



EASE OF SEPTAGE MANAGEMENT

**A tool for sustainable and inclusive urban
sanitation systems**

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Background

Faecal sludge and septage management is a priority for all states and cities of India. There is no city in India that is 100% sewerage. Septage management is therefore an urgent priority. India has in the last five years, embarked on addressing septage management through the 2017 National Policy on FSSM.

In the last five years, Uttar Pradesh (UP) along with Odisha, Tamil Nadu, Telangana, Maharashtra and Andhra Pradesh, have made big strides in addressing septage management. UP now has 59 towns with septage management infrastructure in place. This still leaves more than 700 towns in UP that are without basic infrastructure and systems of treating faecal sludge. Co treatment of sewage and septage at Sewage Treatment Plants can go a long way in addressing septage management in India as proposed in SBM 2.0 Guidelines.

UP has made substantial investment in upgrading its urban sanitation under Namami Gange (NMCG), AMRUT and SBM programs. The state has also come out with a Septage Management Policy in 2019.

The state government has now brought out an Ease of Septage Management (ESM) Tool as an enabling framework for promoting sustainable and inclusive septage management in towns of UP. The tool can also be used by other states/cities, and incorporated into Swachh Sarvekshan by MoHUA, as a pre assessment tool.

Objective of ESM Tool

The tool represents a major leap in approaching urban sanitation from the perspective of safety, equity and justice. Mere infrastructure provisioning may not translate into access and use of sanitation infrastructure and services by all, specially the poorest settlements of towns. The ESM tool lays a pathway from functionality of infrastructure, to sustainability, and to inclusive sanitation services. It helps identify actions at ULB level to attain higher standards of services, that are built into the tool, as indicators.

Sustainability of plant operations and of co treatment systems and infrastructure in terms of their operations and management, is a pre requisite of sustainability. Unsafe desludging services may put the service providers (sanitation workers) at risk. Economically weaker sections may not be covered by septage services and the priorities of women may not feature into the septage services provisioning.

Centre for Science and Environment, on the request of Department of Urban Development (DOUD) UP, has developed the Ease of Septage Management (ESM) Tool to support cities to attain functional, sustainable and inclusive sanitation services to all.

Rationale of ESM Tool

Assessment of outcomes of urban sanitation was so far covered under Service Level Benchmarks (SLBs). These measures were based on a 100% coverage logic – sewerage coverage essentially. And more recently under Swachh Sarvekshan (since 2016). The uptake of faecal sludge treatment is not reflected in the measurement of sanitation coverage assessment in SLBs yet. Inclusion of everyone, including the economically less well off, to sanitation services access, is not reflected in Swachh Sarvekshan.




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 ULBs. If coverage is less than 100%, we don't really know who is left out. Usually the economically poor households are left out.

The ESM Tool is a simple Star Rating Tool that incentivizes towns and cities to improve their septage 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.

- **One Star Town (*)** has basic septage management infrastructure and systems that are at the minimum – Functional
- **Two Star Town (**)** has additional set of of septage management infrastructure and systems that are - Sustainable and inclusive
- **Three Star Town (***)** has the highest level of Functional, Sustainable and Inclusive septage management infrastructure and systems

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

Infrastructural provision

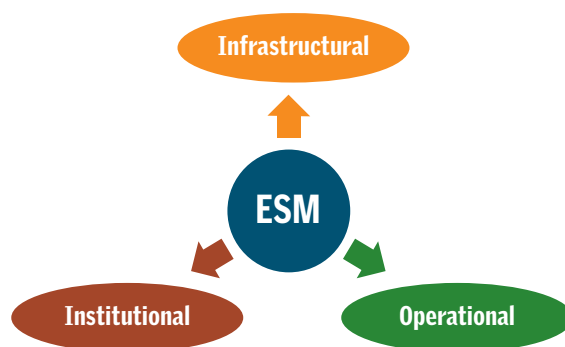
- Containment systems exist. Access to safe sanitation: individual household toilets, community & public toilets and to off site treatment facilities.
- Public or Privately managed septage treatment infrastructure exists in functional condition. Functional status of STPs, Faecal Sludge Treatment Plants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



Implementation of ESM Tool

Application of the tool-

The tool is applicable to all ULBs that have either functional STP or FSTP or provision for co-treatment of sewage and septage at functional STP. Also those ULBs that are managing faecal sludge through town cluster based approach to septage management.

Deep Row Entrenchment (DRE) is not considered a sustainable solution hence towns with only DRE systems should not be ranked using the ESM Tool.

The tool is primarily a supporting measure for towns. Applied as a self assessment measure, before the annual Swachh Sarvekshan of a town. The tool can also be used to assess performance of ULBs based, over time, in improving their septage management.

Frequency of application-

The tool can be implemented annually by the staff of SBM (DPMs), and can further be verified by the state-level SBM officials, reviewed by the senior officers of SBM and AMRUT. 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 ULB.

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

For a ULB to attain 1 star rating, it should comply with 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 the set of indicators under the '2 stars' category and henceforth. If the ULB fails to comply with the first set of 8 indicators, no star rating will be provided to the ULB.

Ease of Septage Management (ESM) Tool



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



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, - atleast 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	
3.INSTITUTIONAL	3c.Handover of the treatment facility from implementing agency to ULB is done.	Handover letter signed by both parties	
	3d. System for citizens to raise sanitation related requests in the ULB - a helpline, annual public hearing, etc. is present. (Atleast 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(Clause 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

The tool is designed in such a way that each indicator corresponds to a component of City Wide Inclusive Sanitation (CWIS) framework that is required for achieving outcomes summarized by Sustainable Development Goal 6. The indicators of ESM tool can be broadly classified as-

OUTCOMES			FUNCTIONS		
Equity	Safety	Sustainability	Responsibility	Accountability	Resource planning & Management
1a,1d 2f,2i,2k 3b,3k	1b,1c,1e,1f,1g,1i 2b,2h,2l 3n	1h 2a,2c,2d,2g 3f	2e,2h,2j 3c,3g,3h,3i,3j,3l	2k 3a,3d,3m	3e



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