

LIGHTHOUSE CITIES SAFAIMITRA SURAKSHA KI MISAAL

17TH AUGUST, 2022





देश ने स्वच्छ भारत मिशन के माध्यम से जो हासिल किया है, वो हमें आश्चर्य करता है कि हर भारतवासी अपने कर्तव्यों के लिए कितना संवेदनशील है, कितना सतर्क है। इस सफलता में भारत के हर नागरिक का योगदान है, सबका परिश्रम है और सबका पसीना है। और हमारे स्वच्छता कर्मी, हमारे सफाई मित्र, हर रोज झाड़ू उठाकर सड़कों को साफ करने वाले हमारे भाई-बहन, कूड़े की बदबू को बर्दाश्त करते हुए कचरा साफ करने वाले हमारे साथी सच्चे अर्थ में इस अभियान के महानायक हैं। कोरोना के कठिन समय में उनके योगदान को देश ने करीब से देखा है, अनुभव किया है।

श्री नरेंद्र मोदी

भारत के माननीय प्रधानमंत्री



MESSAGE

SECRETARY, MINISTRY OF HOUSING AND URBAN AFFAIRS

In the last few years, India has moved a long way in ensuring improved sanitation systems coupled with the safety and welfare of our sanitation workers, as part of the Government of India's flagship scheme Swachh Bharat Mission. Within this, it is particularly important to recognize the efforts being made by our SafaiMitras who form the cornerstone of the sanitation ecosystem. Therefore, it has been especially encouraging to see the efforts being made by our cities and towns that are proactively engaging with the public to build awareness on safe desludging practices, facilitating sani-preneurship, building internal capacities, and safeguarding the health and well-being of SafaiMitras. These efforts are equally complemented by numerous other sector partners, community based organizations, not-for-profits, and other non-governmental sector allies who continue to sustain the momentum at the grassroots and with cities.

It is a proud moment for India that over 500 cities have declared themselves 'SafaiMitra Surakshit Shehar' - with over 94 lighthouse cities leading this momentum - and more cities joining the pursuit of becoming safe for SafaiMitras. It brings me immense pleasure to introduce the stories of 41 such cities curated in this document that have demonstrated good practices which can be scaled up and replicated by cities and towns in the country.

I would like to appreciate the states' and cities' efforts in contributing to this document. My special acknowledgment to the NFSSM Alliance for curating these case studies. I hope this document will inspire more cities to achieve freedom for their sanitation workers from hazardous sewer and septic tank cleaning through adopting the good practices under mechanization and institution strengthening, collectively transforming India as SafaiMitra Surakshit.

A handwritten signature in blue ink, appearing to read 'Manoj Joshi', with a stylized flourish at the end.

Shri Manoj Joshi

Secretary

Ministry of Housing & Urban Affairs,

Govt. of India,

New Delhi

MESSAGE



JOINT SECRETARY, MINISTRY OF HOUSING AND URBAN AFFAIRS

Over the last few decades, rapid urbanization in India has created pockets of dense living conditions in cities. This overcrowding in urban areas has put significant pressure on the country's sanitation systems, which are often on-site, especially in small towns.

The brunt of this crisis is borne by sanitation workers – who were previously, often untrained, and with limited access to equipment, safety gear, or resources, many of them from already marginalized communities. The hazardous nature of the work, involving manual desludging, made them disproportionately vulnerable to health and accident risks. At the same time, being an informal and unregulated sector, they were subject to financial challenges, compounded by inadequate access to financial and social security.

Acknowledging the gravity of the issue, the Government of India, over the last few years, has laid considerable emphasis on streamlining sanitation operations and formalizing the sector. A key initiative of the Ministry of Housing and Urban Affairs – SafaiMitra Suraksha Challenge – especially focuses on encouraging cities to transform manholes to machine holes, enabled through its three-pronged approach of (i) setting up institutional mechanisms such as Responsible Sanitation Authority (RSA) in districts, Emergency Response Sanitation Units (ERSUs), with citizen grievance addressal processes (ii) equipping cities with adequate machinery and safety gear for sanitation workers, and (iii) training sanitation workers to ensure the right set of skills are imparted, MoHUA aims to eliminate hazardous entry of sanitation workers into sewers and septic tanks.

It is commendable to see the active steps cities across India have taken toward becoming SafaiMitra Surakshit. This volume titled, 'SafaiMitra Suraksha Ki Misaal' celebrates the journey of 41 lighthouse cities that have been recognized as leaders in the process of mechanization of sanitation work as well as improving working conditions and livelihoods of their SafaiMitras.

MESSAGE

As we celebrate our country's 75 years of independence with Azadi ka Amrut Mahotsav, it is hoped that through the collective efforts of governments, civil society, and NGOs, we can accelerate the momentum in achieving safety and dignity for our SafaiMitras.

Smt. Roopa Mishra

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The Alliance would also like to thank the municipal corporations and municipalities of Ahmedabad, Ahmednagar, Ambikapur, Amravati, Bhavnagar, Bhopal, Gaya, Ghaziabad, Hyderabad, Jamshedpur, Karimnagar, Khammam, Lucknow, Ludhiana, Meerut, Mysore, Nellore, Nizamabad, Panvel, Puducherry, Rajahmundry, Rajkot, Ramagundam, Roorkee, Shahjahanpur, Surat, Tirupati, Vadodara, Visakhapatnam, Warangal, Chandigarh, Noida, Dewas, Jagdalpur, Vasai-Virar, Thane, Chandrapur, Malegaon, Kalyan, Nizampet, and Bhubaneswar.

This report was compiled by the National Faecal Sludge and Septage Management (NFSSM) Alliance with assistance from Tamara Fernandes, Jeremiah Andrew and Drishti Basi of Dasra, Manvita Baradi, Meghna Malhotra, Xerxes Rao, Vaidehi Gohil, Dhairya Chopra and Vishwa Mistry from the Urban Management Centre, and Swathi Rao, Venkat Jayagopi and Sneha Narayana Pillai of The Quantum Hub. The report has been designed and illustrated by The Propagator Lab under the supervision of Sheetanshu Mishra.

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OVERVIEW

Sanitation has always been a politically and socially significant sector in India - mainly due to the complexities of its caste linkages, especially with manual scavenging. While the government has tried to intervene, through the Civil Rights Act, 1955, and the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993, manual scavenging as a livelihood activity, particularly among the marginalized communities, has still persisted. This resulted in the passage of the Prohibition of Employment of Manual Scavengers and their Rehabilitation Act, 2013 (PEMSR Act, 2013) to mechanize the processes of sanitation and rehabilitation of manual scavengers and their dependents. Various schemes and programs have since been launched by both the central and state government to this end.

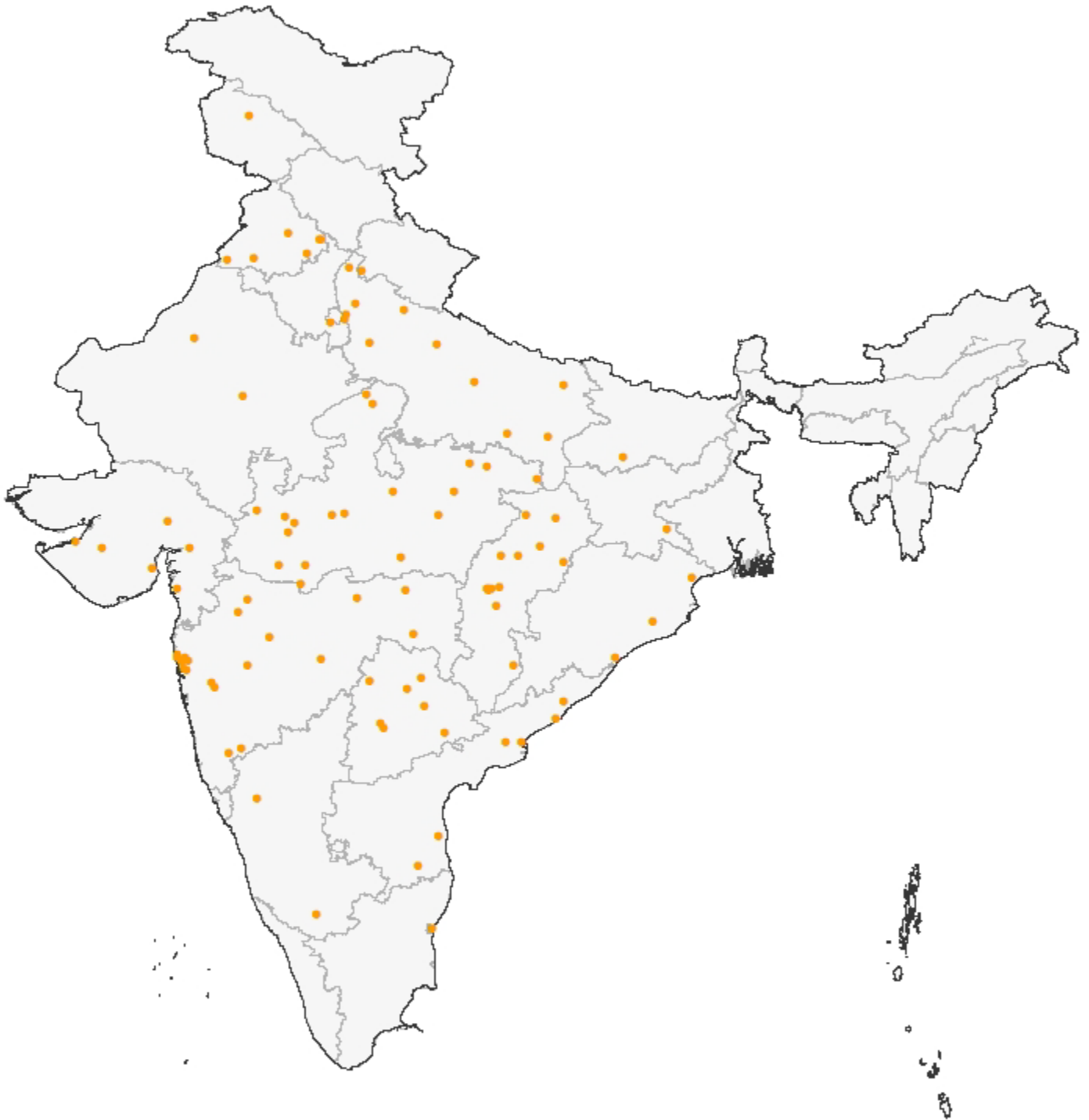
Despite these efforts, persistent gaps in awareness and poor access to mechanized forms of manual scavenging have resulted in the loss of lives among sanitation workers, especially during manual entry. Hence, to increase awareness and incentivize ULBs to adopt more mechanized sanitation processes, the Ministry of Housing and Urban Affairs (MoHUA), under the direction of the PMO, launched the SafaiMitra Suraksha Challenge on 19th November 2020. In addition to the thrust towards mechanization, the challenge also focused on ensuring the availability of protective gears and equipment, and the creation of a conducive ecosystem for sanitation workers by ensuring a trained workforce, robust enforcement mechanisms, and a helpline for the citizens.

