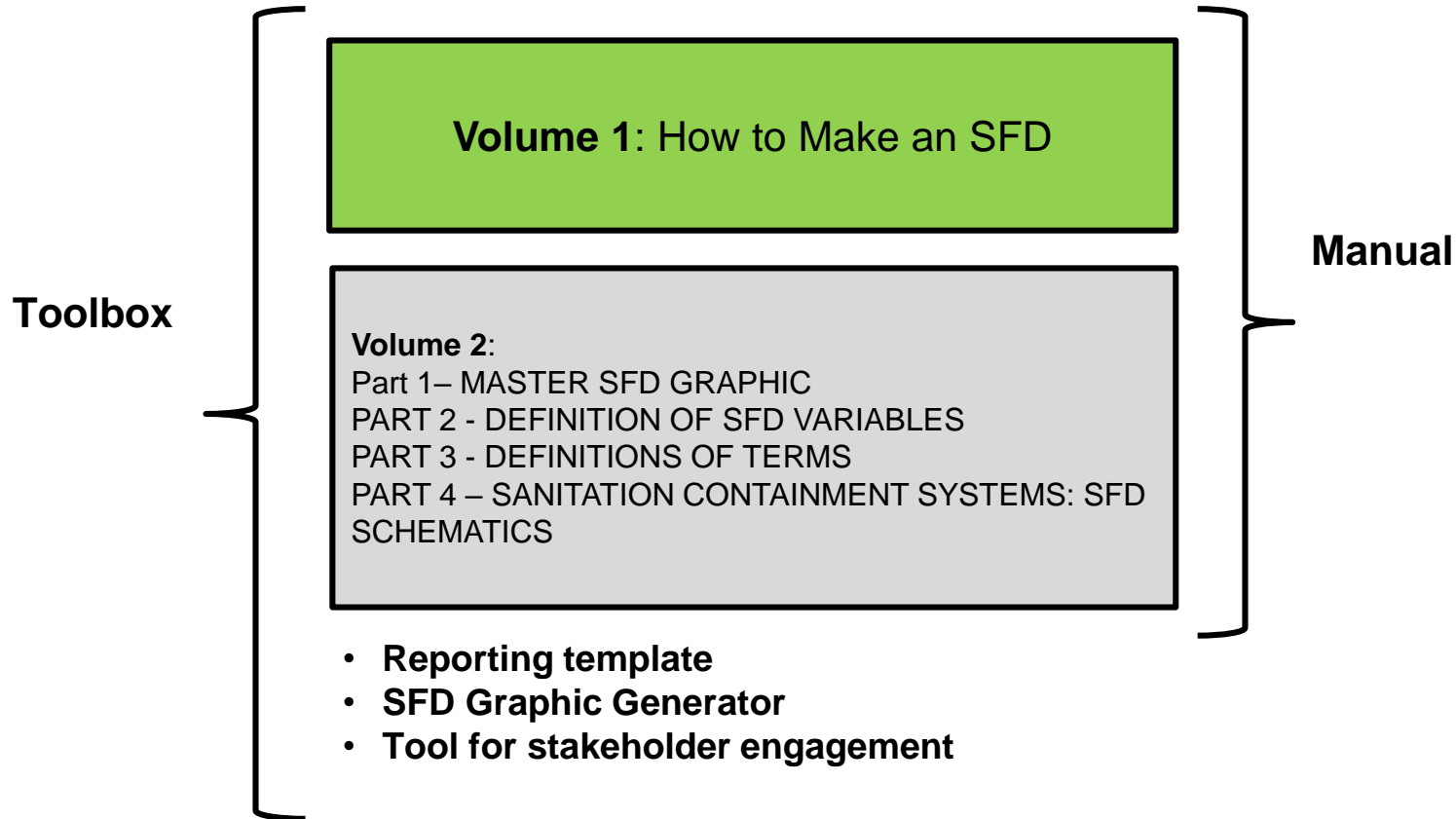
Methodology for Data Collection



Centre for Science and Environment

What is the SFD Process?





