Situation Assessment Study

Faecal Sludge Management in Sheohar District of Bihar

January 2021
# Executive Summary

1. **Rationale of the Situation Assessment Study and Methodology adopted**

1.1 Project background

1.2 Stakeholders Consulted as part of Situation Assessment

1.3 Sample size for Focussed Group Discussions (FGDs) and In-Depth Interviews (IDIs)

1.4 Site selection and sample size methodology for HH Survey and GP level Survey

2. **Sheohar profile**

2.1 Demographic Profile Sheohar, Bihar

2.2 Community based institutions in Sheohar, Bihar

3. **Policy, regulatory and institutional framework**

3.1 Institutional Structure for Sanitation in Rural areas

3.2 Existing Policy Framework in rural areas

3.3 Existing Policy and Regulatory Framework for NP

4. **Situation of the FSM value chain**

4.1 Toilet Containment Typologies

4.2 Emptying, Transportation, treatment & Disposal/ reuse

5. **Stakeholder consultations**

6. **Shit Flow Diagram (SFD)**

7. **Proposed Interventions**

8. **District level consultative workshop on Situation Assessment Study on FSM**

9. **Annexures**

9.1 List of abbreviations

9.2 HH Survey Format

9.3 GP Survey Format

9.4 In-Depth Interviews and Focused group discussion formats

9.5 Attendance Sheet: District level consultative workshop on Situation Assessment Study on FSM
Executive Summary

Sheohar is a district carved out of Sitamarhi district. Its population as per Census 2011 is 6.56 lakhs of which 96% resides in rural areas. Its total land area is 443 square kilometres. The district is divided in 5 Blocks viz. Purnahiya, Piprarhi, Sheohar, Dumri Katsari and Tariyani. It comprises of 54 Gram Panchayats and 1 Urban Local Body. Economy of the district is predominantly agriculture based.

The rural areas of Bihar have been declared Open Defecation Free (ODF) in 2019 under Swachh Bharat Mission (Gramin) and the Lohia Swachh Bihar Abhiyan (LSBA). Under this campaign, toilets have been provided to 1.4 crore families of rural Bihar. Now the **emerging challenge is to manage the large volume of faecal sludge from the growing number of septic tanks, single and twin pit latrines**. Hence, proper manage of faecal waste through last mile coverage that maximizes safety and environment sustainability are emerging priorities. **Considering the high-water table in Sheohar, it is critical to safely treat the faecal sludge to prevent ground water contamination.** Faecal Sludge Management (FSM) can be looked as economical and quickly implementable approach for last mile coverage in sanitation for rural households. Water For people (WFP) and Ernst & Young LLP (EY) jointly conducted a Situation Assessment Study on Faecal Sludge Management in Sheohar from November - December 2020 to assist the district administration explore the potential for FSM.

This **study covered Gram Panchayats(GP) of all 5 blocks and Sheohar Nagar Panchayat.** Field visits were conducted and different stakeholders were consulted. Household survey was done in each GP and along with pan GP level survey. Different stakeholders consulted, were elected representatives, service providers such as cesspool operators, sanitation workers, Self Help Groups (SHGs) and masons, financial institutions working in the field of sanitation and government officials. Government officials consulted were District Magistrate (DM), Deputy Development Commissioner (DDC), Executive Officer (EO) of Sheohar Nagar Panchayat, Block Development Officers (BDOs), GP Secretaries, District and Village Water and Sanitation Committees and representatives of Jeevika Mission.
Executive Summary contd.

As far as access to toilets is concerned, almost entire population is covered with toilets and most have individual household toilets. While more than 90% of the drinking water is sourced from ground water but more than 50% of the toilets are located less than 10 m from the ground water source. ~38% of Households (HH) are dependent on pits and ~60% on septic tanks. Out of these, 80% of septic tanks are unscientific and >90% of pits are single pits. 36% of Onsite Sanitation System (OSS), which comprises of pits and septic tanks, are unlined. 24% of the OSS opens directly to ground. All of these pose a serious threat of groundwater contamination and consequent health risk. In Nagar Panchayat (NP) area >70% HHs are dependent on holding tanks. 16% OSS open directly to ground. In both rural and urban areas there is no standard size of OSS which could be attributed to the lack of awareness among masons about scientific design of septic tank.

In both Urban and rural areas most of the access roads are less than 5 m wide and most of OSS are either inside house and plastered completely. Therefore desludging requires breakage of the structures. In rural areas there is less prevalence of desludging as ~85% HHs have constructed toilets in the last 4-5 years. Among those who have undergone desludging, 20% of them have undergone non-mechanised desludging. So, proper implementation of Manual Scavenging Act is required. Desludging activity in rural areas are conducted mainly by private cesspool operators. In the NP ~66% HHs have constructed toilet in the last 4-5 years and 9% of households have undergone non mechanised desludging. So in both urban and rural areas there could be huge demand of desludging in coming years.

Due to lack of treatment facilities cesspool operators (private and government) dump the collected faecal sludge in open grounds and in water bodies. There is absence of regulatory mechanism to curb illegal disposal of faecal sludge. Personal Protective Equipments (PPEs) are seldom used by cesspool operators and almost no training has been provided to cesspool operators.
During stakeholder consultation it was evident that, in Sheohar not much has been done on the FSM. Most of the work is limited to construction of toilets. During discussion with Water and Sanitation Committees it was informed that there is limited understanding of FSM not only among citizens but also among those who are involved in sanitation activities. Block Development Officers (BDOs) expressed that they want SHGs, JEEVIKA members, Swachhagrahi’s to be regularly trained on these issues. GPs adjoining to NP areas have shortage of land for sanitation activities. In GPs there is poor drainage facilities due to lack of funds. Self Help Groups (SHGs) are involved in creating awareness among the masses for the use of toilets but they are also unaware of the need for FSM. Masons were found to be have limited to no awareness of the scientific design of septic tanks. This could be the reason for high number of unscientific septic tanks in the area. So training of masons is required. Sanitary workers appeared to be lacking adequate Personal Protective Equipments (PPEs). Since they are involved in a hazardous activities, their annual health check up is very important which is missing presently. There is dearth of Financial institutions. Only one Financial Institution (FI) C-DOT is working in Sheohar on sanitation. They too are providing finances only for construction of toilets as nobody has approached them yet, for financing other aspects of sanitation value chain.

Based on the situation assessment, several interventions can be proposed. Since there is no treatment facility available in the district, Faecal Sludge treatment Plants should be developed. This could be done by preparing feasible clustering plan for different GPs. Different treatment technologies should be assessed and appropriate treatment technology should be selected based on different factors like land area required, Capex and Opex and ease of operation and maintenance. Existing cesspool vehicles should be assessed for having adequate number of vehicles as per requirement. Therefore new vehicles could be purchased as per demand and considering access to narrow lanes. GPS enablement should be done for existing and new vehicles to check indiscriminate dumping.
A host of interventions could be done on regulations and governance part. This includes training and licensing of cesspool emptying vehicle operators. Building Byelaws could be made at district/Block level for rural areas and amendments in Sheohar building bye-laws could be done to include provision of scientific containment of faecal sludge as part of building approval process. Provision of penalties for indiscriminate dumping of faecal sludge should be made. For effective planning of FSM interventions, Block Sanitation Plan (BSP) for rural areas and City Sanitation Plan (CSP) for NP areas could be made. City Sanitation Task force at NP level and Village Water and Sanitation Committees (VWSC) in rural areas could play a key role for effective implementation of these interventions. PPEs usage should be mandatory for all sanitation workers and legal mechanisms could be put in place to ensure regular provision.

Sheohar has currently 3 Public Toilets (PTs). The total requirement of Public Toilets (PTs) in the district could be estimated. Conversion of insanitary toilets to sanitary toilets could be planned in the long run. Multiple Capacity Building programs is required to be arranged for all stakeholders. Since there is very low level of understanding among sanitary workers, masons, CBOs such as SHGs and Ward Sanitation Committees and GPs, Blocks, NP and district officials, capacity building workshops should be arranged for them periodically to increase their involvement. Capacity building of masons for toilet construction and retrofitting should be done. Exposure visits to learn leading practices could help change perceptions and develop new outlook. Existing IEC/BCC campaigns could evolve to motivate people to convert insanitary toilets to sanitary using incentive provided under SBM. Communication regarding harmful impact of non-mechanized emptying and indiscriminate dumping to relevant stakeholders could be made.

