

OVERVIEW

DE-SLUDGING OPERATIONS: OVERVIEW, CHALLENGES, WAY FORWARD

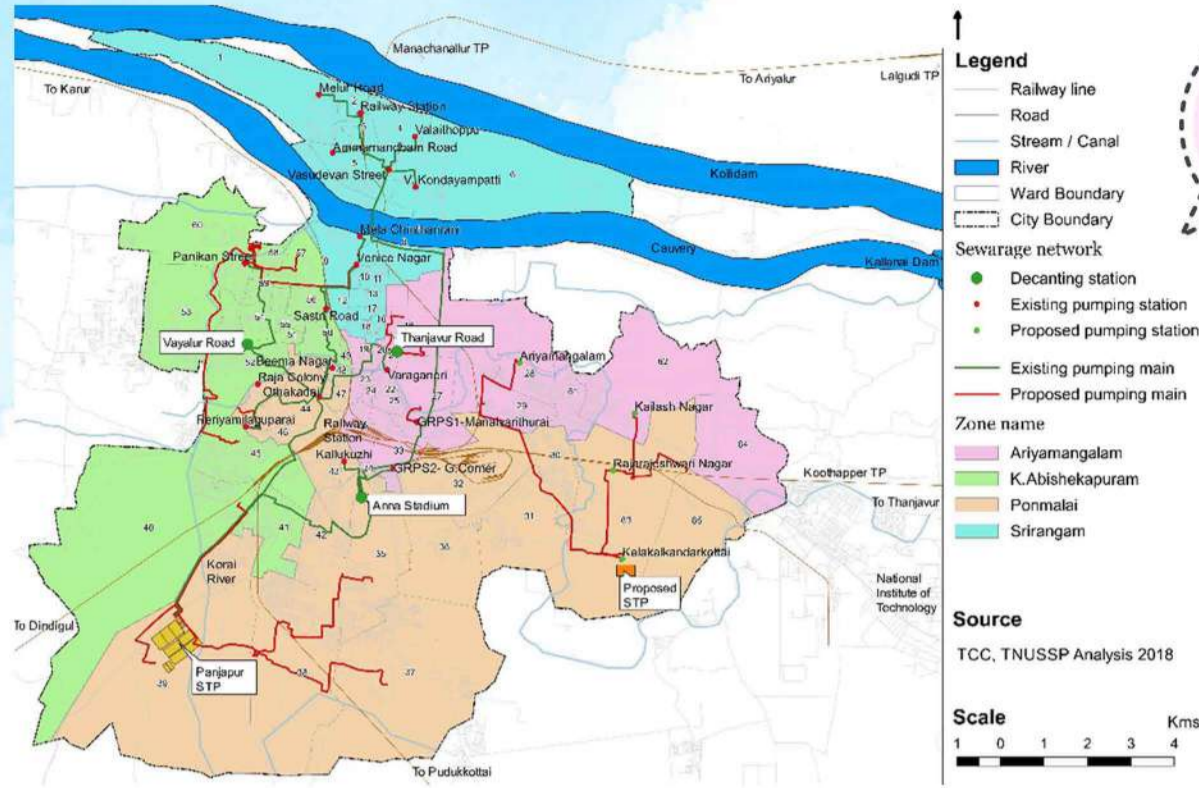
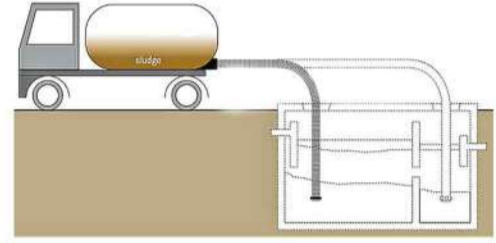


WHERE SHOULD THE COLLECTED FECAL BE SLUDGE DISPOSED?

Government designated disposal facilities such as Decanting stations (sewage pumping stations with minor modifications serving as fecal sludge disposal facilities)

Sewage Treatment Plants (STPs)

Fecal Sludge Treatment Plants (FSTPs)



Location of 3 decanting stations in Trichy for disposal of fecal sludge marked in map

Smaller municipalities and town panchayats do not have any disposal facilities within their boundaries compelling the de-sludging operators to travel long distances to access designated disposal facilities wherever available. For example, the nearest disposal facility for Periyanaicken-palayam (PNP) town panchayat in Coimbatore district is located at Coimbatore city that is beyond the 12 kms average distance. TNUSSP is in the process of constructing a model Fecal Sludge Treatment Plant (FSTP) at PNP.