- **First identify the stakeholders!**

No.	Stakeholder group
1	City council / Municipal authority / Utility
2	Ministry in charge of urban sanitation and sewerage
3	Ministry in charge of urban solid waste
4	Ministries in charge of urban planning, environmental protection/ health, finance and economic development, agriculture
5	Service provider for construction of on-site sanitation technologies
6	Service provider for emptying and transport of faecal sludge
7	Service provider for operation and maintenance of treatment infrastructure
8	Market participants practising end-use of faecal sludge end products
9	Service provider for disposal of faecal sludge (sanitary landfill management)
10	External agencies associated with FSM services: e.g. NGOs, academic institutions, donors, private investors, consultants

Main methods adopted for data collection are:

- **Secondary data** : Published and grey literature, government documents, performance reports, DPRs etc

- **Primary data**
 - *Qualitative* data, that can be obtained through, for example:
 - **Key Informant Interviews (KIIs)** – either conducted in person or remotely managed. Key informants may include community leaders and people in charge of different aspects of sanitation in the city
 - **Observation of service provision and facilities** through the sanitation service chain
 - **Focus Group Discussions (FGDs)** with community representatives or service providers

Questions and data collection methods to analyse the range of sanitation service chain

	System type	Containment	Emptying	Transport	Treatment	End-use/disposal	Possible sources of information
System technologies and methods used in the city	Off-site sanitation: Wastewater direct to sewer (centralised)	<p>It is simple Just ask the Question What is? and seek how many/much?</p>					
	Off-site sanitation: Wastewater direct to sewer (decentralised)						
	On-site sanitation: Excreta contained on-site						
	On-site sanitation: Excreta not contained on-site						
	Open defecation						

Methodology for data collection CSE experience



Centre for Science and Environment

1. Formal email to the relevant department before visiting city

- Attach relevant documents like data checklist, questionnaires etc.
- Coordination with nodal person over phone in advance

2. Background study

- Population, area, wards etc.
- Geography of the city
- Sanitation overview
- Identify relevant stakeholders

3. Be prepared with

- All types of questionnaires and a base map
- Contact details of relevant stakeholders
- Camera to click pictures
- Supporting material an existing SFD report/flyer etc.
- Identity proof and relevant permission letters

1. Interact with Urban Local Body (ULB) officials

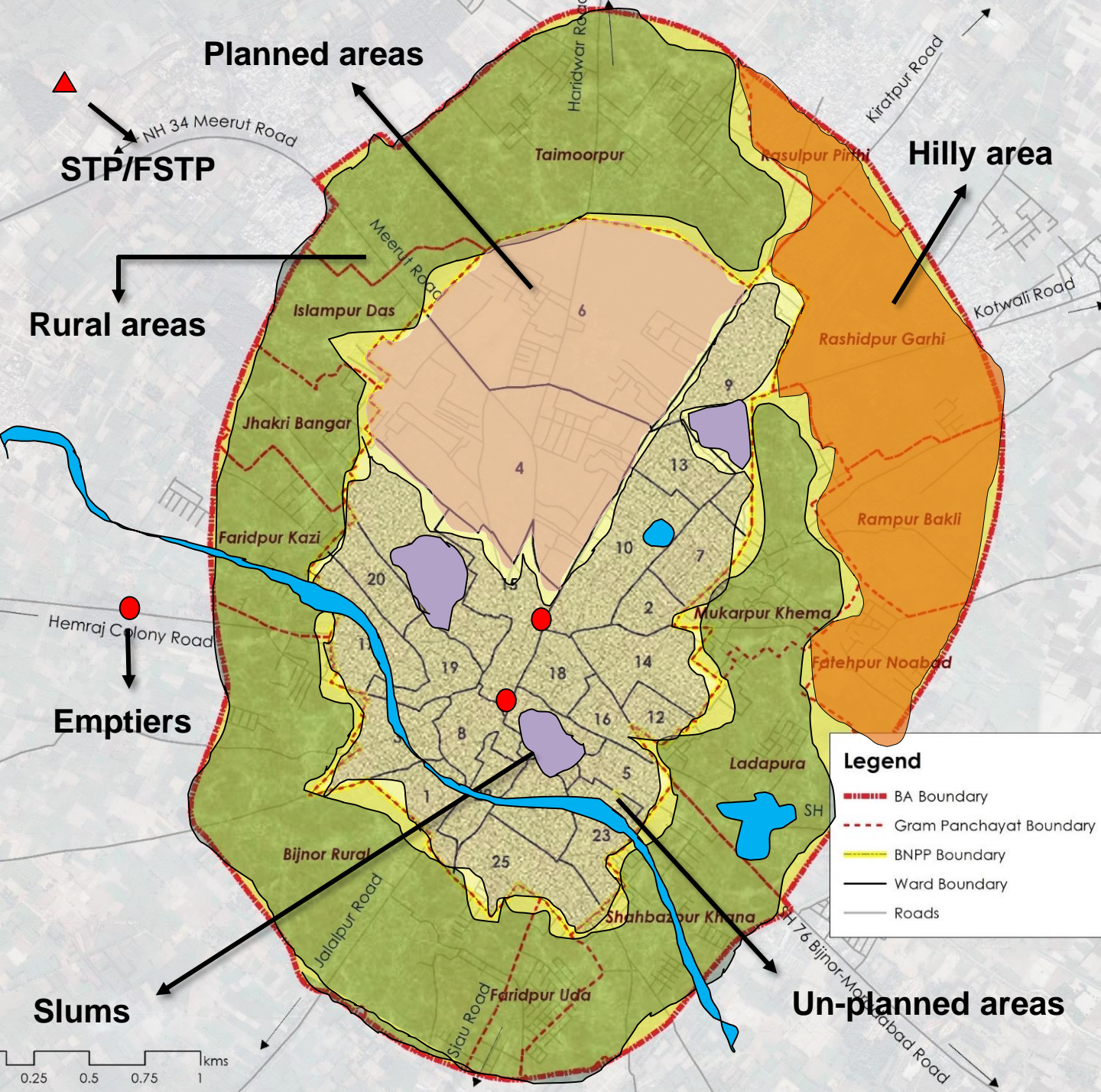
- Meet the Chairman/Commissioner to explain the work at hand
- Request for a nodal person, who can assist in data collection
- Plan for survey day wise and do reporting daily

