

Onsite Training Programme on “Planning and Designing of Faecal Sludge Management Systems” (September 16-18, 2025)



PROMOTING SUSTAINABLE FSSM IN SOUTH AFRICA

A PARTNERSHIP PROGRAMME ON SANITATION
AND WASTEWATER MANAGEMENT

September 13-25, 2025. South Africa

TRAININGS • FIELD ASSESSMENTS • MEETINGS • ACTION PLANNING

Session Title: Tracking and Monitoring of FSSM – ESM Tool

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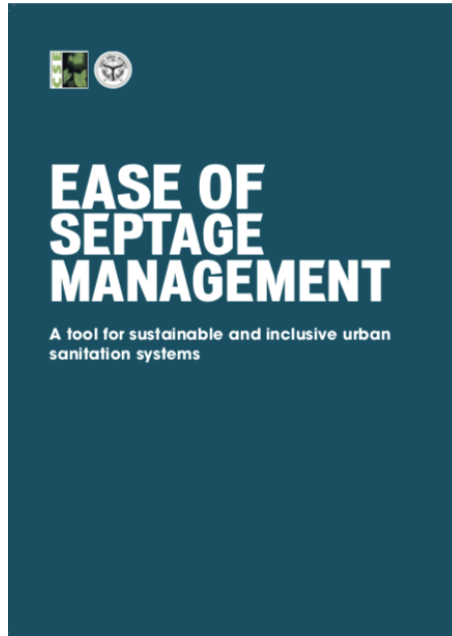
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- Objective of ESM Tool
- Rationale
- How does it work?
- ESM Tool rating system
- What does the tool do?
- Components of the tool
- Implementation of the tool
- Highlights from Uttar Pradesh Case
- Findings and Recommendations

Ease of Septage Management (ESM) tool



- A tool for **sustainable** and **inclusive** urban sanitation systems.
- Endorsed by **Uttar Pradesh State (Province) Government** as an **enabling framework** for promoting **Sustainable** and **Inclusive Septage Management** in towns of UP.

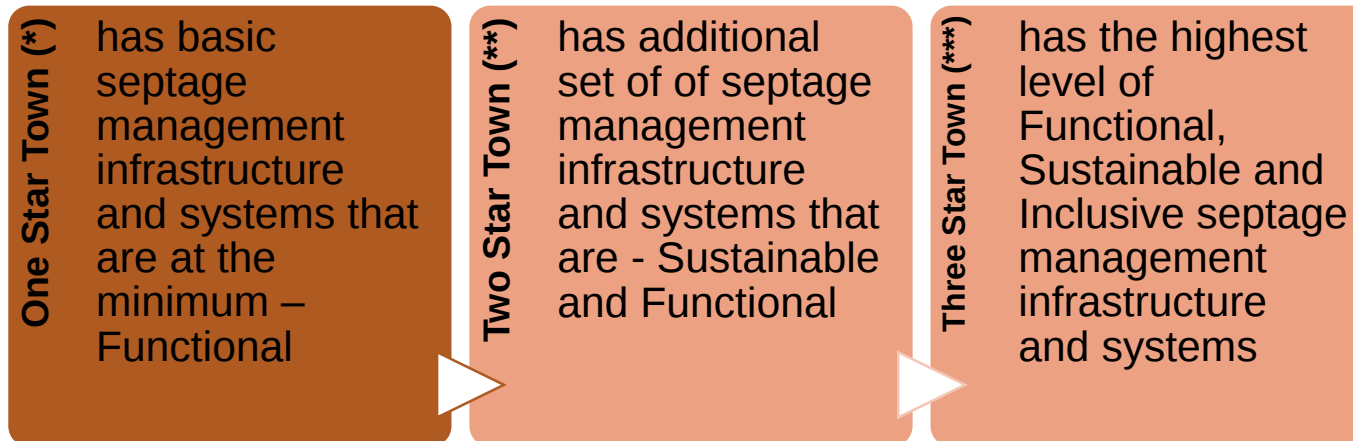
Objective of ESM Tool

- Major leap in approaching urban sanitation from the perspective of **safety, equity and justice.**
- Infrastructure provisioning **may not translate** into access and use of sanitation infrastructure and services by all, specially the poorest settlements of towns.
- ESM tool lays a pathway from functionality of infrastructure, to **sustainability, and to inclusive sanitation services.**
- Helps **identify actions** at Municipality level to attain higher standards of services, that are built into the tool, as indicators.