The Ministry has also been organizing video conferences with officials and stakeholders in states/ UTs and its ULBs to guide them on the need for institutional, mechanical and workforce-related interventions. Cities had to meet the following qualification conditions before being deemed eligible to participate in the SafaiMitra Suraksha Challenge:

- A valid ODF+ (Open Defecation Free) certification at the time of assessment
- A functional Responsive Sanitation Authority (RSA) and Sanitation Response Unit (SRU)
- Notified ban on single-use plastic

The score-based evaluation of the qualifying cities was carried out on two main thematic aspects - Core Parameters and Ecosystem Parameters. Based on this evaluation, 100 cities that were in advanced stages of mechanization and sanitation delivery were designated as 'Lighthouse Cities'. This section showcases the success stories of 41 lighthouse cities.

AN OVERVIEW OF INDIA'S LIGHTHOUSE CITIES



Name of State	Names of Cities
Andhra Pradesh	Nellore, Tirupati, Rajahmundry, Kakinada, Visakhapatnam, Vizianagaram
Bihar	Gaya
Chandigarh	Chandigarh
Chhattisgarh	Raipur, Birgaon, Ambikapur, Durg, Korba, Bilaspur, Raigarh, Jagdalpur, Dhamtari, Bhilai charoda, Bhilai nagar, Risali, Chirmiri
Gujarat	Ahmedabad, Surat, Rajkot, Vadodara, Bhavnagar, Jamnagar
Haryana	Gurgaon
Jammu & Kashmir	Srinagar
Jharkhand	Jamshedpur
Karnataka	Mysore, Hubli-dharwad
Madhya Pradesh	Indore, Bhopal, Dewas, Chhindwara, Ujjain, Satna, Ratlam, Sagar, Morena, Burhanpur, Gwalior, Katni, Rewa, Khandwa, Jabalpur, Singrauli, Khargone, Sehore
Maharashtra	Navi Mumbai, Amravati, Kolhapur, Kalyan Dombivali, Mira-bhayandar, Dhule, Thane, Pimpri Chinchwad, Chandrapur, Greater Mumbai, Sangli, Panvel, Pune, Ahmednagar, Nagpur, Vasai Virar, Malegaon, Aurangabad, Bhiwandi, Parbhani
Odisha	Balasore, Bhubaneswar, Brahmapur
Puducherry	Puducherry
Punjab	Abohar, Bathinda, S.A.S. Nagar (Mohali), Ludhiana, Patiala
Telangana	Warangal, Karimnagar, Khammam, Nizampet, Greater Hyderabad, Nizamabad, Ramagundam
Uttar Pradesh	Ghaziabad, Noida, Varanasi, Lucknow, Shahjahanpur, Gorakhpur, Saharanpur, Prayagraj, Meerut, Rampur, Aligarh
Uttarakhand	Roorkee









CASE 1 - AHMEDABAD

GUJARAT

ULB: Ahmedabad Municipal Corporation | State: Gujarat

ULB Profile

 Population 72,72,267	 % HH connected with Sewerage network 100%	 Current method of maintenance of sewer and on-site sanitation systems: Mechanized
 Area 480.88 sq.km.	 Number of SafaiMitras 1016	
 Number of wards 48		

Journey of the ULB

The Ahmedabad Municipal Corporation (AMC) has already adopted sewer cleaning through mechanized means since many years. Due to the SafaiMitra Suraksha Challenge, the AMC has set up an ERSU and RSA in the city and has started the new helpline number 14420 for complaints regarding unsafe practices of sewer cleaning. The AMC has also initiated awareness campaigns on illegal practices on desludging through posters which are posted on tankers, billboards, wall paintings etc.

Currently, the city has all the equipment and machinery in 100% compliance with CPHEEO norms. The ULB itself has purchased necessary machinery such as hydrovacs, machine hole dredgers, sewer inspection camera apparatus, hydraulic sewer root cutters, power rodding apparatus, etc. The O & M of these equipment and machinery is also done by AMC itself.

The Municipal Corporation has enough human resources as per CPHEEO norms & all the human resources are engaged in the activities directly. All the SafaiMitras are trained by different means of interaction like training programs & awareness campaigns regarding safety of work, as well as their roles and responsibilities. No PSSOs are currently engaged for the purpose of human resources.

Health Checkups are conducted every quarter & benefits of hospitalization for any injury is provided free of cost under the hospitals of ULB.

The Municipal Corporation has been providing service contracts by tendering of the particular length of the

sewer and ensuring the usage of appropriate machines with safety gear and PPEs.

Earlier, there was no financial support available for training as well as provision of equipment to SafaiMitras. But, now the same is available through the National Safai Karmcharis Finance & Development Corporation (NSKFDC-A Govt. of India undertaking under Ministry of Social Justice and Empowerment).

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

As all the criteria are fulfilled by the ULB as per CPHEEO norms no further private entities have been engaged for mechanization of service delivery.

- The AMC has purchased sufficient machinery over and beyond the minimum requirements as specified by CPHEEO. Hence, all the cleaning activities are carried out through mechanical means by the AMC without hiring any outside contractors.
- There are 1000 small machine operators within the 7 zones and 48 wards of the AMC who have the skill to use power bucket machines, jetting machines etc.
- Bigger machines (Like suction machines) are operated by the STP department and are provided to the various zones on demand. These machines are stationed at 4 lots spread across the city so as to cut down the response time to the different zones.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- The Municipal Corporation has provided PPE kits to all the SafaiMitras.
- All workers are linked with schemes such as health benefits treatment in government hospitals, ration cards, and jobs for the kin of workers.

3. Initiatives taken to manage public awareness

- An awareness campaign for citizens was carried out by the ULB - awareness with regards to the 14420 helpline for reporting illegal practices on desludging.

Outcome

Due to the mass awareness campaign, citizens are now aware of the 14420 helpline & the opportunities that workers have to become financially empowered entrepreneurs through loan melas, etc. Awareness about the importance of the safety of all the workers has increased due to the training programs & enhancement of skills through workshops.

- The AMC has a 100% coverage of sewer network and has a 100% mechanized cleaning system with no instances/ requirements of manual cleaning.
- The availability of adequate machinery has ensured that all cleaning requests are handled within 30 mins.
- Loan mela programs have been held to link the sanitation workers to entrepreneurial opportunities. This consisted of one central loan mela for the entire city followed by zone-level presentations to the sanitation workers in each of the 7 zones.
- As of June 2022, 7 zonal level theoretical training programs as well as 48 ward level on-field training programs have been conducted for the benefit of sanitation workers.



Ahmedabad 's journey: From Manhole to Machine hole



Figure 1.1 - SafaiMitras with mechanized equipment



Figure 1.2 - SafaiMitras with mechanized equipment



Figure 1.3 - SafaiMitras with mechanized equipment



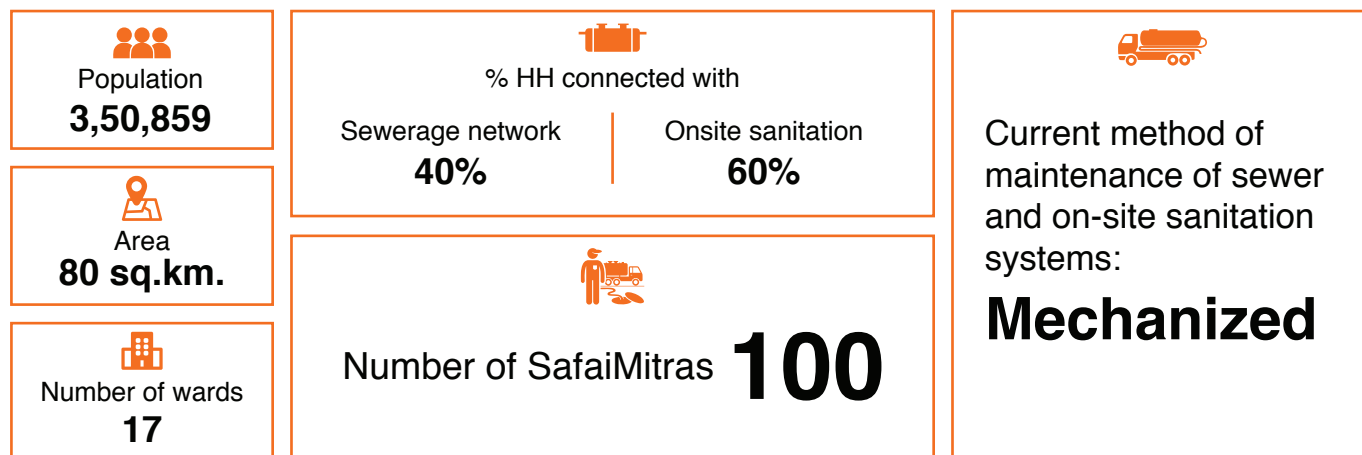


CASE 2 - AHMEDNAGAR

MAHARASHTRA

ULB: Ahmednagar Municipal Corporation | **State:** Maharashtra | **Support Partners:** Young Marvel Services, KAM Foundation, Hariyali

ULB Profile



Journey of the ULB

Ahmednagar is a city in the Indian state of Maharashtra with a total population of 3,50,859. The city has some areas with open drains while some areas have covered drains. 40% of households are connected to the sewer network while the rest 60% are dependent on on-site sanitation service.

Before the SafaiMitra Suraksha Challenge of 2020, the Ahmednagar Municipal Corporation had sufficient safety gear, and vehicles to maintain sewers and septic tanks, though, mostly traditional equipment was used manually to maintain sewers and septic tanks. For cleaning the sewers and septic tanks, the ULB rented required equipment for cleaning the sewers and septic tanks through their sanitation staff. The ULB also hired private operators for septic tank cleaning.