All the proposed interventions will require sustainable operation models to maintain the upcoming FSM infrastructure and services. Local entrepreneurs and Jeevika members could play a key role in this which leads to local livelihood creation too while addressing a grave environment and public health challenge. A phased programmatic approach is required to prioritize multiple interventions along with technical handholding assistance to the administration.
Rationale of the Situation Assessment Study and Methodology adopted
Project background

**Project Objectives**

FSM becomes an important aspect of sanitation due to the emerging challenges of managing the large volume of faecal sludge from the growing number of septic tanks and single pit latrines. So, the project aims for Assessment of following in Sheohar district of Bihar:

- Sanitation Practice and needs, reuse interests
- Institutional setup, government support, private sector support
- ODF alignment
- Legal and Regulatory framework
- Town structure and heterogeneity of sanitation practices
- Existing Financial flows

**Project Outputs**

- Situation Assessment of FSM*
- Shit Flow Diagram*
- FSM study report
- Sanitation Catalogue

* - This has been undertaken based on field study of select locations in all GPs
Stakeholders Consulted as part of Situation Assessment

**Elected Representatives**
- Mukhiyas and Members of GP

**Government Officials**
- District Magistrate, Sheohar
- Deputy Development Commissioner, Sheohar
- EO of Sheohar Nagar panchayat
- Block Development Officers (BDOs)
- GP Secretaries
- District Water and Sanitation Committees
- Village Water and Sanitation Committees

**Citizens**
- Households and Farmers
- SHG’s and NGO’s

**Service providers**
- Cesspool Operators
- Sanitation Workers and Masons
- Financial Institutions working in sanitation
## Sample size for Focussed Group Discussions (FGDs) and In-Depth Interviews (IDIs)

<table>
<thead>
<tr>
<th>Category of In depth Interviews (IDI)</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>District Magistrate, Sheohar</td>
<td>1</td>
</tr>
<tr>
<td>Deputy Development Commissioner, Sheohar</td>
<td>1</td>
</tr>
<tr>
<td>EO of Nagar Panchayat</td>
<td>1</td>
</tr>
<tr>
<td>BDOs</td>
<td>5</td>
</tr>
<tr>
<td>GP Secretary (GP level Survey)</td>
<td>7</td>
</tr>
<tr>
<td>Mukhiyas</td>
<td>9</td>
</tr>
<tr>
<td>Cesspool Operators</td>
<td>5 (4 private and 1 NP)</td>
</tr>
<tr>
<td>Financial Institutions working in Sanitation</td>
<td>1 (Only C DOT)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category of Focussed Group Discussions (FGDs)</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>District Water and Sanitation Committee Members</td>
<td>1</td>
</tr>
<tr>
<td>Village Water and Sanitation Committee Members</td>
<td>9</td>
</tr>
<tr>
<td>Sanitary Workers</td>
<td>3</td>
</tr>
<tr>
<td>Masons</td>
<td>5</td>
</tr>
<tr>
<td>Self Help Groups</td>
<td>6</td>
</tr>
</tbody>
</table>
## Site selection and sample size methodology for HH Survey and GP level Survey

<table>
<thead>
<tr>
<th>Name of Block/ NP</th>
<th>Number of GP</th>
<th>Number of Villages</th>
<th>No. of Households</th>
<th>Sample size @95% Confidence interval</th>
<th>Sample size per GP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dumri Katsari</td>
<td>8</td>
<td>30</td>
<td>20943</td>
<td>378</td>
<td>47</td>
</tr>
<tr>
<td>Piprahi</td>
<td>11</td>
<td>27</td>
<td>28107</td>
<td>379</td>
<td>34</td>
</tr>
<tr>
<td>Purnahiya</td>
<td>8</td>
<td>27</td>
<td>21600</td>
<td>378</td>
<td>47</td>
</tr>
<tr>
<td>Tariyani</td>
<td>16</td>
<td>78</td>
<td>44888</td>
<td>381</td>
<td>24</td>
</tr>
<tr>
<td>Sheohar</td>
<td>11</td>
<td>45</td>
<td>34606</td>
<td>380</td>
<td>35</td>
</tr>
<tr>
<td>Sheohar (NP)</td>
<td>NA</td>
<td>NA</td>
<td>5858</td>
<td>381</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2277</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Stakeholder Consultation

Consultation with DM

Consultation with Mukhiyas

Consultation with Households

Consultation with SHGs
## Demographic Profile Sheohar, Bihar

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population of Bihar State</td>
<td>10,40,99,452</td>
</tr>
<tr>
<td>Population of Rural Bihar</td>
<td>9,23,41,436</td>
</tr>
<tr>
<td>Population of Sheohar District</td>
<td>6,56,246</td>
</tr>
<tr>
<td>Population of Sheohar (Rural)</td>
<td>6,28,130</td>
</tr>
<tr>
<td>Area of Sheohar (sq Km)</td>
<td>443</td>
</tr>
<tr>
<td>No. of Blocks in Sheohar</td>
<td>5</td>
</tr>
<tr>
<td>No. of Gram Panchayats (GPs)</td>
<td>54</td>
</tr>
<tr>
<td>No. of Villages in Sheohar</td>
<td>207</td>
</tr>
</tbody>
</table>

- Purnahiya
- Piprarhi
- Sheohar
- Dumri katsari
- Tariyani

All the Population are as per Census 2011

Source: www.mapsofindia.com
Community based institutions in Sheohar, Bihar

Community based institutions are managed by Bihar Rural Livelihoods Project (BRLP), locally known as JEEViKA with the objective of social & economic empowerment of the rural poor. Different levels are managed as:
1) State Project management Unit (SPMU): at State level
2) District Project Managers: at District level
3) Block Project Managers: at Block level

Different SHGs consulted during stakeholder consultation are:
1) Gayatri Swayam Sahayta Samuh
2) Kumkum Swayam Sahayata Samuh
3) Anu Jeevika Samuh
4) Shivani Jeevika Samuh
5) Kaali Swayam Sahayta Samuh
6) Maa Durga Swayam Sahayta Samuh
Policy, regulatory and institutional framework
### Institutional Structure for Sanitation in Rural areas

<table>
<thead>
<tr>
<th>Level</th>
<th>Institutional Structure</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
</table>
| **State level** | **Executing Body:** Rural Development Department State Project Management Unit (SPMU – LSBA*) | ► Policy Formation  
► Guidelines and directions  
► Monitoring of sanctioned schemes  
► Capacity building  
► MIS development |
|              | **Members:** CEO, Director Livelihood Mission and State Project Manager – Sanitation, Health and Nutrition with technical staff |                                                                   |
| **District level** | **Executing body:** District Water and Sanitation Committee | ► Implementation of SLWM  
► Technical and administrative approval  
► Review of work plan developed by GP  
► Monthly monitoring and evaluation of SLWM activities in GPs  
► Direction to different departments to help in SLWM through other schemes and activities as and when required |
|              | **Members:** Chairperson – District Magistrate, Vice chairperson - Deputy Development Commissioner (DDC), Member Secretary - Director Accounts of District Rural Development Agency (DRDA) Other Members - Executive Engineer, Public health Board, District Project Manager (DPM) – Jeevika |                                                                   |
| **Block level** | **Executing body:** Block level monitoring unit (BPMU) | ► Monitoring & Evaluation of different SLWM activities at block level  
► Technical inputs to GP for SLWM activities  
► Forwarding technical and financial recommendations of GPs to district |
|              | **Members:** Chairperson- Block Development Officer (BDO), Member Secretary- Block Coordinator |                                                                   |
| **Gram Panchayat level** | **Executing body:** Gram panchayat Implementation committee (GPIC) and Ward implementation and Management Committee (WIMC)** | ► Formation of Village and ward level work plan  
► Implementation of SLWM activities at ward level  
► Collection of user charges for SWM |
|              | **Members:** Chairperson- GP head for GPIC and Ward member for WIMC, Member Secretary- GP Secretary |                                                                   |

* LSBA – Lohia Swachh Bihar Abhiyan

**During Stakeholder Consultation, we come to know that WIMCs are more active and vibrant than gram panchayat level committees**
Existing Policy Framework in rural areas

Existing Policies for Sanitation in rural areas

► State level guidelines for Solid and Liquid Waste Management (SLWM), October 2019
► No policy at the state level for liquid waste management
► Lack of local bye-law for GP that covers FSM

Key highlights of SLWM guidelines for Bihar

 ► Sanitary inspector can be employed at GP level (min. 1 per GP)
 ► For SLWM activities GPs can be provided with finances as:
   ► GPs with 150 HH: Max. 7 Lakhs
   ► GPs with 300 HH: Max. 12 Lakhs
   ► GPs with 500 HH: Max. 15 Lakhs
   ► GPs with >500 HH: Max. 20 Lakhs
 ► Finances can also be arranged from Nir Nirmal Pariyojana (NNP), Ganga Action Plan (GAP), Mukhyamantri Payjal Yojana, RURBAN/ MNREGA/ 14th Finance commission/ 5th State Finance commission
 ► Community Procurement can be done through NNP