- Assessment of outcomes of urban sanitation was so far covered under Service Level Benchmarks (SLBs)
- The SLBs set attainable goals in terms of coverage, they don't address the need to assess incremental improvements in infrastructure, in operations and in institutional strengthening of Municipalities
- These measures were based on a 100% coverage logic – sewerage coverage essentially.
- Inclusion of everyone, including the economically less well off, to sanitation services access.

ESM Tool – How Does it work?

- The ESM Tool is a simple Star Rating Tool that incentivizes towns and cities **to improve their Faecal Sludge management services in an incremental manner**, to attain higher level outcomes, in a way that equity in access of sanitation services is achieved.
- Towns can aspire to move from one to two and then to a three star rating – provided they improve the **functionality, sustainability and inclusivity** of septage management services.
- The ESM Tool can be applied to all cities of India, to identify the existing status of functional, sustainable and inclusive septage management in the towns; and setting goals and indicators for improving the same.



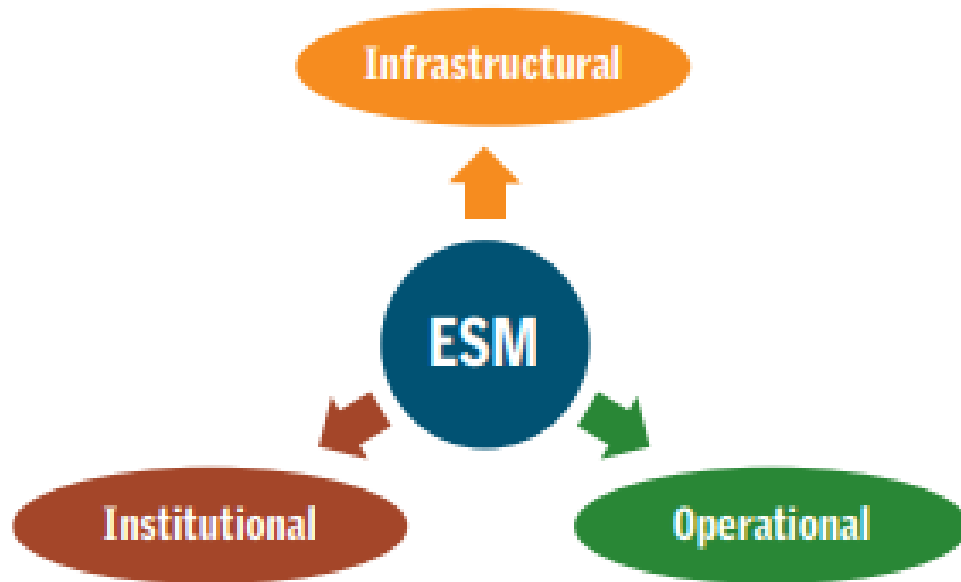
ESM Tool - Ratings

The ESM Tool is a simple **Star Rating** Tool that **incentivizes** towns and cities to improve their **septage management services** in an **incremental manner**. Towns can aspire to move from one to two and then to a three star rating – provided they improve the **FUNCTIONALITY**, **SUSTAINABILITY** and **INCLUSIVITY** of septage management services.

Rating (Outcomes)	Functionality 	Sustainability 	Inclusion 
Systems Improvement (Functions)			
Infrastructural	Sanitation infrastructure is present and functional	Sustainability of infrastructure	Inclusivity enabling infrastructure
Operational	Operations aiding functionality	Operations aiding sustainability	Operations aiding inclusivity
Institutional	ULB level enabling systems and norms -enabling functionality of infrastructure	ULB level enabling systems, norms and policy - enhancing sustainability of systems	ULB level enabling systems, norms and policy - enhancing inclusion and safety

- **An Advocacy Tool.** Commits to the CSE Aims: Promoting inclusive, sustainable and affordable sanitation, as well as a circular economy goal.
- Focus on **sustainability of infrastructure** (a bane of sanitation infrastructure systems in India and much of developing world).
- Expands service delivery focus to **Inclusion**

- **Addresses on ground priorities** of FSM work in India. Can be improvised and modified for practical use.
- **Incentivizes State/local governments** and Municipal bodies – to improve septage management – in an incremental manner.



Infrastructural provision –

- Containment systems exist. Access to safe sanitation: individual household toilets, community & public toilets and to off site treatment facilities.
- Public or Privately managed septage treatment infrastructure exists in functional condition.
- Functional status of STPs, Faecal Sludge Treatment Plants and Co Treatment infrastructure in existing STPs.

Operational efficacy-

- O&M of Treatment Plants(Sewage-Septage Co- treatment Plants and FSTPs)
- Regular desludging services available and delivered to all residents(ensuring inclusion of services to the marginal and poor households)

Institutional (Urban Local Body) effectiveness-

- Management of septage treatment operations.
- Governance of sanitation systems - for safety, equity and justice

ESM Tool – Implementation



Application of the tool–

- The tool is applicable to **Municipality that have either functional STP or FSTP** or provision for co-treatment of sewage and Faecal Sludge functional STP.