2. Conduct Key Informant interview with Sanitary Inspector or equivalent officer

- To understand about the sanitation situation of the city
- To map of different types of settlements, physical features, income group of city
- To identify different possible containment systems
- To map different components of service chain on map to get an idea before doing the field survey

3. Plan KIIs and FGDs with relevant stakeholders

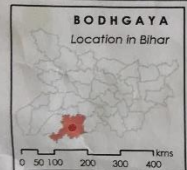
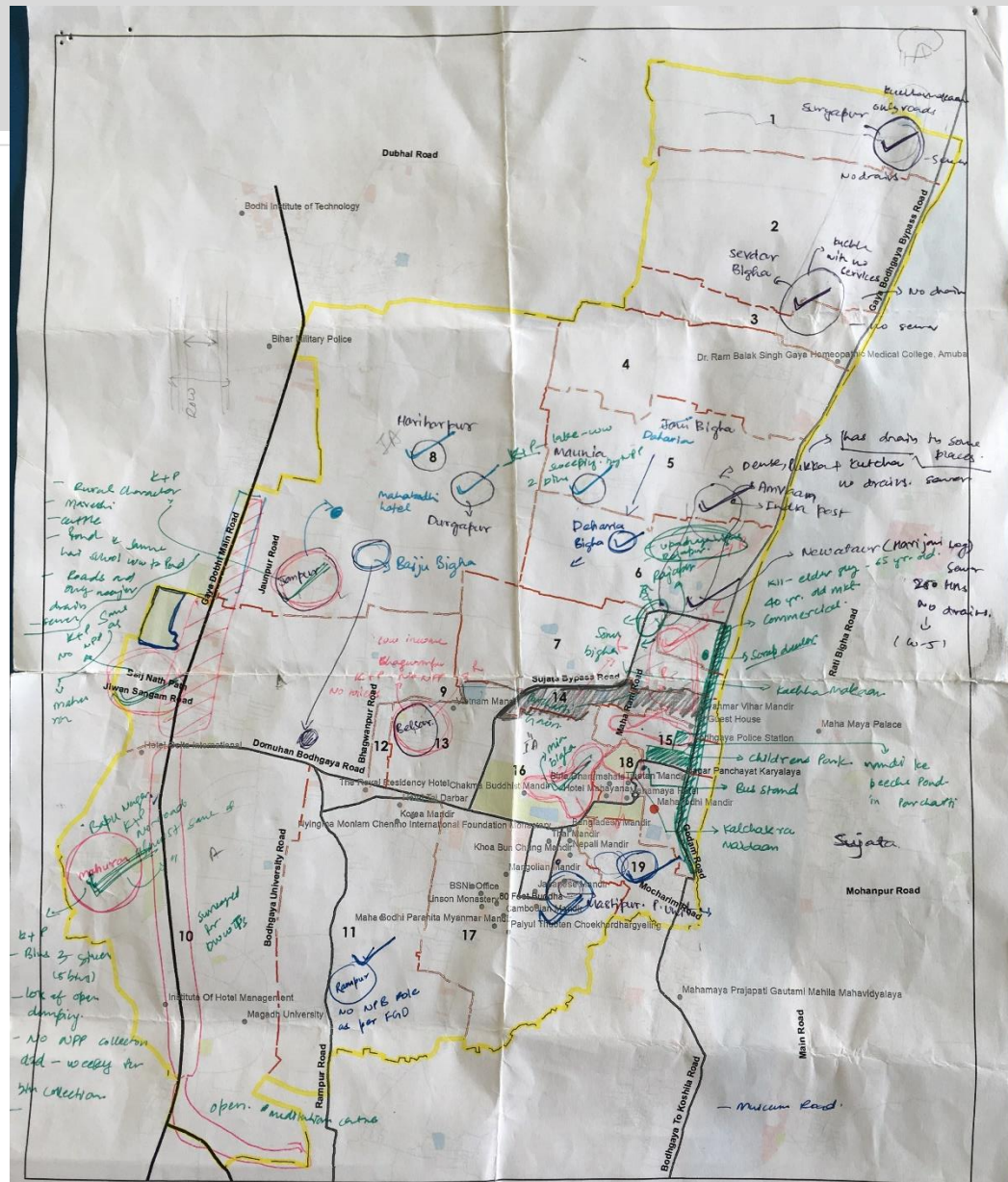
An example is presented in the following slides.