Key highlights of SBM (G) guidelines

► Atleast one FSTP per district
► Source of funding for sanitation activities can be as:
  ► Construction of Individual Household Latrines (IHHLs) : SBM funds
  ► Retrofitting of Toilets: 15th Central Finance Commission
  ► Faecal Sludge management Plants Construction: SBM Funds – INR 230 per capita at district level for village clusters
### Existing Policies for Sanitation in urban areas

- State has already provided guidelines for Faecal Sludge and Septage Management in June 2018
- No policy and Rules at state level for SLWM in Urban
- No SLWM guidelines at Sheohar Nagar Panchayat level
- No City Sanitation Plan (CSP) for Sheohar Nagar Panchayat
- No City Sanitation Task Force has been formed yet at city level
- Bihar Building Bye Laws issued in 2014 but no provision for evaluating proper Onsite Sanitation System (OSS) during building approval process

* - This was mentioned by NP officials during primary discussions. However, we are yet to receive these documents.
Situation of FSM value chain

A - Toilet Containment Typologies
Access to toilets in rural Sheohar

<table>
<thead>
<tr>
<th>Description</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Household Latrine (%)</td>
<td>99.1</td>
</tr>
<tr>
<td>Community Toilet (%)</td>
<td>0.9</td>
</tr>
</tbody>
</table>

**Highlights:**
- Between 2015 and 2020, 109071 no. of toilets were added.
- Almost entire population is covered with toilets and most have Individual Household Toilets.
- >50% of toilets located <10 m from ground water source.
- >90% of drinking water is from ground water.
- 3 Public Toilets (PTs) in the entire district.

“GPs need more Community Toilets (CTs) due to more footfall in existing CTs” – Mukhiyas of Kolhua Thikha, Purnahiya block and Parsauni Baij, Piprahi block.
Onsite Sanitation System (OSS) types in rural Sheohar

Highlights:
- 38% HHs dependent on pits, ~60% on septic tank
- 80% of septic tanks are unscientific
- >90% of pits are single pits. There is growing preference for twin pits.
- 36% of OSS are unlined which poses a serious threat of groundwater contamination
- There is no standard size of OSS

* Lined onsite sanitation system is one that is plastered from all four sides and at the bottom and prevent contamination of ground water and soil. Pits have pores on the side walls to allow wastewater to percolate out.
Onsite Sanitation System (OSS) types in rural Sheohar

- OSS connected to Open drain, 27.7, 28%
- OSS connected to Open Ground, 24.1, 24%
- OSS connected to Closed drain, 48.1, 48%

**Highlights:**
- 24% OSS open directly to ground
- Most OSS within house and are sealed

*Toilet built on top of OSS*

*OSS discharging in open ground*
Onsite Sanitation System (OSS) types in Sheohar NP

**Highlights:**
- > 70% HHs dependent on holding tanks
- 72% of septic tanks are unscientific
- There is no standard size of OSS
- 16% OSS open directly to ground which is a serious matter for any city
- Lack of awareness in masons about scientific design of Septic tank

* - Lined onsite sanitation system is one that is plastered from all four sides and at the bottom and prevent contamination of ground water and soil. Pits have pores on the side walls to allow wastewater to percolate out.

“We have been provided training on construction of pre-cast ringed pit” – Mason, Sheohar
Situation of FSM value chain

B - Emptying, transportation, treatment & disposal/ reuse
Access roads to containment system in rural Sheohar

Types of Access roads to OSS
- Narrow road (less than 2 m): 15%
- Medium road (2-5 m): 83%
- Broad road (more than 5 m): 2%

Highlights
- Most of the access roads are <5m wide
- Most of OSS are either inside house and plastered completely

Narrow lanes to OSS
OSS inside house
Desludging pattern in rural Sheohar

**Highlights**
- ~85% HHs have constructed toilet in the last 4-5 years
- There could be huge demand of desludging in coming years
- Desludging requires breakage of structure
- Desludging mostly done by private cesspool operators
- 20% of households have undergone Non mechanised desludging. So, proper implementation of Manual Scavenging Act is required

"We are struggling for disposing collected faecal sludge. Everybody wants to get their tanks cleaned but no one wants it to be emptied in drains or open areas. If FSTPs are constructed, then it will be a big relief to cesspool operators" – Private Operator, Sheohar
Access roads to containment system in Sheohar NP

**Highlights**
- Most of the access roads are <5m wide
- Most of OSS are either inside house and plastered completely
Desludging pattern in Sheohar NP

**Highlights**
- ~66% HHs have constructed toilet in the last 4-5 years
- ~22% HH have never gone for desludging
- There could be huge demand of desludging in coming years
- Desludging requires breakage of structure
- 9% of households have undergone Non mechanised desludging.

“We are working in such hazardous environment, we should be provided with PPEs and annual health checkup should be arranged for us” – Sanitary worker, Sheohar
Emptying transport and disposal practices

Desludging and disposal practices

- Desludging is mostly done by private cesspool operators. Sheohar Nagar Panchayat (NP) also has desludging vehicles.

Private Operations

- 4 private operators identified with 12 vehicles (6 vehicles of 6 Kl capacity and 6 vehicles of 5KL capacity)
- ~INR 1500 or more per trip for desludging (no fixed fee).
- Extra charges for breakage to gain access to septic tank/pit.
- Household is responsible to provider place for disposal
- Private Operators sometimes refuse service if disposal site is not provided

Sheohar NP

- Sheohar NP has 2 cesspool vehicles of 4 KI capacity (out of which 1 is under breakdown) which covers entire district
- Lack of vehicle is inhibiting their ability to provide services
- INR 1500 per trip for desludging (fixed fee).
- Extra charges for breakage to gain access to septic tank/pit.

Other points:

- There is absence of regulatory mechanism to curb illegal disposal
- PPEs are seldom used by cesspool operators
- No training has been provided to cesspool operators
Sheohar Site Visit

**OSS discharging in open ground in Harnahi GP of Sheohar block**

**Desludging Operation in Sheohar by workers without PPEs**

**Disposal from cesspool emptying vehicle in the outskirts of Sheohar**

**Disposal by worker without using PPE**
Stakeholder consultations
Key Insights from stakeholder consultation - Government

**Stakeholder’s consultation insights**

**Block Development Officers (BDOs)**
- Regularly involved in monitoring of different works undertaken by GPs but that is limited to toilet construction.
- Although awareness campaigns are regularly undertaken but nothing concrete has been done on FSSM.
- They are of view that it is very crucial subject and will be ready to do something in this field.
- They want SHGs, JEEVIKA members, Swachhagrahi’s to be regularly trained on these issues.

**Gram Panchayat Chiefs (Mukhiyas)**
- Toilet construction has been a focus. FSM needs attention.
- Lack of funds with GPs which leads to poor drainage facilities.
- GPs adjoining to Sheohar NP even has shortage of land availability.
- GPs need more Community Toilets (CTs); more footfall in existing CTs.

**Village Water and Sanitation Committees (VWSC)**
- Involved in mostly awareness campaigns for more use of toilets and health hygiene aspects.
- Not sound understanding of FSM, they know only desludging.
- Involved in monitoring of toilet construction and sanitation activities like drains construction.

**Gram Panchayat Secretaries**
- Sanitation related database maintained manually; has very limited and incomplete information.
- More than 50% of the GPs provided with piped drinking water network but very low availability of water in taps. But as per secretaries 50-60 litres per capita/day water provided.
Key Insights from stakeholder consultation – Non Gov.