Frequency of application–

- The tool can be implemented **annually by the Municipality staff**. And once in two years, by **independent third party verification**.

Measurement–

- Each star rating is based on a set of indicators. Each indicator to be assessed based on observation of functionality, physical verification and verification of relevant documents at the plant level and with the Municipality.

Indicators	Rating
Two star + 13	Three Star
One star + 13	Two Star
8	One star

For a Municipality to attain 1 star rating, it should comply with **all the indicators** listed under that category.

In order to move to the next category, ULB is required to attain **1 star rating and additionally should comply with all the indicators under the ‘2 stars’** category and henceforth.

ESM Tool – Implementation

★ One Star Rating

Thematic area	Indicator	Means of Verification	Response (Yes/No)
1. INFRASTRUCTURAL	1a. Town is Open Defecation Free.	ODF certificate	
	1b. Treatment infrastructure exists for sludge generated in the city in form of either FSTP / Co-STP or agreement with nearby ULB.	Field observation/MoU with nearby ULBs	
	1c. All-weather serviceable approach road to the Faecal Sludge Treatment Plant or Co-treatment Plant.	Field observation	
2. OPERATIONAL	2a. Treatment facility is running at 20% of its maximum capacity in the last month.	Logbook records at treatment facility	
	2b. Treated wastewater meets standards laid down by SPCB/CPCB.	Sample test reports by competent lab/Field observation, if no lab report is available	
	2c. Number of desludging vehicles are sufficient to cater (registered private operator or government) desludging requests on timely basis.(within 3 days)	Field observation/Key Informant Interviews	
3. INSTITUTIONAL	3a. Penalties for indiscriminate dumping of faecal sludge in open areas defined and notified.	ULB notification/ Provision in byelaws/ Advertisement	
	3b. Operator/caretaker of the treatment facility and or sanitation workers paid regularly, in time, for all related work.	Salary slips/records/ Interview with workers	
	Total		8



ESM Tool – Implementation



Two Star Rating (One Star + 13 indicators)

Thematic area	Indicator	Means of Verification	Response (Yes/No)
1. INFRASTRUCTURAL	1d. Functional and Clean CT/PTs located in the town in all public places and Slums.	Random Field observation/Swachh Sarvekshan (Clause 3.4)	
	1e. Treatment facility is running at 40% of its maximum capacity in the last month.	Logbook records at treatment facility	
2. OPERATIONAL	2d. Treated Bio-solids and/or waste water is re used or safely stored	Field observation/notification from ULB	
	2e. Date-wise tanker decanting records maintained at the treatment facility.	Logbook records at treatment facility	
	2f. Faecal sludge regularly desludged from toilets in Institutional or housing colonies (Awaz Yojna, etc.) and CT/PTs, - at least once in 6 months.	Logbook record at facility (Last 3 months record)	
	2g. All private desludging operators formally registered by the ULB and operate under ULB license. (If No private operators in the ULB, automatic response as 'Yes')	Registration/license records at ULB	
	2h. Appropriate PPEs used by all sanitation workers and or workers at treatment facility.	ULB maintained records/ observation	
	3c. Handover of the treatment facility from implementing agency to ULB is done.	Handover letter signed by both parties	
3. INSTITUTIONAL	3d. System for citizens to raise sanitation related requests in the ULB - a helpline, annual public hearing, etc. is present. (At least one)	Advertisement by ULB/ Field observation if the system is present	
	3e. O&M of FSTPs and Co-treatment plant recognized as an expenditure line item eligible for funding under any schemes or as regular ULB annual list of expenses.	Finance records of the ULB	
	3f. FSSM/Sanitation Bye-laws gazette notified.	Byelaws document with gazette notification	
	3g. ULB, contractor and/or private operator's stakeholder meetings take place at least once in 6 months to review desludging work and or cost escalation	Past meeting records	
	3h. All government and private sanitation workers engaged by the ULB, have Identity cards.	ID card issue register/ Observation/Key Informant Interviews	
	Total		13



Three Star Rating (1 Star + 2 Star + 13 indicators)