The Ahmednagar Municipal Corporation has already enabled mechanized cleaning via septic tanks before the launch of the SafaiMitra Suraksha Challenge. The ULB has two desludging vehicles with a capacity of 3000 liters each. The ULB also outsourced these services to private operators when needed.

There were a total of 100 formal and registered sanitary beldars (SafaiMitras) engaged in cleaning services who were working with the Ahmednagar Municipal Corporation. No informal or unregistered SafaiMitras were engaged in cleaning of sewers and septic tank across the city. Citizens had to register their complaints at the ULB office and had to pay ₹1000/-

towards one trip for cleaning septic tank. The ULB conducted many awareness programs among citizens regarding regular cleaning of septic tanks.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- **Assessment:-** The Ahmednagar Municipal Corporation had a total of 2 standard septic tank cleaning machines available in 2020 but after the launch of the SafaiMitra Suraksha Challenge, the ULB has been assessing their capacity, human resource, special equipment, etc. After assessing the requirements of vehicles and other equipment the ULB purchased 9 desludging vehicles. These vehicles will be sufficient to cover the on-site sanitation across the ULB jurisdiction.
- **Setting up of ERSU:-** The Ahmednagar Municipal Corporation has established an Emergency Response Sanitation Unit (ERSU) for the city in the year 2021.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- **PPE standardization and procurement:-** The Ahmednagar Municipal Corporation has provided standard PPE kits to a total of 750 sanitation workers along with safety gear/equipment to 100 SafaiMitras in May 2021.

- **Uniforms** - The ULB purchased 100 standard uniforms as per the design provided by the MoHUA for the sanitation workers trained under SafaiMitra Suraksha Challenge.
- **Welfare** - For safety and security of workers, the Ahmednagar Municipal Corporation has linked the Pradhan Mantri Suraksha Bima Yojana benefit to all 750 sanitation workers along with 100 SafaiMitras in September 2021.
- **Reporting illegal practices:-** The Ahmednagar Municipal Corporation through various print medium, hoardings and wall paintings has created awareness regarding illegal desludging practices.

Outcome

Ahmednagar Municipal Corporation has actively participated and successfully achieved the targets highlighted in the SafaiMitra Suraksha Challenge. The situation of the city before and after SSC can be easily highlighted. Now every citizen, from a child to an adult, is aware about the SSC. There are total of 750 sanitation workers along with 100 SafaiMitras in Ahmednagar city who have received the benefits of government schemes like Pradhan Mantri Jeevan Jyoti Bima Yojana, Atal Pension Yojana, Sukanya Samriddhi Yojana, Pradhan Mantri Jan Arogya Yojana. Additionally, all sanitation workers are fully trained and aware about how to safely work in on-site sanitation services.

3. Initiatives taken to manage public awareness

- **Helpline 14420:-** The Ahmednagar Municipal Corporation has started the 14420 - a toll-free helpline number for registering complaints about septic tank-related issues. The ULB has posted hoardings, banners, and posters of the 14420 helpline number all over the city to inform citizens of the same.
- **Periodic desludging:-** The Ahmednagar Municipal Corporation has given notification in local as well as state newspapers regarding scheduled desludging. The Ahmednagar Municipal Corporation has put-up hoardings and done wall paintings to raise public awareness on the importance of scheduled desludging.



Ahmednagar's journey: From Manhole to Machine hole



Figure 1 - Sanitation workers wearing PPE



Figure 2 - Vehicles used for providing sanitation services



Figure 3 - Sanitation workers with Equipment



Figure 4 - Workshop for sanitation workers



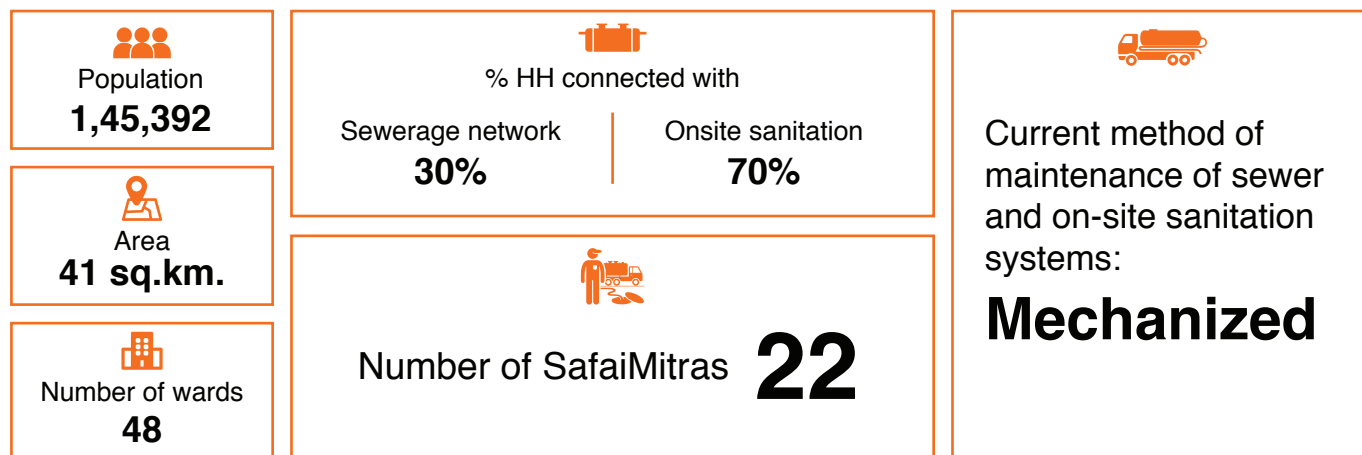


CASE 3 - AMBIKAPUR

CHHATTISHGARH

ULB: Municipal Corporation Ambikapur | **State:** Chhattisgarh

ULB Profile



Journey of the ULB

Prior to the SafaiMitra Suraksha Challenge, there was a lack of equipment in the Corporation but there were sufficient vehicles to maintain sewers and septic tanks, the lack of equipment was caused due to a gap in awareness about the same prior to the SSC.

Before the SSC, The workers were provided with gum boots, uniforms, gas masks, gloves, etc. Desludging machines (3) and hydro jetting machines (1) were used for service delivery which was owned by the ULB. The entire process of service delivery was owned and managed through a dedicated ULB fund for city sanitation as well as funds leveraged from AMRUT Mission and finance commission. The funds available for the purpose represented the bare minimum required to support the services.

Prior to "Safai Mitra Suraksha Challenge", there was a lack of safety equipment, due to lack of knowledge on safety standards. There was a shortage of skilled staff, no detailed guidelines were available for training. After the release of the SSC Guidelines, the safety gear was procured according to the criteria; detailed training was also provided to the employees.

All the employees are now covered under the risk allowance, insurance along with schemes such as PMAY, Ayushman Bharat and PM-Jan Dhan Yojana. The employees are ensured regular health check ups by the ULB. 15th FC, State as well as SBM funds are leveraged to undertake interventions related to the SSC. Various programs are now organized for generating awareness among citizens about safe cleaning, such as hoardings, wall writing, street plays, meetings, rallies, competitions etc. in all wards.

As far as human resources to take care of the cleaning of septic tanks/ sewers was concerned, the ULB had a dedicated staff of 40 persons for purpose of service delivery. The staff were employed directly by the ULB itself. The staff were categorised as follows - desludging operator, sewer operator, STP/FSTP operator, sanitary supervisor and sanitary workers. The staff were trained at the ULB level by the sanitary officer and sanitary inspector before the challenge. No Informal workers were formalised in the entire process.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- In line with the SSC guidelines a detailed assessment on machine and human resource availability was conducted to understand the future needs of the city. Extra equipment and machines were purchased accordingly to meet mechanization needs with the help of grants from the Centre and State.
- As per the survey, digitized data base was prepared, in which the city was bifurcated into clusters, and on the basis of the clusters, the vehicles were deployed.
- Toll free numbers 14220 and Nidaan 1100 were publicized for the citizens to access desludging services.
- As per the norms, an RSA and ERSU were set up in the municipal corporation.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- Quarterly health check-up camps were organized, in convergence with Ayushman Bharat and Mukhya Mantri Sahari Slum Swasth Yojna.
- PPE standardization and procurement was done as per CPHEEO norms. These kits were distributed and its use was made mandatory for all SafaiMitras.
- The SafaiMitras were covered under all schemes linked to the central and state government such as-Ayushman Card, PM-Jan-Dhan Yojna, PM Suraksha Bima Yojna, PM Jeevan Beema Yojna, Mukhya Mantri Sahari Slum Swasth Yojna.

3. Initiatives taken to manage public awareness

- Hoardings were placed in every wards to create awareness on periodic desludging.
- Massive IEC activities were conducted to engage and sensitize the citizens on regular desludging. The IEC Activity included organizing ward sabha, mass rally and street plays. Efforts were also made to publicize the toll free No 14420.

- Hoarding and wall painting was done at major locations of the city and in every ward where illegal activities were reported.

Outcome

40 SafaiMitras were trained and provided with standardized PPE kits. Health issues linked to workers are now resolved through convergence with State and Central schemes. Mechanized vehicles are now deployed for cleaning of septic tanks and sewers. The level of awareness among the citizens has increased with regards to the importance of periodic desludging. Through convergence with Central and State Government schemes, the SafaiMitras now lead a life with dignity and worth and their position in the society has been uplifted.