REALITY IS DIFFERENT

In Tamil Nadu, only 43 out of 664 ULBs have operational treatment facilities. Recognising the need to increase treatment coverage, the Government of Tamil Nadu (GoTN) has issued a State Investment Plan (SIP). Under the SIP, ULBs have been clustered around existing treatment/proposed facilities within a radius of 10 km to ensure easy access for de-sludging operators. (See Treatment Panel).

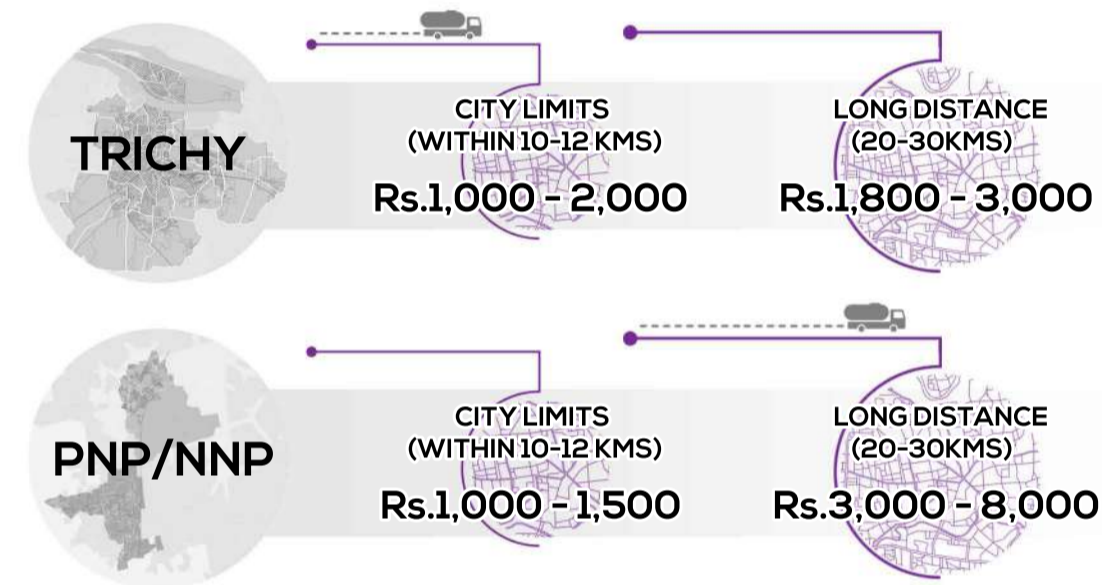
IS A TREATMENT FACILITY SUFFICIENT? DISTANCE MATTERS!

Findings from a baseline study in Tamil Nadu revealed that majority of the de-sludging operators choose to travel only upto 15-20 kms to dispose the fecal sludge. Larger ULBs such as Trichy have set an example by ensuring that disposal locations are located within a 12 km distance from any part of the city.

WHAT DO THEY CHARGE?

De-sludging fee varies depending upon the distance travelled to customer site for providing de-sludging service. The average de-sludging fee for majority of the households across the State is in the range of Rs. 1,000- Rs 3,000 per visit.

De-sludging Fee charged by Private Operators (in Rs.)



Source: TNUSSP primary study, 2016



REGULATING PRIVATE DE-SLUDGING OPERATORS

While the Operative Guidelines have provided a template for licensing, ULBs have modified and issued licensing regulations based on their local requirements. Two examples of licensing models in Trichy and Coimbatore Corporations are shown below

LICENSING AT TRICHY CITY CORPORATION

Annual license fee of Rs. 2,000 every year

Tipping fee of Rs. 30 for each disposal at designated points

Imposition of a penalty of Rs. 5,000 for first time offence along with the option to seize and auction truck if caught more than three times without a license