- 1. Type of settlement**
 - Planned
 - Unplanned
 - Rural characteristics
 - Slums
- 2. Income level**
 - Low income
 - High income
- 3. Geographical location**
 - Near river, nullah or any water body
 - Hills
- 4. Private emptiers**
- 5. STP/FSTP**

Sanitation chain sorted out on map

An example of mapping done by CSE




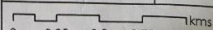
Legend

Landmarks	Land Use
Landmarks	Commercial
Ponds	Dense Tree Area
River/Natural Drains	Garden Park
Ward Boundary	Recreational
Municipal Boundary	

BASE MAP

Model City Sanitation Plan
BODHGAYA - 2035

Source:

You are now aware of where to get desired information from the city. Accordingly plan your day and schedule interviews with relevant stakeholders in advance. The survey you can conduct are:

1. Household survey in different settlements to identify which onsite/offsite system prevalent in city
2. Septic tank emptiers/manual scavengers, engaged in emptying transport of faecal sludge and septage
3. STP/FSTP survey to check treatment of sewage/septage

Possible key informant interviews

Containment

- Sanitary inspector
- Household survey
- Experienced mason survey
- Emptiers and manual scavengers
- Census data

1. Centralised/Decentralised system

- Sewerage network
- Coverage
- Treatment

2. Onsite Sanitation system

Septic tank and pit latrine

- Coverage
- Treatment

3. Open defecation

Emptying

- Sanitary inspector
- Emptiers and manual scavengers

Transport

- Sanitary inspector
- Emptiers and manual scavengers

Disposal

- Emptiers and manual scavengers
- Local people
- Sanitary inspector
- Local farmers

Treatment/ Enduse

- STP/FSTP in charge
- Local farmers

Key observations

- Construction sites to examine containment systems
- Supernatant outlet of onsite systems
- Overflowing of faecal sludge (FS) in drains
- Blockage in drains
- Coverage of sewerage network
- Open defecation hotspots near underserved areas
- Vacuum trucks in operation
- Quality of end product of a treatment unit
- Disposal points of FS
- Final discharging point of sewage
- Reuse of FS by farmers

1. To gather qualitative data that will complement, validate, or challenge data collected during the literature review and interviews
2. Focus groups are typically 4-10 participants of varied age groups and gender
3. FGDs should follow commonly adopted good practice, including:
 - Explaining the purpose of the FGD at the start and gain approval from participants to continue
 - Allow everyone the opportunity to participate and no-one to dominate
 - Voice-record the FGD with prior knowledge and granted permission
 - Allow participants to opt-out or leave at any time

Data checklist



Data Required

1. Population & area of city
2. No of household within municipal boundary
3. Population growth rate, topography and climate
4. Sources of water supply
5. Water supply per capita (lpcd)
6. Water supply coverage
7. No of household & population with latrine facility
8. No household & population connected to sewerage
9. No of household & population dependent on onsite sanitation
10. No of household & population dependent on community toilet/public toilet
11. Total no of Community and public toilet
12. No of HHs & population practicing open defecation
13. Septage generation per day
14. Emptying cycle of septic tank of HH in years
15. Emptying cycle of septic tank of PT/CT in years
16. State policy on sanitation
17. Institutional roles
18. Sanitation scenario in Institutions, Commercial areas, Industrial areas, Restaurants and hotels