Ambikapur's journey: From Manhole to Machine hole



Figure 1 - Workers with their PPE



Figure 2 - Workers with desludging vehicles



Figure 3 - Wall paintings on desludging helpline



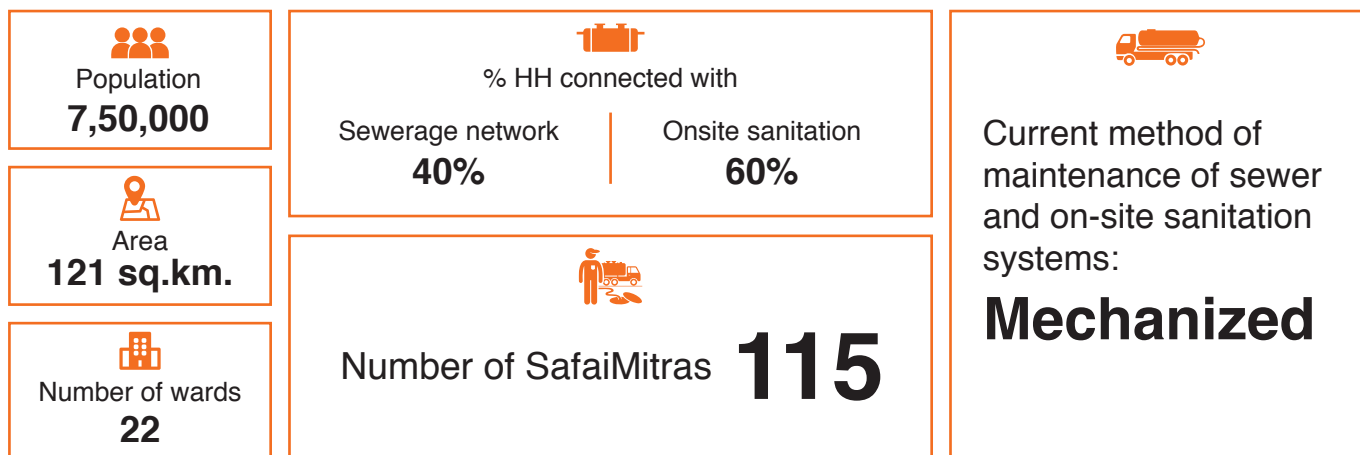


CASE 4 - AMRAVATI

MAHARASHTRA

ULB: Amravati Municipal Corporation | State: Maharashtra

ULB Profile



Journey of the ULB

Before the SSC, no frequent health checkups or insurance were provided to workers for both medical and health reasons. Workers had become addicted to drugs and alcohol. They were not aware of their safety and security needs. Available equipment and machines were not sufficient as per the CPHEEO norms. There was no training or capacity building workshops were held for the SafaiMitras. SafaiMitras were not even aware about the NSKFDC scheme for loan. There was also a lack of awareness amongst citizens about illegal desludging practices.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- The Municipal Corporation has ensured the set up of the ERSU along with the RSA and the 24x7 helpline 144420.
- The Municipal Corporation has also ensured the availability of special maintenance/cleaning machines as per CPHEEO norms.
- Special maintenance and cleaning machines as per the CPHEEO norms has been ensured by the corporation. The Corporation has a total of 26 available machines, including combination hydrovac equipment, hydrovac sets, grabbers, standard septic tank vehicles, etc.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- The Municipal Corporation has a total of 799 permanent workers, 107 informal workers, and 1210 contractual/third-party workers. It also has an ERSU team of 9 members. Training is provided to all Safai Mitras to ensure safe and efficient usage of equipment.
- All sanitary workers and informal waste pickers working under Amravati Municipal Corporation are provided with personal protection equipment like fluorescent jackets, gumboots, hand gloves, raincoats, footwear, masks, helmets, and safety gear.
- Workers are also linked to schemes under Ayushman Bharat, NULM, and NUHM (Health).
- Under the PSSOs, a total of 19 masons/contractors were trained in the standardization of septic tanks. The training program was organized on Designing and Construction of Onsite Sanitation Systems.
- All SafaiMitras have been enrolled in a housing PMAY scheme. Provision of soft loans through NSKFDC is in process. In other schemes, SafaiMitras have already taken loans worth ₹200000. During COVID 19, it was very crucial to focus on this process. All workers (2116 SafaiMitras) have been given information about NSKFDC scheme.

3. Initiatives taken to manage public awareness

- The Municipal Corporation has undertaken street plays, door-to-door campaigns, wall paintings, and messaging on trucks as part of its awareness campaigns as part of the SafaiMitra Suraksha challenge.

Outcome

The Amravati Municipal Corporation carried out a public awareness campaign in all 22 wards of the city to educate citizens, other stakeholders as well as ULB employees on following legal practices for septic tank/storm water drain/manhole cleaning. The public awareness initiative was carried out through posters, wall writing/murals as well as training. All public awareness campaigns carried out by the Amravati Municipal Corporation have been able to penetrate key messages among all citizens and other key stakeholders

including service providers. RSA and ERSU authorities have been nominated and units have been set up in the Amravati Municipal Corporation. There is an operational 14420 24x7 helpline emergency number under the Amravati Municipal Corporation. The Amravati Municipal Corporation has completed the rehabilitation of SafaiMitras. All 2116 SafaiMitras have been identified and linked with entrepreneurship opportunities. The provision of soft loans through NSKFDC is in process. From other schemes SafaiMitras have already taken loan of ₹200000. All Children of SafaiMitras are enrolled in public schools, and all SafaiMitras have been provided with a ration card.



Amravati's journey: From Manhole to Machine hole



Figure 1 - Street plays for IEC



Figure 2 - SSC awarness campaigns as truck paintings



Figure 3 - Training for SafaiMitras



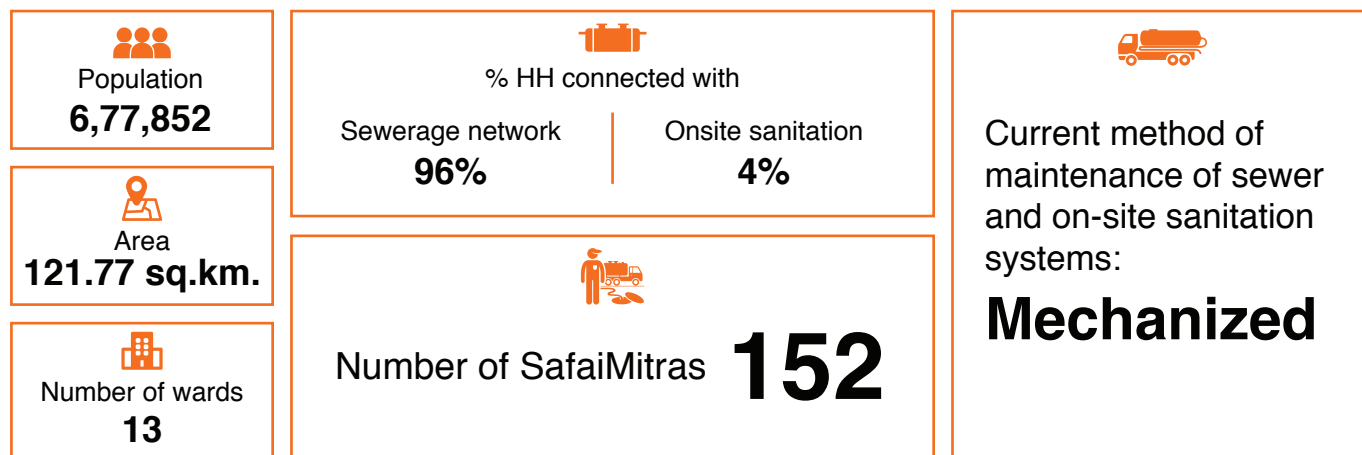


CASE 5 - BHAVNAGAR

GUJARAT

ULB: Bhavnagar Municipal Corporation | State: Gujarat

ULB Profile



Journey of the ULB and Approach to mechanization under SafaiMitra Suraksha Challenge

As per the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act 2013, the Bhavnagar Municipal Corporation has stopped manual scavenging as well as manual removal of raw (fresh and untreated) human excreta from buckets or other containers that are used as toilets or from the pits of simple pit latrines. The safe and controlled emptying of pit latrines, on the other hand, is one component of faecal sludge management. After the launch of the SafaiMitra Suraksha Challenge, the Bhavnagar Municipal Corporation has ensured that all kinds of scavengers' work is now done through mechanized/machine methods and has strictly ensured that no manual scavenging is allowed in the city.

1. Key initiatives taken for mechanization

- Since the SSC 2020, the ULB has taken active efforts toward the mechanization of sanitation service delivery. It has nearly doubled the availability of equipment such as hydrovac, machine hole dredgers, septic tank vehicles, and hydro jetting machines. All the equipments are owned by the Bhavnagar Municipal Corporation.
- Along with the purchase of mechanized equipment, the corporation has taken serious steps towards placing importance on the safety of its workers - it has nearly quadrupled the purchase of safety equipments for workers after the SSC, 2020 for equipments such as reflecting jackets, safety helmets, hand gloves, and safety boots and uniforms.

- The Corporation has also tried to improve mechanization efforts through the inclusion of private sanitation service operators. There were 2 PSSOs operating before the SSC 2020. Post SSC 2020 there are 9. The Corporation has tried to increase private sector participation by increasing the tender period from 1 to 3 years.
- The Corporation has also awarded contracts to PSSOs - PSSO (M/s. Clean Tech Corporation, Vadodara) of sewer cleaning machinery with five years O & M and to PSSO (M/s. TPS Infrastructure Limited - New Delhi) of sewer cleaning machinery with 03 years comprehensive O&M for BMC owned machinery.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- Prior to the SSC 2020, there were no sewer entry professionals or Response Units. The Corporation now has 10 sewer entry professionals, a 12-member RSU team, and a 9-member ERSU team. Most of the manpower is hired directly through the ULB.
- There has also been an increased focus on the training of workers. Prior to 2020 skill training was undertaken by ward officers or technical staff. Now there are dedicated engineers from the Bhavnagar Municipal Corporation as well as other qualified engineers who undertake capacity-building efforts.
- There has also been a shift in benefits for workers. While before there were no defined benefits linked to SafaiMitras, the Municipal Corporation has now introduced bi-annual health checkups, linkages to health cards, ration cards, insurance, and higher education schemes. Facilities for workers have also

improved with the provision of purified R.O. drinking water facilities and standardized uniforms.

- To improve the dignity of workers and instill pride in their work, a monthly 'Best SafaiMitra Award' is handed out.
- While there were initially no financial avenues for workers, the Corporation is now working towards linking workers with the NAMASTE and NSKFDC loan schemes as well as organizing loan melas to encourage entrepreneurship amongst workers.

3. Initiatives taken to manage public awareness

- The Municipal Corporation has established the 14420 helpline for schedule desludging as well as organized street plays, hoardings, and training programs to raise awareness on the importance of safe working condition.

- The Corporation has also organized street plays, as well as created hoardings, kiosk boards, and wall paintings to raise awareness of the importance of safe working conditions for SafaiMitras.

Outcome

- Through IEC Activities like rallies, wall painting, banner/poster making, and street plays, citizens are now aware of 14420 helpline and safe working practices.
- Safety awareness of all the workers has increased due to the training programs & workshops.



