SCALING UP Faecal Sludge and Septage Management (FSSM) in Uttar Pradesh

Lessons Learnt

With a focus on inclusive service delivery
Inclusive Urban Sanitation
Addressing the Desludging Challenges of Narrow Lanes in UP

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Webinar on Scaling up Faecal Sludge and Septage Management (FSSM) in UP
• To ensure the safety of workers, manual scavenging is a banned in India under the Prohibition of Employment as Manual Scavengers and their Rehabilitation (PEMSR) Act, 2013

• The Act bans the engagement of any individual for manually cleaning, carrying, disposing of or otherwise handling of human excreta in any manner, till its disposal.

• The government’s focus is to switch towards 100% mechanized sewer cleaning to avoid hazardous practices of sewer and septic tank cleaning

• Launched Safaimitra Suraksha Challenge and National Action Plan for Mechanized Sanitation Ecosystem (NAMASTE) scheme with an objective to ensure zero manual entry into sewers and septic tanks by encouraging mechanization

• However, as per Ministry of Social Justice and Empowerment, 1,035 people have died while undertaking hazardous cleaning of sewers and septic tanks across India since 1993. Out of which 339 people have died in last 5 years.

• The states with the highest number of deaths are Uttar Pradesh, followed by Tamil Nadu, Delhi, Haryana
Aim of the study

Ensuring the safe mechanical emptying of septic tanks from households in narrow-lane settlements to prevent unsafe practice of septic tank cleaning, thereby safeguarding the safety and dignity of sanitation workers.

Objectives:

- To examine the current desludging practices from households in narrow lanes settlements;
- To understand the capacity and preparedness of urban local bodies for providing desludging services in these settlements;
- To document the successful case studies from India that have effectively addressed the challenge of septic tank emptying in narrow-lane settlements; and
- To identify the gaps and recommend pathways for safe mechanical desludging.

Methodology:

- Semi-structured interview and FGDs with households residing in narrow lanes;
- Interaction with desludging service providers; and
- Discussion with ULB officials.
Consultation workshop under the chairmanship of Director, SBM and Directorate of Urban Local Bodies, Uttar Pradesh
Understanding the challenges

Four towns were studied to understand the desludging practices in narrow lanes (two municipal corporations and two municipal councils).

Jhansi  Shahjahanpur  Amroha  Farrukhabad
Key findings and observations

- **Low frequency of desludging** (every 15–20 or 30 years) the septic tanks (without soak pits) is very prevalent in UP towns.

- The existing small desludging vehicles (width: 6.1 foot) can navigate through roads that are up to 8–9 feet wide and have a suction pipe 100–150 feet long. Therefore, households situated in narrow lanes (less than 7–8 feet) further than 150 feet away become inaccessible for desludging service.

- In small and medium towns, **20-35% households resides in narrow lanes area**, road width less than 7 foot.

- Unsafe manual cleaning of septic tanks is frequently practiced in small and medium towns of Uttar Pradesh. Inadequate urban planning has resulted in the development of **unplanned and densely populated settlements** with road width less than 7–8 feet. As a result, mechanical cleaning of septic tanks is not feasible by means of the currently available desludging vehicles.

- The charges for manually cleaning the septic tanks vary from Rs 2,500 to Rs 7,000, depending upon the class of town. The work is usually done by drain cleaners/sweepers during the night, without the information/consent of ULB officials.
All the AMRUT towns have at least 3 desludging vehicles (combination of 4KL, 3KL, 2KL, 1KL and 0.5KL capacity)

Smaller vehicles of **500-litre capacity have been procured in large cities** such as Lucknow, Varanasi, Prayagraj, Agra and Kanpur. However, their requirement was more in smaller and medium towns, where concentration of households in narrow lanes is high.

Out of total 762 ULBs in UP, **133 small and medium ULBs do not have any (government or private) desludging vehicles** to provide septic tank cleaning services. As a consequence, households have had to resort to unsafe manual cleaning of septic tanks.
- In 530 small and medium towns (Non-AMRUT cities) have total 607 desludging vehicles (mostly 3KL capacity). Out of which only 49 vehicles are private and remaining are government vehicles.

- A limited number of private desludging operators in small and medium towns indicates that desludging remains primarily a public service and it is the responsibility of ULBs to provide desludging service.

- The innovative small-sized suction machines are not listed in the Government e Marketplace (GEM) portal for procurement.
Case studies of desludging in narrow lanes
1. Double boosting pump in Leh

- The double boosting pumping system is a low-cost, easy-to-use desludging system.
- It increases desludging distance and accessibility, of double boosting pump, allowing the operator to serve users in narrow lanes.
- The suction range of desludging vehicles was 100–150 feet.
- The double boosting pump eliminated the need for manual scavenging by increasing the accessibility to narrow streets and enables desludging from distances of up to 500 feet (from main streets).
2. Case of Jhansi: Empowering and supporting sanitation workers through Swachhta Udyami Yojana

**Key Feature:** The program facilitated improved employment and livelihood opportunities for sanitation workers while ensuring the safe mechanical cleaning of septic tanks, all without adding to the financial burden of the ULB.

- Jhansi Municipal Corporation organized a loan mela to facilitate access of workers to the Swachhta Udyami Yojana of the National Safai Karamcharis Finance & Development Corporation (NSKFDC). Attended by 30 sanitation workers.
- The Corporation provided the certificate and assurance letter, required for processing and approving the loan amount, to the bank.
- A small desludging vehicle of 700-litre capacity was purchased by a sanitation worker. Can navigate in a road with width upto 5 foot.
- Cost of vehicle: 9 Lakhs. The worker received a subsidy of 3.5 Lakhs under Swachhta Udyami Yojana.
- The remaining amount to be repaid at a subsidized interest rate of 4 per cent over a tenure of seven years.
3. Other innovations: Jalodbust & Three wheeler suction machine - Gully Man

- Developed by Cherries Engineering and Innovation India Pvt. Ltd in 2019.
- **Key feature:** Agitator-based sludge-handling machine suitable for emptying the settled and hardened sludge.
- Key lock to decant the sludge, helps to prevent illegal discharge.
- Dimension: 7 x 4.7 feet.

- Developed by Ahmedabad-based Maniyar & Co.
- A suction tank of 500-litre capacity, mounted on a three-wheeler auto
- The width of the vehicle is around 3.5 feet.
- Capable of creating a high degree of air pressure which breaks the silt sedimentation that gets accumulated at the bottom of the septic tank.
Conclusions

- Irregular and low desludging of septic tanks
- Desludging of septic tank is a public service
- Analysing the feasibility of small-bore sewer system in sewered town
- Need of research and development in technology
- Lack of regulatory measures
A state-level plan for procuring desludging vehicles and allied equipment to determine the specific vehicle requirements for each urban local body (ULB). The plan must factor the town layout and requirements for desludging, based on actual and potential desludging in each town, affordable fee, and the operation and maintenance of new vehicles and allied equipment.

Each Class 4 town and above should make provision for at least two sizes of desludging vehicles and a double booster pump set with an additional 200-foot pipe for desludging. However, this should not be prescribed as a standard for all towns.

Profiling of sanitation workers should be the focus under the NAMASTE scheme and linking them to the Swachhta Udyami Yojana of the Ministry of Social Justice and Empowerment, Government of India for purchasing smaller desludging vehicles in small and medium towns.
Thank you

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