



# EASE OF SEPTAGE MANAGEMENT

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

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## A Tool for Sustainable and Inclusive Urban Sanitation Systems

### 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% seweraged. 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, UP along with Odisha, Tamil Nadu, Telengana, Maharashtra and AP, 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 with functional Sewage Treatment Plants, can go a long way in addressing septage management in India.

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) \ Systems Improvement (Functions)	Functionality 	Sustainability 	Inclusion 
<b>Infrastructural</b>	Sanitation infrastructure is present and functional	Sustainability of infrastructure	Inclusivity enabling infrastructure
<b>Operational</b>	Operations aiding functionality	Operations aiding sustainability	Operations aiding inclusivity
<b>Institutional</b>	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

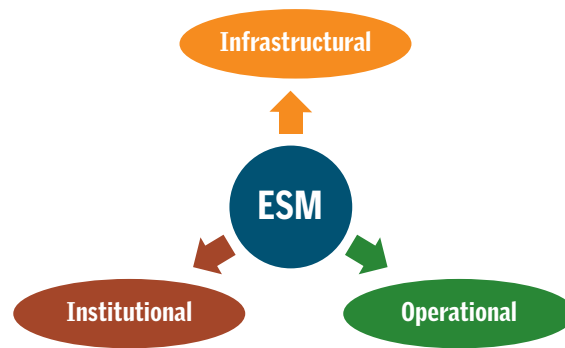
- Containment systems exist. Access to safe sanitation: individual household toilets, community & public toilets and to off site treatment facilities.
- Public or Privately managed septage treatment infrastructure exists in functional condition. Functional status of STPs, Faecal Sludge Treatment Plants 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 Institutional) 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 + 15	Three Star
One star +13	Two Star
9	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	Response (Yes/No)
1. INFRASTRUCTURAL	1a. Town is Open Defecation Free.	
	1b. Treatment infrastructure exists for sludge generated in the city in form of either FSTP /Co-STP or agreement with nearby ULB.	
	1c. All-weather serviceable approach road to the Faecal Sludge Treatment Plant or Co Treatment Plant.	
2. OPERATIONAL	2a. Treatment facility is running at minimum of 25% of its capacity.	
	2b. Treated wastewater meets standards laid down by SPCB/CPCB.	
	2c. Sufficient number of desludging vehicles (private or government) exists and performs desludging operations.	
3. INSTITUTIONAL	3a. Penalties for indiscriminate dumping of faecal sludge in open areas defined and implemented.	
	3b. Operator/caretaker of the treatment facility paid regularly, in time, for all O&M work.	
	3c. Private or government desludging tanker services enabled by the ULB.	
	<b>Total</b>	<b>9</b>



## Two Star Rating (One Star + 13 indicators)

Thematic area	Indicator	Response (Yes/No)
1. INFRASTRUCTURAL	1d. Sufficient Functional and Clean CT/PTs located in the town in all public places and Slums.	
	1e. Treatment facility is running at minimum of 70% of its maximum capacity for at least 15 days in the last month.	
2. OPERATIONAL	2d. Faecal Sludge collection done regularly from all households of the ULB.	
	2e. Treated Bio-solids and waste water is re used.	
	2f. Date-wise tanker decanting records maintained at the treatment facility for quantity of sludge decanted.	
	2g. Faecal sludge regularly desludged from Institutional Toilets, CT/ PTs - atleast once in 6 months.	
	2h. All private desludging operators formally registered by the ULB and operate under ULB license.	
3.INSTITUTIONAL	3d.Commissioning of the treatment facility and the transfer of its assets from UPJN to ULB have been completed.	
	3e. System for citizens to raise sanitation related requests in the ULB - a helpline, annual public hearing, etc.	
	3f. O&M of FSTPs recognized as an expenditure line item eligible for Finance Commission funding or as regular ULB annual list of expenses.	
	3g. FSSM/Sanitation Bye-laws framed and gazette notified.	
	3h. ULB, contractor and private operator's stakeholder meetings take place at least once in 6 months to review septic desludging work.	
	3i. All formal and informal sanitation workers engaged by the ULB, have Identify cards.	
	<b>Total</b>	<b>13</b>



### Three Star Rating (1 Star + 2 Star + 15 indicators)

Thematic area	Indicator	Response (Yes/No)
1. INFRASTRUCTURAL	1f. CT/PTs are women, disabled and child friendly.	
	1g. Treatment facility is running at minimum of 90% of its maximum capacity for at least 15 days in the last month.	
	1h. Atleast 75% of treated water and 50% of treated bio-solids at the treatment facility being reused.	
	1i. Masons in the city are provided training on construction of standardized septic tanks by the ULB once a year.	
2. OPERATIONAL	2i. Appropriate gender friendly PPEs used by all female workers.	
	2j. ULB monitors registered septic tank desludging operators to ensure that they do not discharge sludge in non-designated areas.	
	2k. ULB reviews desludging cost implications for the poorest settlements. Desludging rates are revised atleast once in three years.	
	2l. At least one round of orientations/trainings are provided to the sanitation workers (formal/informal) including operators on Health & safety aspects covering gender issues.	
3.INSTITUTIONAL	3j. City Sanitation Task Force (CSTF) / City Sanitation Committee (CSC) formed with defined roles & responsibilities.	
	3k. O&M budget of FSTP operations assessed and enhanced atleast once in three years.	
	3l. Record of all informal and formal sanitation workers maintained and updated annually by the ULB.	
	3m. No discrimination in salary and wages of sanitation workers, based on gender.	
	3n. 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).	
	3o. Performance based incentive/ recognition for operators and workers given.	
	3p. Assessment done on emerging needs for septage treatment. ULB plans for expansion/improvement (FSTP/Co Treatment) of infrastructure.	
<b>Total</b>		<b>15</b>

The tool is designed in such a way that each indicator corresponds to a component of citywide inclusive sanitation service 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 2g,2i,2k 3b,3m	1b,1c,1e,1f,1g,1i 2b,2l 3n	1h 2a,2c,2d,2e 3g	2f,2h 3c,3d,3h,3i,3j,3l	2j 3a,3e,3o	3f,3k,3p



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