**Self Help Groups (SHGs)**
- Mostly not aware about FSM and its value chain but only health hazards of its ill management
- Mostly providing awareness in public for use of toilet, helping them to get employed, getting loans for entrepreneurship and providing education to all

**Masons**
- Almost all are unaware of Indian Standards (IS) of Septic tank designing
- Most of the masons are misinterpreted tanks made from precast ring as septic tank.
- Clear need for training on regular basis

**Sanitation workers**
- Not involved in FSM activities, rather in solid waste only and that too only in Nagar Panchayat (NP) area
- Limited availability of Personal Protective Equipments (PPEs)
- Not much exposure to training on different aspects.
- Workers involved in hazardous activities, their annual health check up is very important which is missing presently

**Financial Institutions**
- Only one Financial Institution (FI) C-DOT working in Sheohar on sanitation.
- Involved in only providing finances for toilet construction. No body has approached them yet, for financing other aspects of sanitation value chain.
Shit Flow Diagram (SFD)

Key Terminologies of SFD:
- **Offsite sanitation**: includes both toilets directly connected to sewer network and toilets connected to open drain without OSS
- **Onsite Sanitation**: Toilets having some type of containment system (septic tanks, single and twin pit, holding tank etc)
- **Open defecation**: Not availability of toilets
- **Contained**: when pathogen transmission from faecal sludge is arrested (safe sanitation)
- **Not contained**: when pathogen transmission from faecal sludge is not arrested (unsafe sanitation)
- **SN**: Supernatant
- **FS**: Faecal Sludge
- **WW**: waste water

Highlights:
- 70% of FS managed in unsafe manner
- Septic tank with soakpit: unsafe for Sheohar
- Twin pits: unsafe for Sheohar
Shit Flow Diagram (SFD)

* Offsite Sanitation system in SFD includes both toilets directly connected to sewer network and toilets connected to open drain without OSS
Proposed Interventions
# Proposed Interventions

## Faecal Sludge Treatment Plant (FSTP)
- Clustering plan for GPs
- Estimation of land area and devise selection criteria
- Selection of treatment technology
- Preparation of DPR
- Construction of FSTP
- O&M model and approach for FSTP

## Cesspool Vehicles
- Procurement of desludging vehicles considering access to narrow lanes
- GPS enablement of existing & new Cesspool vehicles
- Procurement of vehicles as per demand

Area to be allotted for setting up of FSTP (1-2 Acres) based on clusters of different GPs
To work out the affordable cost which can be bear by citizens to go for schedule desludging

| Short term intervention (0-6 months) | Medium term intervention (6-12 months) | Long term intervention (12-24 months) |
Proposed Interventions

Regulation and governance reforms

- PPE usage to be made mandatory
- Training and licensing of cesspool operators
- Desludging fee could be fixed and regulated
- Implementation plan for Prohibition of Manual Scavenging
- Implementation strategy of the Bihar SLWM guidelines (rural and urban)
- Amendments in Sheohar building bye-laws to include provision of scientific containment of faecal sludge as part of building approval process
- Building byelaws for rural areas at district/Block/GP level
- Provision of penalties for indiscriminate dumping of faecal sludge
- Formation of Block sanitation Plan (BSP)
- Finalizing City Sanitation Plan (CSP) for NP region
- Formalization and strengthening of community level institutions such as CSTF in Sheohar NP and VWSC in rural areas
- Service level benchmarking for each ward and its integration with CSP and BSP

Short term intervention (0-6 months)  Medium term intervention (6-12 months)  Long term intervention (12-24 months)
## Proposed Interventions

<table>
<thead>
<tr>
<th>Proposed Interventions</th>
<th>Access to toilets</th>
<th>Capacity building</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conversion from pits to scientific septic tanks</td>
<td></td>
<td>Capacity building of masons (Toilet construction and retrofitting)</td>
</tr>
<tr>
<td>At least one Public Toilet in each GP or each market</td>
<td></td>
<td>Building capacity of CBOs such as SHGs and Ward Sanitation Committees</td>
</tr>
<tr>
<td>Drainage to collect overflow from containment system and grey water</td>
<td></td>
<td>Strengthened monitoring at community level of Ward Sanitation committee, CSTF and SHG</td>
</tr>
<tr>
<td>Providing Point of Purchases (POP) for procuring sanitary items</td>
<td></td>
<td>Capacitate GPs, Blocks, NP and district officials to increase their involvement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exposure visits to learn leading practices</td>
</tr>
</tbody>
</table>

### Interventions Timeline
- **Short term intervention (0-6 months)**
- **Medium term intervention (6-12 months)**
- **Long term intervention (12-24 months)**
Proposed Interventions

- Motivate people to convert insanitary toilets to sanitary using incentive provided under SBM
- Disseminate information on OSS solutions available in market which are economical, retrofittable and quicker to implement
- Communication of harmful impact of non-mechanized emptying and indiscriminate dumping to relevant stakeholders
- Identify ways to increase penetration of information to citizens on mechanized emptying service providers

IEC/BCC

Short term intervention (0-6 months) | Medium term intervention (6-12 months) | Long term intervention (12-24 months)
Key highlights from the Consultation Workshop held to share the findings of the Situation Assessment Study
**District level consultative workshop on Situation Assessment Study on FSM**

District level consultative workshop was organised on 18.12.2020 in Sheohar Collectorate.

**Objective of workshop:**
1. Provide orientation on Faecal Sludge Management (FSM)
2. To share the findings of the situation assessment study on FSM undertaken in Sheohar
3. To take feedback on the potential interventions identified
4. To seek inputs on the same from different stakeholders

**Key Discussion Points**

<table>
<thead>
<tr>
<th>FSM Infrastructure Provisions</th>
<th>DM highlighted the need of FSM in Sheohar. He insisted on funds availability and promised for land could be allocation and recommendation for financial approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DDC insisted for solutions as per local needs</td>
</tr>
<tr>
<td></td>
<td>Due to toilets construction in SBM, desludging demand could be more in future. So FSM estimation to be done for Vehicle procurement and FSTP construction. Engineers at block level could be leveraged.</td>
</tr>
<tr>
<td></td>
<td>Single pits &amp; twin pits in high water table to be relooked. Phase wise plan (short, medium and long term) could be devised</td>
</tr>
<tr>
<td></td>
<td>NP receives 3-4 request daily. Some times have to reject desludging requests due to in accessibility. This point need to be considered in future during vehicle procurement</td>
</tr>
<tr>
<td></td>
<td>Public toilets (PT) are low (3), requirement need to be estimated. Community Toilets (CT) need to be increased due to high footfall in some of the CTs</td>
</tr>
<tr>
<td></td>
<td>Since O&amp;M of CT and PT is a major problem, operation models to be proposed by WFP and EY in FSM report</td>
</tr>
</tbody>
</table>
### District level consultative workshop on Situation Assessment Study on FSM

#### Key Discussion Points

| FSM Infrastructure Provisions | DDC was of view that local specific solutions to be devised and FSM related solutions to be planned in phased manner- short, medium and long term goals  
| Apart from SBM (G) other schemes like Nir Nirmal Pariyojana (NNP) need to be explored for funding FSM initiatives |
| Operational Model | Case example of SHG integrated with FSM initiatives discussed  
| DPM Jeevika affirmed possibility of integration of SHG with FSM services and CT, PT management. District administration to explore such integration. |
| Policy & Regulations | Regularisation of private cesspool vehicles to be done through licensing. Licensing should focus on provisions on PPEs to workers and disposals at designated points.  
| Local byelaws or regulations (including provisions of penalties) to be passed at district level if possible, to regulate illegal dumping and toilets discharging directly in open drains. |
| IEC and Capacity Building | IEC need to be focussed, so far focus has been on toilet construction. Low level of FSM awareness among stakeholders.  
| Masons unaware of scientific designs of septic tanks, one of the reasons of incorrect designs of OSS in Sheohar. Regular training programmes need to be organised for masons  
| PPEs and annual health check up of sanitary workers need to be focussed  
| Funding of training of sanitary workers and masons through labour department to be explored |
## District level consultative workshop on Situation Assessment Study on FSM

### Action Points Agreed

#### WFP and EY
- Final FSM report to be submitted in January 2021 including:
  - Clustering plan for FSTPs in consultation with BDOs and EO Nagar Panchayat
  - Technology options for FSTP
  - Land Area estimates and Broad cost estimate (capex and opex)
  - Total no. of vehicles required if any and associated costs
  - Phase wise implementation plan for creating OSS as per local needs
  - Potential financial sources
  - Operational model for O&M
  - Share existing IEC/BCC material with BDOs and EO Sheohar NP