Bhavnagar's journey: From Manhole to Machine hole



Figure 1 - SafaiMitras with their vehicles



Figure 2 - IEC campaign for SSC



Figure 3 - Wall painting for desludging helpline



Figure 4 - Sanitation workers with mechanized equipment



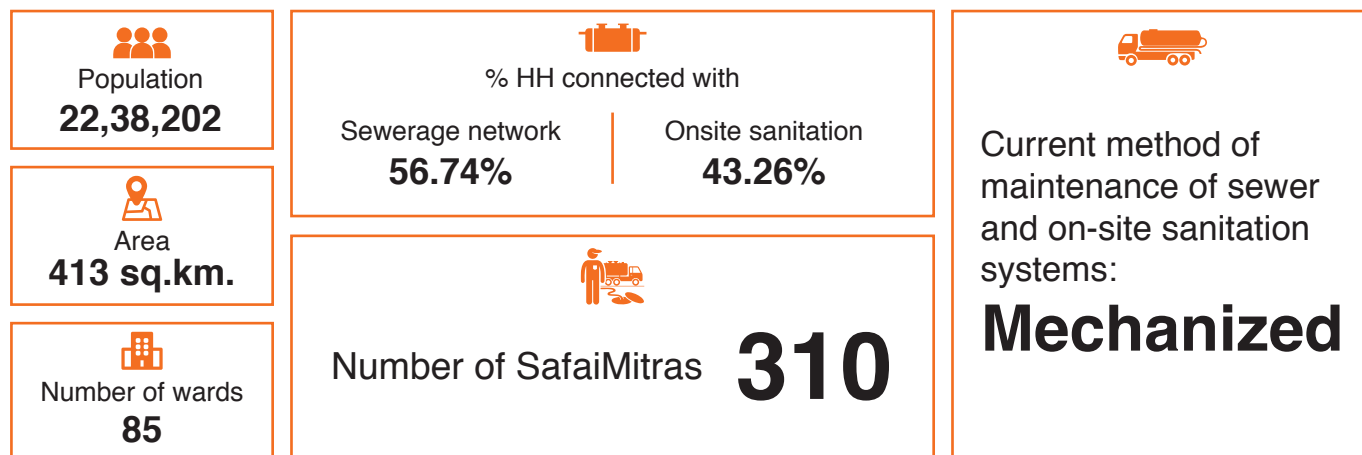


CASE 6 - BHOPAL

MADHYA PRADESH

ULB: Bhopal Municipal Corporation | **State:** Madhya Pradesh

ULB Profile



Journey of the ULB

The Bhopal Municipal Corporation has a 56.74% Sewer network and the rest 43.26% were covered through on site sanitation system. The city has 7 treatment plants (oxidation ponds) with an overall capacity of 74 MLD. Currently, the treated water coming out of treatment plants is not being reused. To ensure the quality of treated water as well as for protection of workers, corporation is also organizing regular workshops.

- Before, the SafaiMitra Suraksha Challenge, Bhopal Municipal Corporation had 26 desludging vehicles and there were 94 SafaiMitras engaged to carry out the service delivery. All the vehicles and SafaiMitras were directly engaged by the Bhopal Municipal Corporation.
- Every year the corporation also organizes technical training on safe disposal of waste in coordination with Water Aid and Aarambh Organisation. Apart from the technical training, the corporation also organises health camps for SafaiMitras every year. All 94 SafaiMitras are provided with a health card and LIC policy. Recently, the corporation also organised eye checkup camps for SafaiMitras in coordination with the Family Planning Agency (FPA) where spectacles were also given free to needy persons.
- The Municipal Corporation has also banned manual entry in sewage holes as per the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013. Awareness camps on scheduled cleaning of septic tank along with open discharge of sludge is also carried out by the corporation.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- Assessment by Calculator** - Before the SafaiMitra Suraksha Challenge, the Bhopal Municipal Corporation had 94 SafaiMitras and 26 vehicles for sewer and septic tank works. After the calculator was introduced by CPHEEO norms, the Corporation updated its resources and SafaiMitras. Bhopal Municipal Corporation has calculated different types of resources identified in the calculator such as Sewer Man, Sanitary Beldars, and Sewer Entry Professionals.
- Purchase of Safety Equipment** - As per the calculator introduced by CPHEEO norms, the Bhopal Municipal Corporation purchased the required safety equipment. The current holdings of the equipment qualify the city on the list of saturated-level equipped cities. The current holdings are hydro-vac sets-4, grabbers/desilting machines-4, Septic tank vehicles-38, sewer inspection camera-8, hydro jetting machine-19, power bucket machine-1, power rodding apparatus-45, hydraulic sewer root cutter-6, safety tripod set-15, nylon rope ladder-15, blower with air compressor-15, gas monitor-15, breathing apparatus-30, safety body harness set-30, airline breathing apparatus-30, full body wader suit-30, gas masks-15.
- Setting up of RSA and ERSU** - After the announcement of the SafaiMitra Suraksha Challenge, the RSA and ERSU were set up in the Bhopal Municipal Corporation which consists of 10

members from various government organizations of the district. The collector of the Bhopal District is the head of the RSA. Since the formation and setup of RSA and ERSU, regular meetings are being held on various agendas.

- **ICT-based monitoring** - All the desludging vehicles are being tracked at the Integrated Control and Command Centre at the Smart City, Bhopal. Dashboard is also prepared and regularly maintained for tracking of scheduled cleaning of septic tanks once every 3 months.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- **Loan Mela** - The Bhopal Municipal Corporation organized a loan mela in which 5 sanitation entrepreneurs emerged. These 5 sanitation workers bought bolero-based suction machines by which they have generated self-employment.
- **Machine Hole Overflow Warning System** - The Bhopal Municipal Corporation has innovated and applied a sensor-based machine hole overflow mechanism. The sensor is installed inside a machine hole through a cable and master controller which provides real-time data at Integrated Control and Command Centre using GSM connectivity. The sensor is powered by a renewable source i.e. solar photo voltaic cells. This mechanism ensures that the cleaning of machine holes is done in a mechanical manner.
- **Pradhan Mantri PuranvasYojna** - Under Pradhan Mantri PunarawasYojna 5 SafaiMitras working in the sanitation department were given houses.

3. Initiatives taken to manage public awareness

- For public awareness, weekly IEC activities were conducted in all the zones for the awareness of citizens about the toll-free number 14420 used for septic tank desludging.
- Wall paintings were done in every zone of the city to generate awareness on the 'MaAsur' campaign which focuses on scheduled desludging of septic tank at every three years.
- IEC and wall paintings were done to raise awareness about the illegal open dumping of fecal sludge and the fines imposed upon it. Notifications were also published in newspapers.

Outcome

As per the CPHEEO calculator, Bhopal Municipal Corporation is 100% equipped with regards to machinery and has reached the saturated stage. All the sanitation workers are given PPE kits and special uniforms. 5 SafaiMitra were given loans in loan mela organized by Bhopal Municipal Corporation and now they are owning their Bolero-based suction machine by which they are earning better than before. Zero Machine holes entry recorded from the launch of SafaiMitra Suraksha Challenge in 2020. A Common platform was introduced to receive and resolve complaints related to sewer i.e. 14420.



Bhopal's journey: From Manhole to Machine hole



Figure 1 - SafaiMitras with PPE



Figure 2 - IEC activities for desludging activities



Figure 3 - SafaiMitras with mechanized equipment



Figure 4 - Awareness campaign



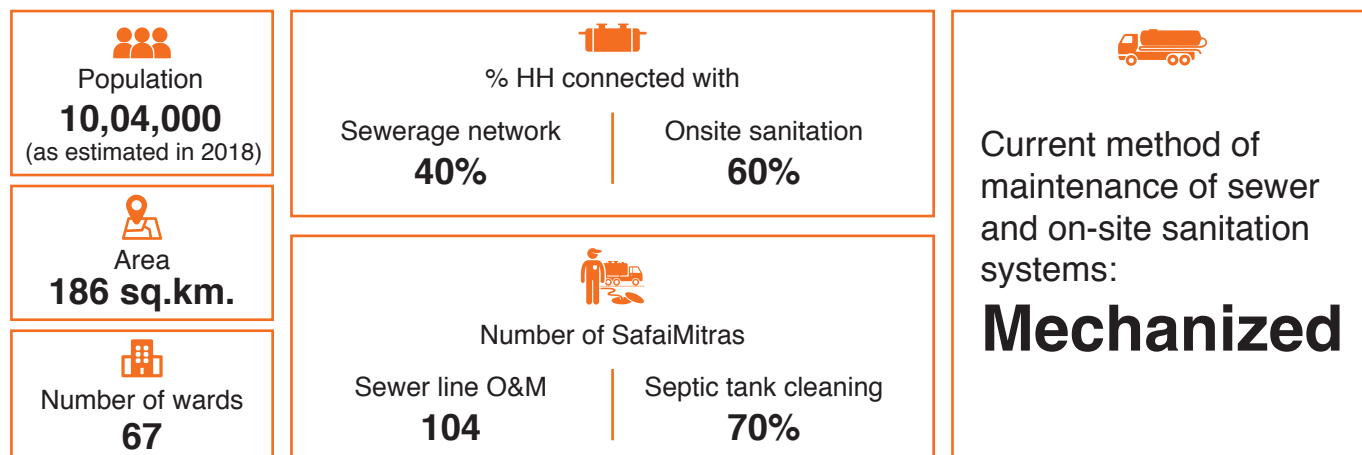


CASE 7 - BHUBANESWAR

ODISHA

ULB: Bhubaneswar Municipal Corporation | **State:** Odisha | **Support Partners:** TSU Garima (BMC), Odisha (Urban Management Centre)

ULB Profile



Journey of the ULB

The Bhubaneswar Municipal Corporation has been improving mechanization in the city for cleaning of sewer lines and septic tanks. However, some workers were engaged informally to undertake hazardous cleaning without access to adequate and appropriate PPE and safety devices.

The Government of Odisha launched the Garima scheme to ensure safety and dignity of core sanitation workers. With technical support of TSU Garima, the Municipal Corporation undertook a PPE study to gather feedback from sanitation workers directly and identified suitable PPE for various job categories including septic tank and sewer line cleaners. Based on the study, an assessment was done and process began for procurement of PPE for all workers. BMC also identified all PSSOs and spread awareness on provisions of MS Act, 2013 and ERSU.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization.

- Streamlining the registration and engagement of sanitation workers and PSSOs in day-to-day cleaning jobs.
- Focus on 100% mechanical cleaning of sewer and septic tanks in the city. ERSU was established as per guidelines issued under Garima scheme by Housing & Urban Development Department, Odisha for regular monitoring of the sewer/septic tank cleaning.