- Fill public toilet questionnaire

Slums

- No of slum settlements and sanitation story
- Plans and measures to reduce inequity

Emptying and transport

- Desludging services given by govt. or private
- Specify no of trucks for each
- Fill private emptier questionnaire

Proposals

- Offsite
- Onsite
- Others

If sewerage connection is present

- No household & population connected to sewerage
- One time connection charges
- Monthly charges
- Functional status of sewerage network
- Capacity of STP (fill the STP questionnaire)
- Waste water generated per day in MLD

If Septic Tank

- No of HHs & population connected to septic tank whose effluent discharge to drain
- No of HHs & population connected to septic tank whose effluent discharge to soakpit
- No of HHs & population connected to pit
- No of HHs & population with no containment ?
- Type of septic tank prevalent in city
- KII with mason to know about septic tank design over time
- Primary survey to have info about containment systems
- Fill FGD questionnaire

HHs & population with no latrine facility and dependent on public or community toilets



CENTRE FOR SCIENCE AND ENVIRONMENT, NEW DELHI
Focus Group Discussion (FGD)
QUESTIONNAIRE

Date: ___/___/___, Area Name: _____, Ward: _____,

Co-ordinates: _____, No. of Participants (4-10) _____

Group Profile

No. of Male:

No. of Female:

Respondents	1	2	3	4	5	6	7	8	9	10
Gender										
Age										
Marital Status (U/M)										
Household size										
Social category (G, OBC, SC, ST)										
House Structure (P,K, SP)										
Latrine facility (IT, ST, CT, PT, ODF)										
IT: Individual Toilet, ST: Shared toilet, CT: Community Toilet, PT: Public Toilet, ODF: Open Defecation										
Who constructed toilet (SF, Govt.,Pvt.,NGO)										



CENTRE FOR SCIENCE AND ENVIRONMENT, NEW DELHI
Septic tank Cleaner Survey

Date:/Nov/2016 Time: Place:

1. Owner name & Mob. No.
2. De-sludging process (Manual/Mechanical/Semi M.M)
3. Reasons for adopting the process.....
4. Type of vehicle used for transportation (Tractor/Truck/trolley/others)

5. Price of vehicle.....
6. Type of ownership (Own vehicle /hire from others)
7. Number of vehicles (total in your area)
8. Capacity of vehicles
9. Typical age of Vehicles
10. Vehicle Assembling point.....

11. Vehicle Details.

New or second hand	
Mileage	
Durability of vehicle (Max.)	
Capacity of pump (in HP)	
Location of pump on vehicle	
Tank maintenance details (if any rupture etc.)	
Tank durability (max.)	

12. Typical No of trips per day
13. Average distance per trip.....
14. Area of responsibility.....

15. Fees charge/trip.....
16. Time taken for desludging activity.....
17. Where is sludge dumped
18. Where should be disposal site to be located?
19. Official dumping site for city.....
20. Reuse for sludge
21. Total Quantity of faecal sludge received per day per trip (Approx.).....
22. Septic tank location (top place used for any activity or unused).....
23. Septic Tanks details (Capacity, dimension, materials used for construction, Inlet and outlet baffle etc.....
24. Areas having highest demand for sludge clearing
25. Frequency of desludging per household.....
26. Fees Charges /Trip (Competitors)
27. NO. Of private Operators in your area
28. Are you maintaining any register/produce any bill for payment?
29. Is the current practice suitable for the you (Suggest any changes)

30. Major issue running in the business

31. Safety Measures if any during desludging process
32. Marketing Strategy.....
33. Why you are doing this work?

Public toilet survey



Centre for Science and Environment, New Delhi

Public Toilets Survey

Date:/August/2016 Time: Place:

1. NameNo. of the person
2. Total no. of public toilets in city
3. How you decide the location of Public toilets?
.....
.....
4. Do you provide all toilet and bathroom facilities in every toilet complex or it differs from place to place
5. Do you have separate section for male and female? (Yes/No)If No, why
.....
6. Whether men's Urinals and Seats separate?
7. No. of seats Present Men Women No. of Urinals Men
8. Water supply? (Present/absent) If present, Source.....
9. Tap water facility for each seat? (Yes/No) Flushing system (Flush/Pour Flush)
10. Quantity of water used monthly?
11. Average no. of user per day
12. User charges? Urinal- Rs Toilet- Rs Bathroom- Rs
13. Frequency of cleaning toilets Who is supposed to clean
14. Toilets and Bathroom connected to same outlet? Yes No
15. If yes, connected to? If No, connected to?
Septic Tanks Toilet Septic Tanks Sewerage Network
Sewerage Network Bathroom Septic Tanks Sewerage Network
If Septic Tank, outlet pipe connected to? Soak Pits Drain
16. Details of Septic Tank like construction, Size, Material etc
17. Frequency of desludging Process of desludging

18. Desludging trucks ownership, Own Private Rented/Contract
.....
19. If rented contact details of the same
20. If Own, Type of Truck No. of Truck Capacity.....
Parking Location No. of Cleanings per day
21. Any official designated place for disposal of sludge (Yes/No) if Yes, Place
22. If No, Where the sludge is disposed
23. Is there any reuse of the sludge
24. Issues

**Some pictures from field surveys
conducted by CSE**

Containment



Bansberia, West Bengal



Katihar, Bihar



Harsh Vihar

Septic tank connected to open drain



Meethapur

User interface discharges directly to open drain or storm drain

Kannur, Kerela



Kalpetta, Kerela



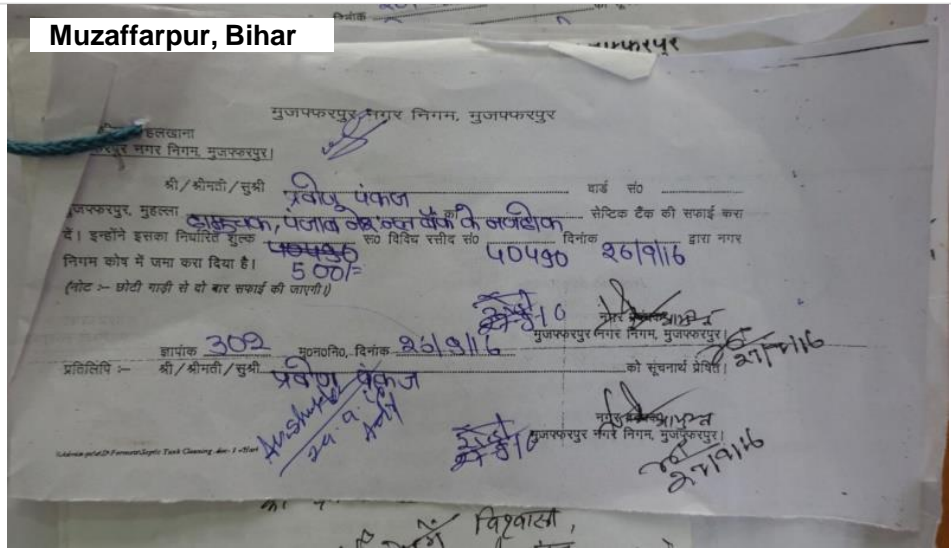
Bongaon, West Bengal



5/25/2020

22

Emptying



Muzaffarpur, Bihar



New Delhi



Bongaon, West Bengal



Muzaffarpur, Bihar



Transport



New Delhi



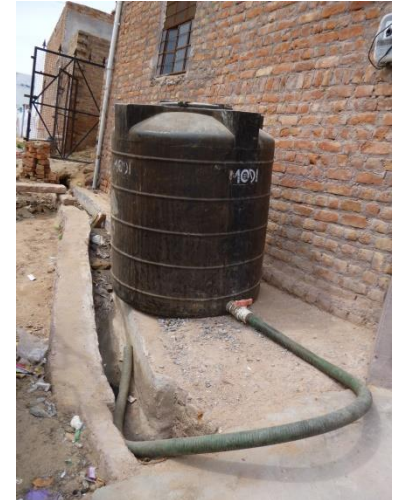
New Delhi



Bangalore, Karnataka



Rajasthan



Bansberia, West Bengal



New Delhi



New Delhi



Treatment



Bansberia, West Bengal



Disposal



New Delhi



Rajpur Extension

Septage disposal into storm water drain



Near Madanpur Khadar

Septage disposal into Agra canal



Nithari

Septage disposal at open ground





Sample household survey



Sample household survey



Key Informant Interviews



Thank you!

Email us at: sfdhelpdesk@cseindia.org

SFD Promotion Initiative

sustainable
sanitation
alliance

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

On behalf of



Federal Ministry
for Economic Cooperation
and Development


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