#### District Administration
- Ensuring availability of land for the proposed FSTPs and application for financial approvals
- Provision of local bye laws/ regulation at district level for FSM
- Licensing of Cesspool operators
<table>
<thead>
<tr>
<th>Abbreviations</th>
<th>Meanings</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDO</td>
<td>Block Development Officer</td>
</tr>
<tr>
<td>BIS</td>
<td>Bureau of Indian Standards</td>
</tr>
<tr>
<td>BOD</td>
<td>Biological Oxygen Demand</td>
</tr>
<tr>
<td>BPMU</td>
<td>Block Level Monitoring Unit</td>
</tr>
<tr>
<td>BRLP</td>
<td>Bihar Rural Livelihoods Project</td>
</tr>
<tr>
<td>BSP</td>
<td>Block sanitation Plan</td>
</tr>
<tr>
<td>CBO</td>
<td>Community Based Organization’s</td>
</tr>
<tr>
<td>CLF</td>
<td>Cluster Level Federations</td>
</tr>
<tr>
<td>CPHEEO</td>
<td>Central Public Health and Environmental Engineering Organization</td>
</tr>
<tr>
<td>CSP</td>
<td>City Sanitation Plans</td>
</tr>
<tr>
<td>CSR</td>
<td>Corporate Social Responsibility</td>
</tr>
<tr>
<td>CSTF</td>
<td>City Sanitation Task Force</td>
</tr>
<tr>
<td>CT</td>
<td>Community Toilets</td>
</tr>
<tr>
<td>DDC</td>
<td>Deputy Development Commissioner</td>
</tr>
<tr>
<td>DEWATS</td>
<td>Decentralized Wastewater Treatment</td>
</tr>
<tr>
<td>DPM</td>
<td>District Project Manager</td>
</tr>
<tr>
<td>DPR</td>
<td>Detailed Project Report</td>
</tr>
<tr>
<td>DRDA</td>
<td>District Rural Development Agency</td>
</tr>
<tr>
<td>EO</td>
<td>Executive Officer</td>
</tr>
<tr>
<td>FGD</td>
<td>Focus Group Discussion</td>
</tr>
<tr>
<td>FS</td>
<td>Faecal Sludge</td>
</tr>
<tr>
<td>FSM</td>
<td>Faecal Sludge Management</td>
</tr>
<tr>
<td>FSSM</td>
<td>Faecal Sludge and Septage Management</td>
</tr>
<tr>
<td>FSTP</td>
<td>Faecal Sludge Treatment Plant</td>
</tr>
<tr>
<td>GAP</td>
<td>Ganga Action Plan</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographic Information System</td>
</tr>
<tr>
<td>GP</td>
<td>Gram Panchayat</td>
</tr>
<tr>
<td>GPIC</td>
<td>Gram panchayat Implementation committee</td>
</tr>
<tr>
<td>GPS</td>
<td>Global Positioning System</td>
</tr>
<tr>
<td>HH</td>
<td>Households</td>
</tr>
<tr>
<td>IDI</td>
<td>In-depth interviews</td>
</tr>
<tr>
<td>IEC/BCC</td>
<td>Information, Education and Communication/Behavior Change Communication</td>
</tr>
<tr>
<td>IHHL</td>
<td>Individual HH Latrines</td>
</tr>
<tr>
<td>KL</td>
<td>Kilo Litre</td>
</tr>
<tr>
<td>LSBA</td>
<td>Lohia Swachh Bihar Abhiyan</td>
</tr>
<tr>
<td>MLD</td>
<td>Million Liters per day</td>
</tr>
<tr>
<td>MNREGA</td>
<td>Mahatma Gandhi National Rural Employment Guarantee Act</td>
</tr>
<tr>
<td>MSW</td>
<td>Municipal Solid Waste</td>
</tr>
<tr>
<td>M</td>
<td>Meter</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organisations</td>
</tr>
<tr>
<td>NNP</td>
<td>Nir Nirmal Pariyojana</td>
</tr>
<tr>
<td>NP</td>
<td>Nagar Panchayat</td>
</tr>
<tr>
<td>NULM</td>
<td>National Urban Livelihood Mission</td>
</tr>
<tr>
<td>NUSP</td>
<td>National Urban Sanitation Policy</td>
</tr>
<tr>
<td>O&amp;M</td>
<td>Operations &amp; Maintenance</td>
</tr>
<tr>
<td>OD</td>
<td>Open Defecation</td>
</tr>
<tr>
<td>ODF</td>
<td>Open Defecation Free</td>
</tr>
<tr>
<td>OSS</td>
<td>Onsite Sanitation System</td>
</tr>
<tr>
<td>PCB</td>
<td>Pollution Control Board</td>
</tr>
<tr>
<td>POP</td>
<td>Point of Purchases</td>
</tr>
<tr>
<td>PPE</td>
<td>Personal Protective Equipment</td>
</tr>
<tr>
<td>PT</td>
<td>Public Toilets</td>
</tr>
<tr>
<td>RfP</td>
<td>Request for Proposal</td>
</tr>
<tr>
<td>SBM (U)</td>
<td>Swachh Bharat Mission – Urban</td>
</tr>
<tr>
<td>SFD</td>
<td>Shit Flow Diagram</td>
</tr>
<tr>
<td>SHG</td>
<td>Self Help Group</td>
</tr>
<tr>
<td>SLWM</td>
<td>Solid and Liquid Waste Management</td>
</tr>
</tbody>
</table>
List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviations</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPMU</td>
<td>State Project management Unit</td>
</tr>
<tr>
<td>STP</td>
<td>Sewage Treatment Plant</td>
</tr>
<tr>
<td>SWM</td>
<td>Solid Waste Management</td>
</tr>
<tr>
<td>ULB</td>
<td>Urban Local Bodies</td>
</tr>
<tr>
<td>VO</td>
<td>Village Organisations</td>
</tr>
<tr>
<td>WIMC</td>
<td>Ward implementation and Management Committee</td>
</tr>
<tr>
<td>WSC</td>
<td>Ward Sanitation Committee</td>
</tr>
<tr>
<td>WTP</td>
<td>Water Treatment Plant</td>
</tr>
<tr>
<td>WWTP</td>
<td>Wastewater Treatment Plant</td>
</tr>
</tbody>
</table>
## Household Survey Format

<table>
<thead>
<tr>
<th>FORM No.</th>
<th>House No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>Commercial Space</td>
</tr>
</tbody>
</table>

**Full Name**

**Number of Household members**

**Telephone / Mobile No.**

**Address**

### On-Site containment information

- **Number of toilets in the house**
- **Year of Construction of Toilet**
- **Last Desludged year**
- **Money spent on desludging (INR)**
- **Desludging Frequency (average) years**
- **Mode of desludging**
  - Manual
  - Mechanized

### On-site containment system type

- **On-site containment system type**
  - Single Pit
  - Tota Pit
  - Septic Tank
  - Septic Tank with soak pit
  - No OSS
  - Holding Tank with soakage or manhole
  - Other (specify) ........................................

### Site of Containment

- **Site of Containment**
  - Location: ____________________
  - Depth: ____________________

### On-site sanitation system

- **On-site sanitation system**
  - Partitioned
  - Un-Partitioned
  - Outside
  - Inside
  - Lined
  - Un-Lined
  - Stalled
  - Unstalled

### Overflow of OSS Outlet location

- Open drain
- Close drain
- Ground
- Nowhere

### Width of the access road to the containment tank

- Yes
- No

### Is Sanitation facility located <10 m from ground water Source??

- Yes
- No

### Is Sanitation facility located uphill of ground water Source??

- Yes
- No

### Source of Drinking Water

- Ground Water
- Piped water supply

### Type of Ground water sourcing

- Protected boreholes, protected dug wells, protected spring
- Unprotected boreholes, dug wells or spring
- No groundwater sources used

### Amount of Biodegradable/wet waste generated per day, kg

**Amount of Dry Waste generated per day, kg**

### Disposal of Biodegradable/wet waste generated

- Composting at household level
- Other (specify) ........................................

### Disposal of Dry Waste generated

- Collected by Gram panchayat
- Other (specify) ........................................