- Procurement and provision of appropriate and adequate PPEs, vehicles, and safety devices.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- Under Garima, the Municipal Corporation conducted a survey of sanitation workers involved in directly dealing with faecal waste including contractual and informal workers. 356 workers involved in septic and sewer line cleaning were recognized.
- Septic tank and sewer line cleaners recognized as Highly Skilled categories based on Gazette Notification issued by Govt. of Odisha. These workers became eligible for hardship allowances of @15% of wages and enhanced wages (approx. 50% higher than previous wages).
- Hands-on training provided to identified workers through the Odisha Water Academy (OWA). Participants were assessed and provided certification by OWA. WATCO recognized 76 trained workers as Sewer Entry Professionals (SEPs).
- Support provided to the workers for establishing sanitation enterprises through bank linkages.
- 25 Garima Griha have been established in BMC under the Garima scheme for the core sanitation workers to ensure that they have access to a bathroom, toilet, drinking water facility, changing room, PPE washing and drying area, locker facilities, and resting area.
- Specially designed waterproof uniform procured for the sewer and septic tank cleaning workers.

- Strong monitoring mechanisms in place to monitor the cleaning done through BMC and parastatal agencies through daily Whatsapp based-monitoring led by Principal Secretary (HUDD).

3. Initiatives taken to manage public awareness

- Films disseminated on various issues including awareness on ERSU, use of PPE by sanitation workers and use of toll free no. 14420 for seeking services for sewer and septic tank cleaning services and reporting any illegal cleaning.
- Awareness content on safety and dignity of sanitation workers and 14420 displayed at public places through hoardings and LED boards.
- Awareness activities taken up for scheduled desludging at household level.
- Community meetings held in slums and informal settlements to spread awareness on Garima and for participation in survey.
- IEC material displayed in all Garima Grihas.

Outcome

The Garima scheme uniquely ensure convergence amongst various stakeholders including labour department, ULB and parastatal officials, PSSOs and workers for creating an enabling ecosystem for safety and dignity of sanitation workers. ERSU has been established and strengthened with outlined processes and protocols established and necessary formats for timely reporting before, during and after manual entry in confined spaces issued. A training ecosystem was institutionalized by HUDD for Garima through Odisha Water Academy. Training infrastructure including fabrication of Model Machine Hole for delivering practical training to duty supervisors and SEPs. Regular monitoring has resulted in regular reporting by PSSOs and adherence to protocols. No manual cleaning happens without due permit from the RSA; SEPs are duly informed and consent is taken from them before any manual entry in confined spaces.

The awareness level of the sanitation workers improved on use of PPEs and mechanical cleaning due to proper orientations and capacity building programs. Now, the workers are using PPEs regularly while performing the sanitation cleaning jobs. The regular use of uniforms has also led to professionalization of sanitation services, thereby bringing both recognition and respect to sanitation workers.

The loan mela organised by BMC has resulted in providing alternative livelihoods to workers for them to avail the resources like equipment and devices for setting up sanitation enterprises. Three sanitation workers have been linked with banks and purchased cesspool vehicles and are currently operating in the city.



Bhubaneswar's journey: From Manhole to Machine hole



Figure 1 - Sewer Entry Professionals in waterproof uniforms and with safety devices



Figure 2 - Mechanical septic tank cleaning



Figure 3 - Garima Griha for Core Sanitation Workers



Figure 4 - Training of Sewer Entry Professionals by Odisha Water Academy

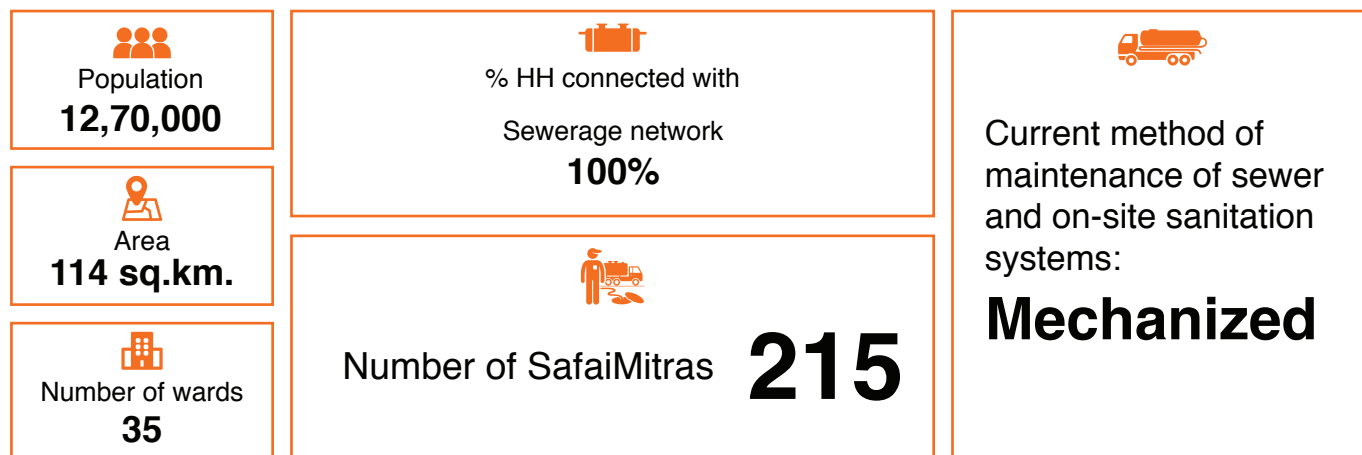




CASE 8 - THE UNION TERRITORY OF CHANDIGARH

ULB: Municipal Corporation Chandigarh | **State:** Union Territory of Chandigarh

ULB Profile



Journey of the ULB

Prior to 2020, the operation and maintenance of the sewerage system was done through the departmental staff (regular and work charged) and also through the job rate contracts. The contracts include deploying sufficient manpower for the area(s) covered under the contract and to use required tools and equipment including safety gear. As per the terms and conditions of the agreements, compliance with the PEMSR Act, 2013, and guidelines of the Hon'ble Supreme Court of India that "sewer men will not enter into the manhole/machine hole chambers" was a must. In case it was essential, for a sewerman (SafaiMitra) to undertake manual entry, it was not allowed without first ensuring the availability of a breathing apparatus & other requisite safety gear. The cost of using routine T&P and safety gear was included in the contract value but for major safety equipments such as breathing apparatus, gas monitors/multi-gas detectors, etc., the cost was provisioned departmentally. The health of all SafaiMitras was also assessed quarterly. The ULB was recovering more than 75% of the expenditure incurred on the operation and maintenance of the sewerage system by charging sewer cess @ 30% of water charges from the residents. The balance funds were arranged by the Municipal Corporation of Chandigarh from its own funds and an annual grant received from Chandigarh Administration.

Now, the SafaiMitras are outsourced through the GeM Portal instead of job rate tenders. In addition to the same, the regular staff of the Municipal Corporation Chandigarh are also deployed area-wise as per the jurisdiction of the concerned maintenance offices. All

the requisite safety equipment is provided to them and no manual cleaning of sewers is done. For cleaning sewer lines and machine-hole chambers, the Municipal Corporation Chandigarh is equipped with sewer cleaning machines of different capacities and also small machines and rodding sets. The small machines are also hired for operation in narrow streets of villages and colonies of Chandigarh. The sanitation system of the city is covered with a 100% sewerage network which is operated and maintained by the Municipal Corporation Chandigarh itself. The Municipal Corporation Chandigarh has not engaged any private operator for the maintenance of the sewerage system. The Municipal Corporation Chandigarh is consistently conducting awareness programs regarding safe cleaning and illegal hiring of workers through messages posted on all public toilet blocks and sewer cleaning machines.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- The Responsible Sanitation Authority along with Emergency Response Sanitation Unit (ERSU) was constituted and notified in 2020.
- 3 new sewer cleaning machines were purchased in November 2021 in addition to existing sewer cleaning machines. 2 new grabbing machines, 2 new sewer jetting machines, and 6 new suction machines have been hired for mechanized cleaning of the sewerage system.
- 7 new multi-gas detectors were purchased in 2021. PPE kits and safety gear like breathing cylinders with masks for the use of SafaiMitras were purchased to ensure safety of workers.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

The Municipal Corporation Chandigarh has deployed 215 SafaiMitras for the maintenance of the sewerage system following the norms of CPHEEO:

- The Municipal Corporation Chandigarh purchased safety gear items i.e. reflecting jackets, safety helmets, normal face masks, hand gloves, safety gum boots, safety body clothing, uniforms, etc. for all SafaiMitras working in the ULB.
- The Municipal Corporation Chandigarh conducts periodic health check-ups for all SafaiMitras.
- The SafaiMitras have been linked with various health benefit schemes i.e. the Pradhan Mantri Suraksha Bima Yojna (PMSBY), the Pradhan Mantri Jeevan Jyoti Bima Yojna (PMJJBY), and those in the ERSU have been provided with more than 10% hardship allowances in addition to their salaries.
- The Municipal Corporation Chandigarh is going to provide full life insurance cover to all SafaiMitras (both regular & outsourced) of at least ₹10 Lakh for each worker, the premium of which shall be paid by the Municipal Corporation Chandigarh.
- All the workers are covered under EPF/ESI/GPF schemes.
- The Municipal Corporation Chandigarh is conducting a periodic safety training program for all SafaiMitras. Topics such as PMSR Act, 2013, behaviour-based safety management, confined spaces training, disaster management, electrical safety, fire fighting for fire responders, fire safety and rescue technique, first aid, material handling safety, stress management at work place, work permit, safety audit, hazardous identification, and risk assessment, etc. are taught.

3. Initiatives taken to manage public awareness

- The publicity of the 14420 toll-free number has been done through social media and placing boards/banners on all public toilets in Chandigarh. Meetings have been conducted with the Resident's Welfare Association and the Market Welfare Association for the publicity of 14420. Regular complaints are being received.
- The messaging around cleaning septic tanks once every 3 years has been displayed at all toilets in the city.
- The message of the prevention of engagement directly or indirectly or employment of any person for hazardous cleaning of sewer network and that the same is a punishable offense is also displayed at all public toilets in the city.