Thematic area	Indicator	Means of Verification	Response (Yes/No)
1. INFRASTRUCTURAL	1f. CT/PTs are women, disabled and child friendly.	Data filled by ULB in Swachh Sarvekshan (3.4)/Observation	
	1g. Treatment facility is running at 90% of its maximum capacity in the last month.	Logbook records at treatment facility	
	1h. 100% of treated water and treated bio-solids at the treatment facility being reused or safely stored	Field observation/notification from ULB/Records maintained	
	1i. Masons/SHGs in the city are provided training on construction of standardized septic tanks/O&M of treatment facility by the ULB once a year.	Past records maintained at ULB	
2. OPERATIONAL	2i. Appropriate PPEs used by all female workers.	ULB maintained records/ observation	
	2j. ULB monitors & penalizes registered septic tank desludging operators to ensure that they do not discharge sludge in non-designated areas.	Past fine/penalties records	
	2k. ULB has differential/lower rate slab for the poorest settlements.	ULB notification/Past records	
	2l. At least one round of orientations/trainings is provided to the sanitation workers engaged by ULB including operators on Health & safety aspects covering gender issues. (every 2 year)	ULB records-Swachh Sarvekshan(Claude 1.5)	
3. INSTITUTIONAL	3i. City Sanitation Committee (CSC) formed with defined roles & responsibilities.	ULB issued notification	
	3j. Record of all private and government sanitation workers maintained and updated annually by the ULB.	ULB records-Swachh Sarvekshan (Clause 1.5)	
	3k. No discrimination in salary and wages of sanitation workers, based on gender.	Salary slip/records	
	3l. All sanitation workers are linked with at least 3 government beneficiary schemes such as Ayushman Bharat, National Action for Mechanized Sanitation Ecosystem (NAMASTE), Sanitation Workers Rehabilitation Scheme (SWRS).	ULB records-Swachh Sarvekshan	
	3m. Performance based incentive/ recognition for operators and workers given every year.	(Clause 1.5)	
Total		Past records/events	13

Key Highlights – Implementation in UP Towns



- **7 Cities qualified under 1 star rating**
- **Best performing areas by cities-**
 - Treatment infrastructure exists/completed
 - No discrimination in wages
- **Worst performing areas by cities-**
 - Not all CT/PTs are women, child and disabled friendly
 - Masons are not provided trainings on proper septic tank construction
 - Treatment facility runs **below 40%** of its capacity



Aligarh
Bijnor
Chunar
Jhansi
Hapur
Loni
Shamli

Key Highlights – Infrastructure



- No Women, Children and disabled friendly CT/PT
- No Mason trainings in last one year



All weather approach road constructed



Infrastructure ready



Functional and clean CT/PTs

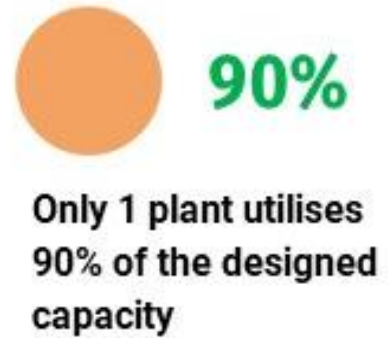
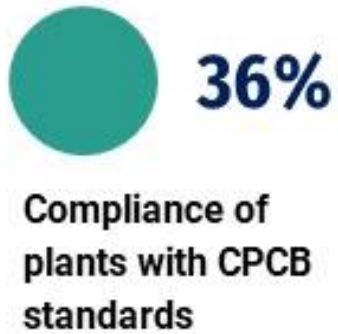
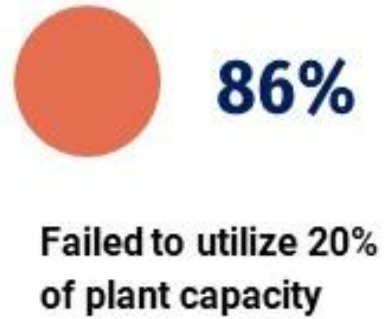
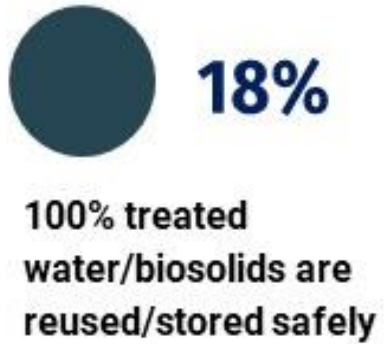


Open Defecation Free



- The initial success of making FSTPs functional after construction may be **jeopardized** if the state and city governments do not resolve **existing technical issues** of treatment chains of FSTPs and co-treatment facilities.
- **Expedite** the process of **Handover** and **Resolve** any issues related to it.
- Construction of **All weather approach road** is a major milestone that every Municipality needs to look into such that vehicles can reach the treatment facility w/o hassle.