LICENSING AT COIMBATORE CITY CORPORATION

Declaration form to be signed by operators

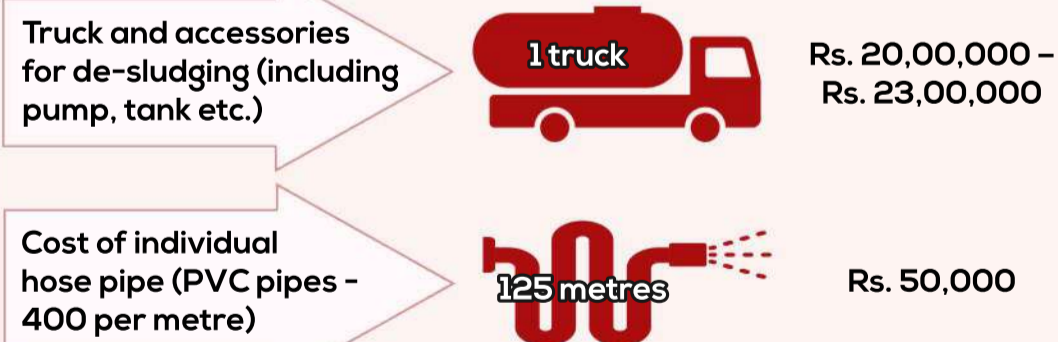
Annual Tipping Fee of Rs. 18,000 to be paid in 4 instalments

Dangerous and Offensive License issued by the Corporation

REVENUE MODEL FOR DE-SLUDGING OPERATORS

De-sludging operations in the State fall under the unorganised sector where there is a vibrant private market with investment in purchase of trucks that are modified to operate as desludging vehicles. Operator's revenue model is largely based upon fees collected from customers, and depend upon repeat business from their clients.

Estimated Capital Investment for a De-sludging Vehicle: Trichy and PNP



Estimated Operational Costs for De-sludging operator : PNP Town Panchayat

No	Item	Qty	Unit price (₹)	Monthly (₹)	Annual (₹)
1	Fuel (Diesel)	900 litres per month	70 per litre	63,000	7,56,000
2	Oil coolant	60 litres per month	280 per litre	16,800	2,01,600
3	Salary	2 Rs. per month	25,000 per employee	50,000	6,00,000
4	Equipment cleaning	1 service per year	25,000 per service	2,083	25,000
5	Engine maintenance	1 service per year	80,000 per service	6,667	80,000
6	Tyres	4 per year	25,000 per tyre	8,333	1,00,000
7	Road tax	1 payment per year	8,000	667	8,000
8	Insurance	1 payment per year	40,000	3,333	40,000
9	Truck Fitness Certificate	1 check per year	20,000	1,667	20,000
OPEX total				1,52,550	18,30,600

Source: Key Informant interviews of de-sludging services proprietors in PNP, 2018

REVENUE

De-sludging business owners operating in PNP and surrounding Town Panchayats have multiple vehicles and make around 17 trips per day. The reported data reveals the revenue generation could be around 35 lakhs per year.

Discussions with owners, revealed that the business operates with a profit margin of 50 per cent. A few operators reported acquiring new trucks indicating that their business is profitable.



To strengthen regulation, TNUSSP has proposed standardising the licensing process and a Model Licensing Agreement has been prepared which includes an application form for capturing operator details, operational terms and conditions and a license template. Some of salient features of the proposed licensing system include:

- Application form to be submitted along with relevant vehicle documents and identity proof for worker/driver employed.
- Time-bound process for ULB to issue license along with provision for appeals.
- License is valid for collection, transportation and disposal of fecal sludge within the jurisdiction of the ULB where application is submitted. In the case where the ULBs share a treatment facility, operator shall register with the ULB where the designated disposal facility is located by submitting a copy of the license obtained.
- ULB shall publish the list of licensed operators from time to time and issue windshield sticker for identification of licensed vehicles.
- License to be renewed every financial year and fee to be kept minimal to encourage compliance.
- Vehicle to be installed with GPS device and access provided to ULB.
- Penalty for violation for terms and conditions along with provision to revoke license upon repeated violations.
- Worker and Driver shall be covered by Personal Accidental Cover policy by Vehicle / Business owner and undergo medical check-up periodically.

OPERATIONAL CHALLENGES



Unregulated private operators in many parts of the state



Disposal at open or non-designated spots.



Long distances (> 12 km) to be travelled for disposal

WAY FORWARD

• Standard Licensing system to be rolled out for all ULBs across states through G.O./by-law

• Pilot IT enabled monitoring system using GPS tracking
 • Community policing

• Increase in treatment facilities across state through co-treatment at STPs and new FSTPs