Outcome

After the SafaiMitra Suraksha Challenge, the operation, running, and management of the sewerage system of Chandigarh has improved considerably. The complaints of blockages in sewers received online as well as through public sources are attended promptly by the Municipal Corporation Chandigarh for which SafaiMitras put their best efforts forward during working hours and even in odd hours as per the demand so that there is no inconvenience caused. For doing so, equipment such as rodding sets, safety gear, machinery i.e. hydrovac machine, desilter/grabber machine, high-pressure suction machine, sewer inspection camera, hydro jetting machine, power bucket machine, power rodding apparatus, etc. are used by SafaiMitras for mechanised cleaning. Some of the key achievements include:

- Zero fatalities in sanitation work in Chandigarh over the last six years.
- All sanitation work is performed by skilled workers with appropriate equipment and training.
- No sanitation workers come in direct contact with human faecal matter.



Chandigarh's journey: From Manhole to Machine hole



Figure 1 - Workers being awarded with the Best SafaMitra Award



Figure 2 - SafaMitras using mechanised equipment to perform their duties



Figure 3 - Sanitation workers wearing their authorized PPE



Figure 4 - Setting up of machinery



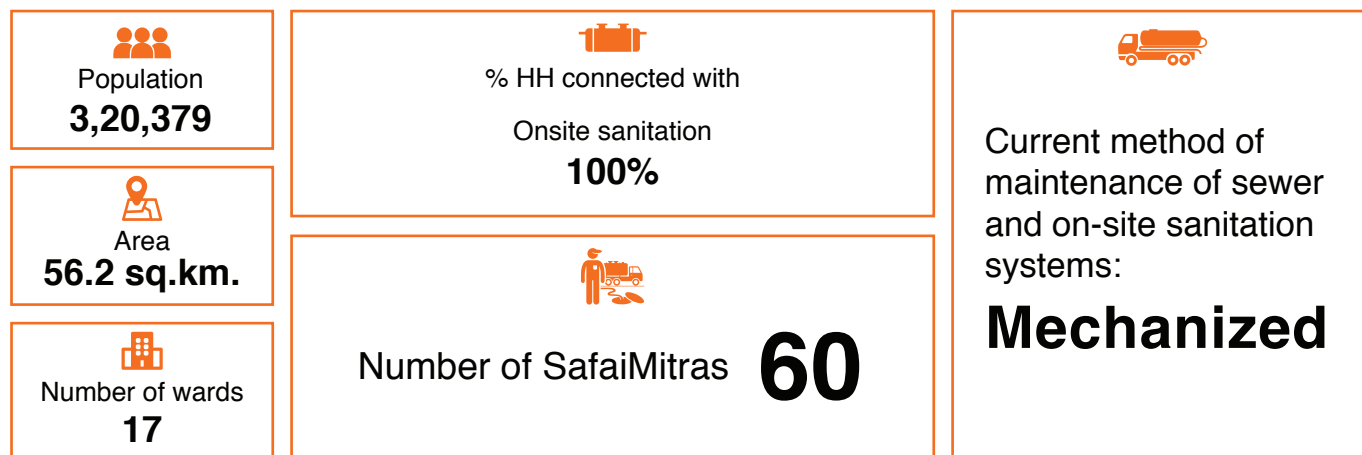


CASE 9 - CHANDRAPUR

MAHARASHTRA

ULB: Chandrapur City Municipal Corporation | **State:** Maharashtra

ULB Profile



Journey of the ULB

The City of Chandrapur has an open drainage system available in the city, there is currently not any sewerage network system available. The Municipal Corporation holds the responsibility of delivering sanitation services to its citizens. Over the past 2-3 years, the city has gradually begun the mechanization process for on-site sanitation services, with the support of the SafaiMitra Suraksha Challenge the city has managed to accelerate the process of mechanization by 100%

The Municipal Corporation has now set up an ERSU and RSA as well as established the 14420 desludging helpline number for sanitation-related complaints and has initiated various IEC activities related to awareness of illegal practices and the need for correct sanitation practices.

Prior to the SSC 2020, the Municipal Corporation had limited gear & equipment and most of the work was done manually. Equipment was in part owned by the ULB and partly outsourced. Operation and maintenance for the past five years were done on a contractual basis using third parties. Prior to the SSC 2020, there was no way to determine the saturation requirement of equipment and machines in the ULB. However post 2020, the equipment required was determined using the CPHEEO calculator and the ULB was able to set targets for procurement. Currently, the ULB is in 100% compliance with CPHEEO requirements for core equipment, PPE, and safety gear.

Pre- 2020, the corporation had a manpower of 60 workers, the calculation done post-2020 as per

CPHEEO standards shows this to be sufficient. This includes SEP Teams (2) to be held with the ERSU. The Municipal Corporation has also worked toward linking workers with schemes and providing access to loans under NSKFDCC

The Chandrapur City Municipal Corporation has started a new scheme for all private sanitation service operators. The ULB has offered many schemes such as licenses and service contracts through tendering, machines, safety gear, PPEs, and so on as per the MoHUA guidelines. The Municipal Corporation has outsourced the equipment, gears, and O&M requirements for three years until the ULB can procure all the necessary equipment and hire the personnel required. All the equipment provided by the private agency is as per the standards, and the manpower provided is trained to smoothly run the O&M services.

Approach to mechanization under SafaiMitras Suraksha

1. Key initiatives taken for mechanization

- **Assessment** - The Chandrapur City Municipal Corporation had a total of 17 standard septic tank cleaning machines (1 owned and 16 private) available in 2020 but after the launch of the SafaiMitras Suraksha Challenge, the ULB assessed their capacity, manpower, special equipment, etc. After assessing all the points they are working toward fulfilling the city's requirement (currently in the process of reaching saturation requirement levels)
- **Setting up of an ERSU** - The City Municipal Corporation has established a Emergency Responsible Sanitation Unit (ERSU) in the year 2021.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- The Municipal Corporation has organized health check-up camps for its SafaiMitras in collaboration with the Sanitation Department
- SafaiMitras have been linked to schemes such as the Pradhan Mantri Awas Yojana. The Corporation is supporting workers with the application process for the same. 15 lakhs insurance coverage is also being provided in case of on-job accidental deaths.
- The Municipal Corporation has also taken efforts to identify and introduce informal workers to NSKFDC loans in an effort to empanel them into the organized sector
- PPE standardization and uniforms - 60 standard uniforms have been purchased for 60 trained SafaiMitras working in on-site sanitation

3. Initiatives taken to manage public awareness

- **Regarding 14420** - The Chandrapur City Municipal Corporation has started 14420 free helpline to ensure an easy and fast process to register complaints about septic tank-related issues for citizens. The ULB has posted hoardings, banners, and posters of the 14420 helpline number to all over the city.

- **Periodic Desludging** - The Chandrapur City Municipal Corporation has posted hoardings, banners, and posters of periodic desludging all over the city to raise awareness of the importance of periodic desludging. The same has been displayed through wall painting and murals
- **Reporting of illegal practices** - Both workers and citizens have been made aware of the penalties associated with illegal desludging practices through posters, banners, wall paintings, murals, etc.

Outcome

The Chandrapur City Municipal Corporation has actively participated in the SafaiMitras Suraksha Challenge and has managed to achieve the desired saturation level. There has been particularly a visible change in the lives of the sanitation workers. They are now able to perform their duties with the appropriate equipment and safety gear. Workers have also been linked to key schemes - The Pradhan Mantri Jivan Jyoti Yojana, the Atal Pension Yojana and the Sukanya Samruddhi Yojana. All SafaiMitras are trained appropriately to perform their duties.



Chandrapur's journey: From Manhole to Machine hole



Figure 1 - IEC campaign



Figure 2 - Poster on reporting illegal desludging



Figure 3.1 - Training workshop for SafaiMitras



Figure 3.2 - Training workshop for SafaiMitras



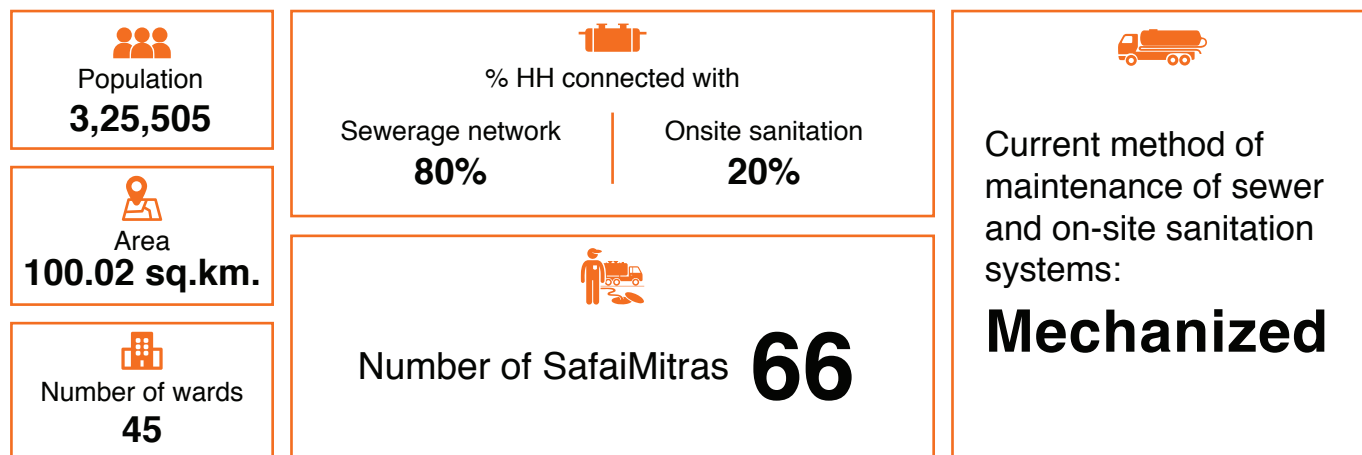


CASE 10 - DEWAS

MADHYA PRADESH

ULB: Municipal Corporation Dewas (M.P.) | **State:** Madhya Pradesh

ULB Profile



Journey of the ULB

The city of Dewas started laying down new sewage system in 2015 under the central supported scheme Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT). Total length of the sewer line proposed in this project is 237560 meters along with the three STPs. It will be operated and maintained by the construction agency till 2034.

Before the launch of the SSC 2020, there was a gap in implementation of CPHEEO norms especially in procurement of machines, equipment and safety gears. Dewas Municipal Corporation assessed these gaps based on the sewer line length and population in SSC 2020 and planned their future procurements.