*Each format to be filled for single containment system.*
### Survey Questionnaire for GP/NP Level SWM and FSSM Scenario

**Name of the Block:** [GP/NP]

**Category of the Block:** [GP/NP]

**Population (Scoring Available):** [GP/NP]

**Water Supply (Level):** [GP/NP]

**Beds Type in Unassured Source of Aquifer:** [GP/NP]

**Ground Water Risk Assessment:** [GP/NP]

<table>
<thead>
<tr>
<th>Category of the Block</th>
<th>[GP/NP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of the Block</td>
<td>[GP/NP]</td>
</tr>
<tr>
<td>Category of the Block</td>
<td>[GP/NP]</td>
</tr>
<tr>
<td>Population (Scoring Available)</td>
<td>[GP/NP]</td>
</tr>
<tr>
<td>Water Supply (Level)</td>
<td>[GP/NP]</td>
</tr>
<tr>
<td>Beds Type in Unassured Source of Aquifer</td>
<td>[GP/NP]</td>
</tr>
<tr>
<td>Ground Water Risk Assessment</td>
<td>[GP/NP]</td>
</tr>
</tbody>
</table>

**General City Profile:**

- **Water Supply (Level):**
  - Public tap / Community Tanker
  - Borewell / Tube well
  - Surface Water / River / Lake
  - Mains / Pipe line

- **Sanitation:**
  - Public toilet
  - Latrine
  - Septic tank
  - Pit latrine

- **Sanitation Status:**
  - Main source
  - Sub-source

- **Sanitation Facility located within 50 m from ground water Source:**
  - Yes
  - No

- **Present Sanitation Issues in the town/Village:**
  - Main source
  - Sub-source

**What is the water production technology used:**

- Protected borewell, dug well or spring
- Borehole / tube well
- Unprotected borewell, dug well or spring
- Surface water / lake, river or canal
- No groundwater sources used

**Sanitation:**

- **Sanitation Status:**
  - Main source
  - Sub-source

- **Sanitation Facility located within 50 m from ground water Source:**
  - Yes
  - No

- **Present Sanitation Issues in the town/Village:**
  - Main source
  - Sub-source
# GP Survey Format

**GP Survey Format**

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP Survey Format</td>
<td>Government Operators □</td>
</tr>
<tr>
<td></td>
<td>Private Operators □</td>
</tr>
<tr>
<td>Number of private/diluting operators available</td>
<td>Type</td>
</tr>
<tr>
<td></td>
<td>Mileage</td>
</tr>
<tr>
<td></td>
<td>Capacity and number and year of purchase</td>
</tr>
<tr>
<td>Source of diluting equipment/vehicle procurement and cost</td>
<td>Source of procurement and cost of purchase</td>
</tr>
<tr>
<td></td>
<td>Number of diluting operators (Driver and Helper)</td>
</tr>
<tr>
<td></td>
<td>Water collection point</td>
</tr>
<tr>
<td></td>
<td>Details of safety norms provided to the diluting vessel</td>
</tr>
<tr>
<td></td>
<td>Mode of request for diluting</td>
</tr>
<tr>
<td></td>
<td>By Application</td>
</tr>
<tr>
<td></td>
<td>By Call</td>
</tr>
</tbody>
</table>

**Request Address (Street) | Area (Subdivision) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Name of area</td>
</tr>
</tbody>
</table>

**Seating area for resident patients (in a tumor) | Seating area for resident patients (in a hospital) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
</tr>
<tr>
<td></td>
<td>Type</td>
</tr>
</tbody>
</table>

**Reason for initial reason | Source of the vehicle (with frequency) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cause of non-scheduled dispatch in the area/village (hostel)</td>
</tr>
</tbody>
</table>

**Contact person for diluting | Household - |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Commercial -</td>
</tr>
<tr>
<td></td>
<td>Institutional -</td>
</tr>
</tbody>
</table>

**Capacity | Cost |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capacity -</td>
</tr>
<tr>
<td></td>
<td>Cost -</td>
</tr>
</tbody>
</table>

**Additional remarks | Additional remarks |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Additional remarks</td>
</tr>
</tbody>
</table>
# GP Survey Format

## GP Survey Format

### Average last year fee collection from destituting

<table>
<thead>
<tr>
<th>Fee Collection from Destituting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database for destituting</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

### Disposal site for destituting waste

<table>
<thead>
<tr>
<th>Disposal Site for Destituting Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database for destituting waste</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

### Major issues and challenges related to FSSM

<table>
<thead>
<tr>
<th>Major Issues and Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
</tr>
<tr>
<td>Transportation</td>
</tr>
<tr>
<td>Disposal</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

### OSF wise request received (approx. % or number of requests in a month)

<table>
<thead>
<tr>
<th>OSF Wise Request Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. OSF Wise Request Received</td>
</tr>
<tr>
<td>2. OSF Wise Request Received</td>
</tr>
<tr>
<td>3. OSF Wise Request Received</td>
</tr>
</tbody>
</table>

### Presence of anewate treatment facility

<table>
<thead>
<tr>
<th>Presence of Latest Treatment Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
</tr>
<tr>
<td>Transportation</td>
</tr>
<tr>
<td>Disposal</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

### Co-treatment facility at STP

<table>
<thead>
<tr>
<th>Co-treatment Facility at STP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
</tr>
<tr>
<td>Transportation</td>
</tr>
<tr>
<td>Disposal</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

### Applicability of Scheduled Destituting in town/Village

<table>
<thead>
<tr>
<th>Applicability of Scheduled Destituting in town/Village</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
</tr>
<tr>
<td>Transportation</td>
</tr>
<tr>
<td>Disposal</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

### Is Composting Facility available at GP

<table>
<thead>
<tr>
<th>Is Composting Facility Available at GP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>
### GP Survey Format

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Other (Specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is MRF/Dry Waste processing facility available at GP? हाँ नहीं अन्य (वैधव्य बताएँ)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount of wet waste collected, transported and brought to treatment facility by GP जमा परचायले द्वारा प्रसंस्करण सुविधा तक मुद्रित करने का संग्राहण एवं परिवहन की मात्रा</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount of dry waste collected, transported and brought to treatment facility by GP जमा परचायले द्वारा प्रसंस्करण सुविधा तक मुद्रित करने का संग्राहण एवं परिवहन की मात्रा</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collection vehicles available for MSW MSW के संयंहण के लिए वाहन</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source of MSW Collection vehicle procurement and costing MSW संयंहण वाहन की खरीद का मूल्य एवं लागत</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source of procurement and cost of purchase स्रोत उपभोग एवं लागत</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Present MSW Collection, Transportation and treatment issues: स्वतंत्र MSW संयंहण, परिवहन एवं उपभोग सम्बन्धित मुद्दे:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1)
2)
3)
In-depth Interview Format: BDO

BDO
Name of Block:
Name of BDO:

1. What are the key issues related to urban sanitation in the Block?
   
2. What are the key roles and responsibilities of Block officials in implementation of sanitation programmes?

3. What are the key challenges in making the Gram panchayats CDF+ in the Block?

4. What is the Block specific plan to address challenges in sanitation?

5. What kind of coordination presently exists between Block and the Gram panchayats?

6. How important is FSSM and SWM in sanitation in Gram Panchayats of the Block?

7. What kind of capacities need to be built to deal with FSSM and SWM at the Gram Panchayat and Block level?

8. Government has strategically planned to empower and capacitate Blocks as planning and monitoring agency for all sanitation services in the Block. What are your key suggestions on this?


# In-depth Interview Format: Cesspool operators

## Survey questionnaire for Cesspool Operator

**Name of the Operator:**

**Education of Operator:**

**Registered name of the company and address:**

**Start date of business operations:**

**Area of Service:**

### General Description:

- Age of the operator
- Sex of the operator
- No. of vehicles operating
- No. of people employed in business
- No. of people deployed for each vehicle

1. How did you come to know about the emptying and transportation business? (trigger for starting this business)

2. Number and types of vehicles owned at the start of business

<table>
<thead>
<tr>
<th>Year Engineered</th>
<th>Average trips in a day</th>
<th>Make/Technology of vehicle</th>
<th>Capacity</th>
<th>Cost of vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Did you take any financing facilities/loan from any financial institutions (Commercial banks/ NBFs or other financial institutions)? If yes, then from which institutions.

4. Do you see any increase in demand of your service after you have started operations?

5. Average number of trips per day in the current year of operations

6. User charges per trip in the current year

7. Did you apply for permission to the government for starting the business?
   - a. Yes
   - b. No

   If yes, please list the departments and nature of permission

<table>
<thead>
<tr>
<th>Department</th>
<th>Nature of permission</th>
<th>Requirements for giving permission</th>
<th>Time taken for approval</th>
<th>Charges paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>department</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gram panchayat/</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Block RTO</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. Was there any directive or GO from the NPF GPM block to initiate FSM services to the private operators?
   - a. Yes
   - b. No

   If yes, please provide us the reference document

9. Do you have any contractual arrangement with the NPF GPM block?
   - a. Yes
   - b. No

   If YES please provide us a sample copy of contract documents (Est. RFP, etc)

10. How do you receive requests from households for emptying and transportation?
    - a. Phone
    - b. In person
    - c. From NPF GPM/Block
    - d. Any other
In-depth Interview Format: Cesspool operators

11. What is the nature of information you seek from the household when a request for emptying and transportation is made?

<table>
<thead>
<tr>
<th>C1</th>
<th>C2</th>
<th>C3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. Do you have any process or maintaining records in the form of a register or book for the requests received from households?
   a. Yes
   b. No
   If yes, please provide a copy of such record (register/book)

13. How do you plan your operations after a request is recorded and accepted?

14. Do you have any guideline or manual that needs to be followed for emptying and transportation?
   a. Yes
   b. No
   If yes, please provide a copy and indicate the name of the author of the guideline/Manual

15. How do you advertise your operations and create awareness about your business among the households?
   □ Posters
   □ Pamphlets
   □ Wall paintings in public areas
   □ Newspapers
   □ Mobile/Smartphone app
   □ Display board at UFL/BL
   Through internet/website

16. What are the tools provided to workers and vehicles for emptying and transportation?

17. What are the factors considered for planning the transportation routes? Please choose from the below and also add relevant ones?