Utilization



Operations



Differential/lower rate slab for the poorest



Formally registered & licensed all private desludging operators



Regular monitoring & penalty for indiscriminate decanting



Regular desludging from Housing & institutional toilets



Sufficient vehicles for catering desludging services



- As an immediate first step, cities should prioritize **institutional desludging on a schedule basis**.
- Cities need to **identify, register and license** all **private desludgers** operating in the city. To **attract operators** to register, cities can incentivize them through **social recognition, cash incentives, low registration fees etc.**
- Registration and licensing of private operators can result in **better monitoring** and **regulations** related to **indiscriminate dumping** of faecal sludge.
- The state should come up with a **guideline** on **Standard Operating Procedures (SOPs)** for cities for the **O&M of FSTPs** and **Co-treatment plants**.
- The state should **formulate** and **issue** a **guideline** for **reuse of treated water and biosolids**.

Enabling Institutional Mechanisms



5%

FSSM byelaws notified



5%

Formed City level
sanitation committees



75%

Issuance of notices for
illegal dumping



9%

Budget allocation for
O&M expenditure



100%

Plants handed over to
ULB



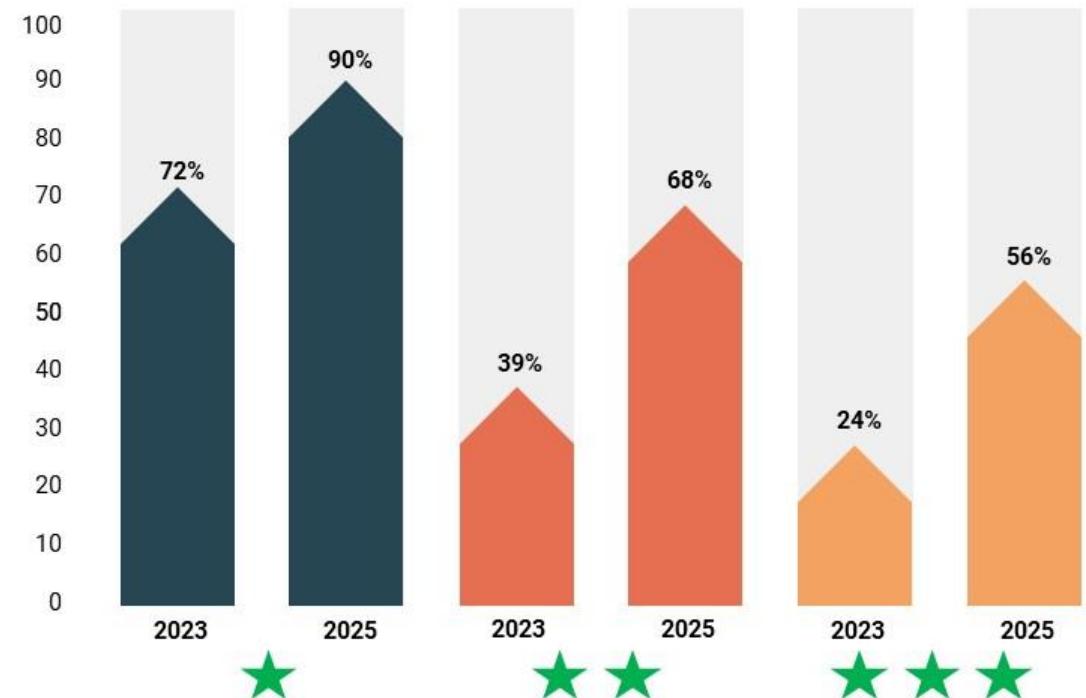
- The **state-issued model bye-laws** must be used by all ULBs for **drafting** their own regulatory **document**, get it **gazette notified** for its **enforcement**.
- **Model contract document** issued by the state needs to be referred by the ULBs while engaging for **3rd party contractors** for **O&M of treatment facility and desludging services**.
- **Advisory** for **funds** for O&M of treatment facilities and **septic tank cleaning charges** should be given by the state.

Key Highlights – Implementation in UP Towns

Star rating

	★	★ ★	★ ★ ★
2023	Aligarh, Bijnor, Chunar, Jhansi, Hapur, Loni, Shamli (7)	None qualified	None qualified
2025	Chunar, Bahraich, Jaunpur, Ayodhya, Basti, Deoria Gonda, Varanasi, Mirzapur Aligarh, Sitapur, Akbarpur Sultanpur, Mainpuri, Kanpur, Firozabad, Sikhoabad, Bijnor, Saharanpur, Ghaziabad, Moradabad, Rampur, Shamli Hapur, Khurja, Meerut, Jhansi Lalitpur, Unnao, Bakshi Ka Talab (30)	None qualified	None qualified

Category wise compliance



THANK YOU

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