18. What are the key steps in locating the septic tank and initiating the dislodging?

19. What are the problems faced in initiating dislodging? (While locating the septic tank and parking the truck for operations)

20. Do you break open the floor or cover of the septic tank? If doing so, who is responsible for repairing it and who bears masonry charges and do you take any permission for the same

21. Do you provide any masonry support for your customers, if so what kind of engagement you have with the mason

22. What are the safety and security precautions taken by workers for initiating and completing dislodging?

23. Do you know the different types of safety gears that are used for operations?
   a. Yes
   b. No
   If Yes List them:

<table>
<thead>
<tr>
<th>Name Source</th>
<th>Safety Equipment</th>
<th>Tick if responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPEHEO</td>
<td>Gloves</td>
<td></td>
</tr>
<tr>
<td>CPEHEOD</td>
<td>Boots</td>
<td></td>
</tr>
</tbody>
</table>
In-depth Interview Format: Cesspool operators

24. Do you have guidelines or rules to be followed either from NH GDP book or other organizations during desludging?

25. What are your terms of agreement with your customer (describe – What work is the operator providing to his customer i.e. like sanitizing the site after cleaning etc.) Describe

26. Is it mandatory for workers to wear safety gear and how do you ensure compliance?

27. Do workers experience any health problems after desludging? Have they developed any prolonged illnesses which can be attributed to continuous exposure to the desludging? (discuss with sub-questions)

28. What are the key steps after completing the desludging including sanitizing the location, washing hands etc.?

29. What is the procedure in collection of user charges?

30. Do you maintain any billing book to account your payments?
   a. Yes
   b. No

31. Did you follow any criteria for pricing your services? Or how did you price your services:
   a. Yes
   b. No
   If YES, please describe the criteria:
   a. Value of vehicle purchased
   b. Salary of operator & Helper
   c. Fuel expenses
   d. Operation and maintenance expenses
   e. Others if any

32. Did any customer ever raise a complaint on damage of his property?

33. Did neighbors or anyone in the community complain of the desludging process? Explain

34. Are there any instances that you have either rejected or could not provide the services related to desludging? Explain

35. Did you or any of your staff members undergo training or awareness orientation with regard to septic tanks, collection, emptying, transportation and disposal activities?

36. What is proportion of septic tanks and septic pits are emptied by you in a month (separately)?

37. Is there any kind of septic tank that you cannot desludge? If yes give the reasons:
   a. Not able to locate tank/PP
   b. Sludge tank is sealed/Covered with lid
   c. Not accessible for existing recycled vehicle
   d. Due to no emptying for long period, desludging is not lucrative as time taken is inefficient
   e. Others if any

38. Are you aware about practice of manual desludging & emptying in the city?
In-depth Interview Format: Cesspool operators

50. If yes, are you aware how many septic tanks and pits are manually emptied in a month?

51. Do you provide support for consumers for manual desludgers?

52. Did you face any problems from the traffic authorities, neighbors, colonies or vehicles on road while transporting the sludge?

53. Did your truck breakdown anytime while carrying fecal load in the vehicle? What do you do if it happens?

54. Did your vehicle ever leaked from the container when it is leaked? What will be your first step if such a thing happens?

55. What is the most commonly used location for disposal of fecal sludge? Provide locations.

<table>
<thead>
<tr>
<th>SN</th>
<th>Location</th>
<th>Land use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

56. Do you have a dedicated fecal waste disposal plan as prescribed by MP? GP? Block? List of the locations.

57. Do you face any problem or rejection from community or any other authority for disposing waste?

58. Did any authority levy fine or file a complaint for disposing waste in a particular location? Give the details and also share a copy of the same.

40. Did your vehicle retain fecal waste for few days, without disposing it for non-availability of site or any other reason? If so, how many days and reasons?

41. Do you dispose waste during day or in the night (preference and why)?

42. Do you sell fecal sludge to any person or any industry for example farmers, or fertilizer industries?

43. What is your annual business turnover?

44. Did you take any loan for the vehicle, if so can you please provide some details

45. What are your profits from last year?

46. Will you be willing to supply sludge if a treatment plant is established?

47. Will you be willing to construct or operate a septic treatment plant?

48. Will you support the entry of other operators into emptying and transportation and treatment?

49. If citizens expect a lower tariff for emptying, would you be open to the idea?
Deputy Development Commissioner

1. What are the sanitation priorities of the district for coming years?
2. Does the city have a City Sanitation Plan (CSP)?
3. How are you planning to meet the goals of SBM G – (Phase II)? What are key bottlenecks in implementing the programme?
4. Is there any strategy adopted to meet local level challenges in sanitation?
5. Has there been any plan to implement the recently notified Rural Sanitation strategy and SBM G (Phase II) guidelines issued by Ministry of Jal Shakti?
6. Is there any district level coordination between different agencies such as Blocks, PCB and Panchayati Raj department in sanitation infrastructures creation and management?
7. Are there any plans to utilize the potentialities of CSR and other sources of funding for sanitation programmes?
8. What are the key challenges with regards to FSSM and SWM in the district?
9. How do you see private participation in O&M of FSSM and SWM?
10. Awareness level is very low among the people on FSSM in comparison to SWM. How do you propose to undertake IEC, BCC and capacity building activities on FSSM in the city?
11. What kind of capacities need to be built to deal with FSSM at the city & district level?
12. What do you suggest could be the best way for effective FSSM in the city and district?
13. What do you think about the opportunities for reuse of treated septage and treated wet waste (fertilizer)?
In - depth Interview Format: Executive Officer, Nagar panchayat

1. What are the sanitation priorities of the city for coming years?

2. Does the city have a City Sanitation Plan (CSP)?

3. How are you planning to implement the SWM (Phase -II) in the city? What are key bottlenecks in implementing the programme?

4. Kindly provide State district level Policy, regulatory and institutional framework for sanitation related activities. This includes existing regulatory framework.

5. How financial flows for Nagar Panchayat happens (this includes revenue and expenditure for last three years)?

6. Is there any State specific guidelines for SWM and Urban FSSM Guidelines?

7. What are the activities undertaken for awareness generation and behaviour change of the community and in what frequency?

8. Which budget is utilised for the same?

9. What are the key challenges with regard to FSSM and SWM in the City?

10. Has any guideline or SOP been developed for FSSM and SWM in the City?

11. How many cesspool vehicles does the ULB have at present? How do these vehicles operate? What is the average no. of trips per day?

12. One of the critical observation from other cities is affordability of desludging services. What price would you suggest for people to afford with?

13. Are you aware about private participation in FSSM?

14. Awareness level is very low among the people on FSSM in comparison to SWM. How do you propose to undertake IEC, BCC and capacity building activities on FSSM in the city?
15. Is there any provision for Faecal Sludge Treatment in the city? If so, then what is the progress for the same?

____________________________________________________________________

16. Have you attended any capacity building trainings on FSSM at any levels – city, district, state, national and international? Please list out.

____________________________________________________________________

17. Have you undertaken any capacity building trainings on FSSM so far? If yes, please describe.

____________________________________________________________________

18. What do you suggest could be the best way for effective FSSM across the value chain in the city?

____________________________________________________________________

19. Has the City Sanitation Task Force (CSTF) been formed? If yes, who are the members and in what frequency does it meet?

____________________________________________________________________
In-depth Interview Format: Financial Institution

Financial Institutions
1. For how many years you are financing the sanitation related activities?

2. What are the prominent activities in sanitation sector for which you are providing financing facilities?

3. These loans are short term or long term?

4. What is the mode of financing facilities you are providing for sanitation?

5. What is the percentage recovery of finances in the sanitation related activities?

6. How much (in %) of your financing business constitute this sector?

7. What according to you are the key challenges faced by financing institutions to finance in the sanitation sector?
FGD Format: Masons

FGD questions for Masons

Name of Block:

Name of GP:

Masons Contacted and Contact Details:

1. Are you aware of IS standards for septic tanks and pits? आपके अनुसार लेखिक डेंस एवं पिट के लिए IS मानक के बारे में जानकारी है?

2. Do you practice these standards while constructing the septic tank? आपके अनुसार लेखिक डेंस के निर्माण में ये मानकों का पालन करते है?

3. Based on your experience, what percentage of septic tanks and pits conform to these standards? आपके अनुसार ये मानकों का पालन करने वाले लेखिक डेंस एवं पिट का प्रतिशत कितना है?

4. Do you think the current design of the septic tank is good? आपके अनुसार लेखिक डेंस का नया डिजाइन गुणवत्ता वाला है?

5. Have you ever been trained on improved knowledge on septic tank construction by any govt / Private agency? आपके अनुसार किसी भी भारतीय या विदेशी निपटाव (हाइटेक डेंस) के प्रविष्टियों के लिए प्रशिक्षण दिया गया?

6. Who are the builders of septic tanks and pits in the city/village and do you think they have adequate knowledge about design of septic tanks and pits as well as emptying and transportation?

7. Do you think households in this city/village have knowledge of any specifications or standards for construction of septic tanks and pits? आपके अनुसार ये एजेंसी का नया डिजाइन गुणवत्ता वाला है?

8. Which type of septic tanks and pits are easier for emptying? लेखिक डेंस एवं पिट के निर्माण में ये मांगों के पालन का प्रतिशत कितना है?

9. What concerns you for construction of septic tanks and pit latrines? a) Builders b) House owners? लेखिक डेंस एवं पिट के निर्माण में ये मानकों का पालन का प्रतिशत कितना है?

10. a) बिलास b) महत्वाकांक्षा

11. What kind of capacity building do you require to build standard septic tanks and pit latrines? आपके अनुसार ये एजेंसी का नया डिजाइन गुणवत्ता वाला है?

12. a) विनिर्देश b) अन्य

13. What kind of capacity building do you require to build standard septic tanks and pit latrines? आपके अनुसार ये एजेंसी का नया डिजाइन गुणवत्ता वाला है?

14. What kind of capacity building do you require to build standard septic tanks and pit latrines? आपके अनुसार ये एजेंसी का नया डिजाइन गुणवत्ता वाला है?

15. What kind of capacity building do you require to build standard septic tanks and pit latrines? आपके अनुसार ये एजेंसी का नया डिजाइन गुणवत्ता वाला है?
**In-depth Interview Format: Mukhiya**

**Mukhiya**

**Block Name:**

**Gram panchayat name:**

**Name of Mukhiya:**

**Contact details:**

1. What are the major sanitation issues in your Gram Panchayat?

2. Whether Village Water and Sanitation Committees have been formed?

3. If yes, what is the size of the Committee and how does it function?

4. What role do Sarpanch and water and sanitation committees play in making their respective wards ODF?

5. How is faecal sludge/septage managed in your Gram Panchayat?

6. How can communities from your Gram Panchayat be mobilised to participate in FSSM?

7. What kind of capacity building do you require to work on FSSM?

8. How can Village Water and Sanitation Committees members be effectively engaged for improved sanitation in the Gram Panchayats and help the communities raise demand for sanitation services?
FGD Format: Sanitary Workers

Survey questionnaire for Sanitary Workers

Name of Block:
Name of Gram Panchayat:
Name of person Consulted and Contact Number:

1. Is FSSM a part of the sanitation services in the city/village?
   का फ्लोटा सेवा एवं सेल्फएनिजेशन अभाव एवं शहर / ग्राम नेतृत्व सेवा संस्थान बांधा है?

2. What are the key issues related to FSSM value chain in the city/village?
   अभाव शहर / ग्राम नेतृत्व सेवा सेवा एफएसएम सेवा सेवा संचालन के मामले संस्थान एफएसएम सेवा सेवा की?

3. What are the key issues related to SWM value chain in the city/village?
   अभाव शहर / ग्राम नेतृत्व सेवा सेवा एफएसएम सेवा सेवा संचालन के मामले संस्थान एफएसएम सेवा सेवा की?

4. Are you provided with Personal protective equipments (PPEs) while doing sanitation services (MSW and Faecal sludge)?
   कर्मचारी आपके नकाशा सेवा सेवा स्थान करते-रहते नकाशा उपकरण (एनएसएवी एवं फेकल स्लेड) का लेना?

5. Are you provided with some training from government or other departments regarding safe discharge of sanitation sludge?
   कर्मचारी नकाशा नकाशा का स्थान करते-रहते नकाशा सेवा सेवा स्थान करते?

6. Does your employer provide you annual health checkup?
   कर्मचारी नकाशा का स्थान करते-रहते नकाशा सेवा सेवा स्थान करते?

7. What according to you should be done by government to improve the sanitation facilities of the city/village?
   कर्मचारी नकाशा का स्थान करते-रहते नकाशा सेवा सेवा स्थान करते?
FGD Format: Self Help groups (SHGs)

FGD questions for Self Help Groups (SHGs)

Name of Block:

Name of GP:

Name of SHG:

SHG Contact person and Contact Details:

1. What are the key health issues related to sanitation in rural and urban areas of Sheohar? Please list the top three?

2. On what sanitation issue do you work in Sheohar district?

3. In which blocks/ GPs do you work and with whom do you work with?

4. What kind of community mobilisation activities do you do?

5. Do you use any kind of communication activities to inform and mobilise communities?

6. Have you worked on MHM in any of the blocks/ GPs of Sheohar?

7. Are you aware about FSSM value chain in sanitation?

8. How can communities be made more aware about their role and participation in FSSM?

9. What kind of capacity building and support do you require to work on FSSM?
FGD Format: District/ Village Water and Sanitation Committee

**District/ Village Water and Sanitation Committee Members**

**Name of Block:**
**Name of Gram Panchayat/ Nager panchayat:**
**Contact person and Name:**

1. What are your key responsibilities with regards to sanitation at the District/ Village level?

2. Name three barriers and enabling factors while mobilising communities to adopt desirable sanitation practices.

3. Is FSSM currently a part of the various sanitation issues on which you mobilise the community?

4. What do you communicate when you mobilise people to build toilets? Do you say anything on standard construction of septic tanks and pits?

5. Do community members approach with regards to septic tank/pit cleaning from the community?

6. If yes, how do you address it?

7. Are you aware of any agency or district Gram Panchayat level septic tank cleaning service facilities available in your district/ Village?

8. How can communities be made aware about the FSSM services and participate in the same?

---

**Note:**

- नया सतहार के कोन रेफ्रिजरेट हैं / फिट की सजावट के लिए आपके खाते पुरी है?

- बन्द होते हैं तो आप आपका बैंक नामकरण करते हैं?

- क्या आप अपने जिले / ग्राम पंचायत के क्षेत्र पर खोज़ी रेफ्रिजरेट को जाते हैं जो सॉडिक टेंक रेफ्रिजरेट की सुरक्षा में काम करते हैं?

- क्या आप अपने जिले / ग्राम पंचायत के क्षेत्र पर खोज़ी रेफ्रिजरेट को जाते हैं जो सॉडिक टेंक रेफ्रिजरेट की सुरक्षा में काम करते हैं?

- आपके अनुशासन खाते नामक सतहार के फिट रेफ्रिजरेट सॉडिक टेंक/ पिट के क्षेत्र के अनुशासन नियोजन की वाल निकलता है?

- क्या आप सॉडिक टेंक रेफ्रिजरेट के मानकों के अनुसार नियोजन की वाल करते हैं?
Attendance Sheet: District level consultative workshop on Situation Assessment Study on FSM

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Name</th>
<th>Designation</th>
<th>Org/Department</th>
<th>Mobile No / E-mail</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Avneesh Kumar Singh</td>
<td>District Magistrate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Vimal Pali</td>
<td>Deputy Development Commissioner</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Vishal Kumar</td>
<td>BDO, Ramabhar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Kaushik Kumar</td>
<td>DDO, Tariganj</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Pradeep Kumar</td>
<td>PO, Pimpri</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Ramchandra Kumar</td>
<td>BDO - Shehar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Ajoy Kumar</td>
<td>Executive Officer, N.P. Shehar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Chandra Pratap</td>
<td>YF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Sita Pratap</td>
<td>YF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Rani Pratap</td>
<td>YF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Kamal Pratap</td>
<td>YF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Udaya Pratap</td>
<td>D.C. District Engineer Shehar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Oindrila Pratap</td>
<td>YF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Bhaskar Pratap</td>
<td>Capacity Building Coordinator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Dinesh Kumar</td>
<td>Workshop Coordinator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Rakesh Kumar</td>
<td>Workshop Coordinator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Meera Shaha</td>
<td>Workshop Coordinator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Surendra Kumar</td>
<td>Workshop Coordinator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Pramod Kumar</td>
<td>Workshop Coordinator</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>