Prior to SSC 2020, the city had two septic tank desludging vehicles & no PSSO were involved in providing desludging services. After the assessment DMC procured two additional septic tank desludging vehicles for the city.

Similarly, there were no separate trainings conducted for the liquid waste management team before the SSC 2020 initiatives.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- After the launch of SSC 2020, the Dewas Municipal Corporation conducted a needs based assessment of human resources and machines as per the norms of CPHEEO using the calculation sheet shared by the Ministry. After identification of gaps,

the Municipal Corporation planned the future procurements for additional machines and equipment.

- The city of Dewas' sewerage system is being operated and maintained by the private agencies that built it. The ULB, based on the need assessment advocated for the procurement of new machines to ensure 100% mechanized cleaning through the agency's own fund. Machines like-hydro jetting, root cutter attachment and sewer inspection camera apparatus, and hydrovac sets were procured by the agency as compliance.
- The Dewas Municipal Corporation through its own fund also purchased a set of gas mask & breathing apparatus, hydro root cutter machine, and sewer inspection camera monitor.
- An ERSU, as part of monitoring and supervision of the program, was set up in the city.
- For the first time, engagement of private operators to carry out desludging of septic tanks was ensured in the city by facilitating loans to the informal workers for the purchase of desludging vehicles.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- Separate uniforms were provided to the liquid waste management teams and the teams involved in cleaning of sewer lines and desludging of septic tanks.
- 100% requirement of safety gear was fulfilled to promote the safety and dignity of sanitation workers. Safety gear such as a full body water suit & gas mask along with a breathing apparatus was

provided to the sewer entry professionals. Other equipment as per the CPHEEO norms was also purchased for safety of sanitation workers.

- With the help of the NSKDFC, two informal workers were given SUI (Swachhta Udyami Yojana) loans to purchase desludging vehicles. They were also registered as PSSOs with the Dewas Municipal Corporation.
- Two rounds of training were conducted for all the workers and one separate technical training was organized for sewer entry professionals. An online orientation workshop on NSKDFC's loan schemes was also organized with support from Delhi team of NSKDFC.
- Bi-annual health check-up camps were organized for liquid waste management team.

3. Initiatives taken to manage public awareness

- Intensive IEC activities like interpersonal communication, group & community meetings were conducted for the general public on periodic septic tank desludging, prohibition of manual cleaning of septic tank and connecting households with sewer line.

- A toll free number 14420 was activated and linked to ULB's control room. Complaint and service request tab were added on ULB's local app.
- Hoardings and wall paintings were put up on the usage of the 14420 and periodic desludging of septic tanks.
- Messages about the helpline number and desludging services were written on the ULB's vehicles.

Outcome

Quality supervision of the sewer cleaning was made possible by putting quality assurance engineers in the liquid waste management team. The need assessment exercise of HR and machines helped ensure 100% compliance for machines and equipment at ULB's level. Fifteen informal workers were linked to livelihood opportunities by placing them in the sewerage agency team. Two workers were provided SUI loan from NSKDFC.

The SSC ensured welfare activities, & safety measures were compiled with. It helped create a healthy and safe working environment for all sanitation workers.



Dewas's journey: From Manhole to Machine hole



Figure 1 - Mechanized equipment for sanitation workers



Figure 2 - SafaiMitras performing their duties



Figure 3 - SafaiMitras with their service vehicles



Figure 4 - Safety equipment for sanitation workers











CASE 11- GAYA

BIHAR

ULB: Gaya Municipal Corporation | **State:** Bihar

ULB Profile

 <p>Population 4,68,614</p>	 <p>Gaya currently does not have any Sewerage Network connections but is in the process of setting up a treatment plant and initiating the same</p>	 <p>Current method of maintenance of sewer and on-site sanitation systems: Mechanized</p>
 <p>Area 50.17 sq.km.</p>	 <p>Number of SafaiMitras 54</p>	
 <p>Number of wards 53</p>		

Journey of the ULB

Earlier the Gaya Municipal Corporation had only one suction machine for cleaning of septic tanks. This machine was provided on demand for service. The SafaiMitras only used gloves and a uniform at the time of work-no other PPE was used as such. Before 2020 no private agencies were available for cleaning of septic tanks. The Gaya Municipal Corporation had used its own revenue sources for all these purposes.

The Gaya Municipal Corporation originally had a workforce of 36 sanitation workers. No specific training was given to the workers. The Municipal Corporation by its own sources, from time to time conducted medical check-ups for the workers. After the introduction of the Swachh Bharat Mission, the payments are done regularly, and the livelihoods of the workers have improved.

There were very few private sanitation service operators. They were engaged by different government offices and private establishments either on a daily basis or as and when required.

The ULB occasionally organized Nukkad Natak to illustrate cleaning procedures for on-site sanitation systems and the precautions to be taken.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- An Emergency Response Sanitation Unit has been constituted at the Municipal Corporation level and it is linked to the 14420 helpline.
- The Municipal Corporation has conducted an assessment of septic tanks based on which they have purchased suction machines, and safety gears for their workers.
- Tenders have been published and all machinery and vehicle requirements will be fulfilled by the Municipal Corporation in line with CPHEEO norms.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- For the safety of the SafaiMitras, the Municipal Corporation has provided the necessary safety gear as per pre-approved standards.
- The ULB also organizes an award ceremony to appreciate the work of SafaiMitras to boost morale.
- Through the NSKFDC, loan facilities are also provided and the nominations of SafaiMitras have been provided to the state under SUY loans to promote financial empowerment of workers.

3. Initiatives taken to manage public awareness

- The Municipal Corporation actively promotes the 14420 helpline number for citizens to raise complaints with regards to illegal desludging activities.

Outcome

All sanitation workers are linked to government schemes and other benefits. Procurement of septic tank cleaning machines, and other safety equipment is done along with periodic engagement with the private players. Occasional training of SafaiMitras is conducted

at the Gaya Municipal Corporation by inviting agencies and experts. Safety and core equipment is being actively purchased for easy, safe, and better performance of SafaiMitras. There is also a Memorandum of Understanding (MOU) in place with other ULBs for providing vehicles and private players are being empanelled for the cleaning of septic tanks.



Gaya's journey: From Manhole to Machine hole



Figure 1.1 - SafaiMitras engaged in mechanised cleaning of sewer lines



Figure 1.2 - SafaiMitras engaged in mechanised cleaning of sewer lines



Figure 1.3 - SafaiMitras engaged in mechanised cleaning of sewer lines



Figure 2 - SafaiMitras wearing their PPE kits



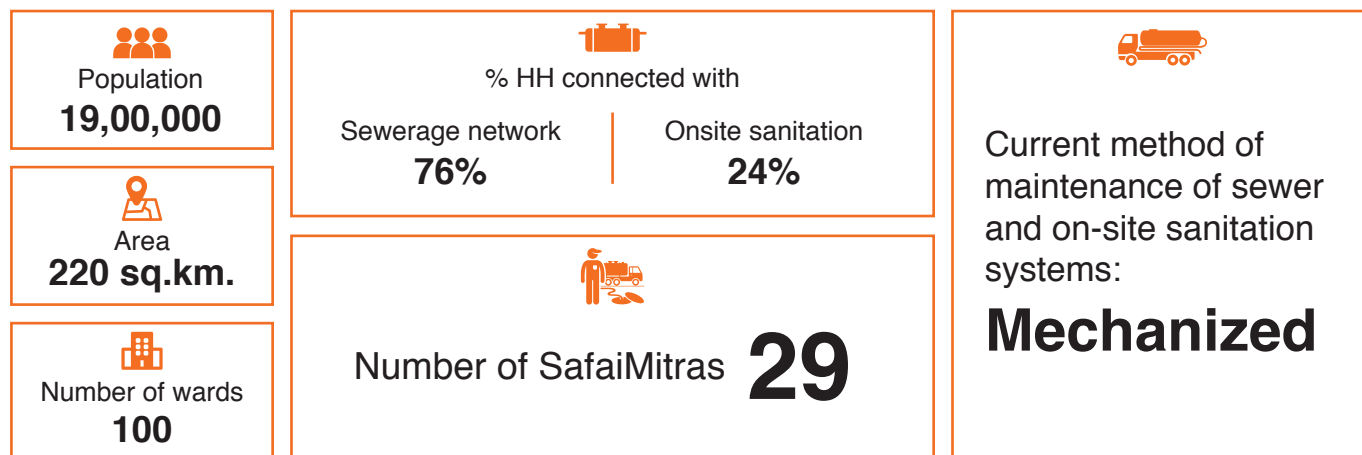


CASE 1 2 - GHAZIABAD

UTTAR PRADESH

ULB: Ghaziabad Municipal Corporation | State: Uttar Pradesh | Support Partners: Vatech Wabag

ULB Profile



Journey of the ULB

Prior to the SafaiMitra Suraksha Challenge 2020 (SSC 2020), there were no proper guidelines for sewerage and septage management related to human resource management. The SafaiMitra Suraksha Challenge changed this with its inception in 2020 by introducing proper Personal Protective Equipment for the workforce. In addition to this, the SSC 2020 also introduced minimal workforce and machine requirements to reduce the overburden of work on both the manpower and vehicles. This new innovative methodology is the most ground-breaking intervention since Prohibition of Employment as Manual Scavengers and their Rehabilitation Act 2013 (PEMSR Act, 2013) and it not only improved the efficiency of the sanitation processes but was also a humane touch to the existing inhumane working conditions for the sanitation supply chain.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- Under the SSC, as per CPHEEO norms new machines were installed like a grabber and de-silting machines, sewer inspection cameras, hydraulic sewer root cutters, power buckets, and power rodding machines for regular and proper maintenance of sewers.
- For Community and Public Toilets - mechanized cleaning vehicles were installed in each zone of the city for cleaning toilets.
- The number of septic tank desludging vehicles was

increased with proper monitoring of usage.

2. Key initiatives for promoting safety, dignity, and entrepreneurship of sanitation workers

- PPE kits were procured for sanitation workers as per CPHEEO norms, e.g. reflecting jackets, safety helmets, face masks, hand gloves, safety gumboots, and safety body clothes. Also, safety gear items like tripod sets, nylon rope ladders, blowers with air compressors, gas monitors, gas masks, breathing apparatus full body wader suits, body harnesses, and airline breathing apparatus.
- Monthly recognition was given to best-performing workers, providing them certificates to help them in future promotions.
- Sanitation workers were also provided linkage to various schemes like Ration Cards, Pradhan Mantri Ujjwala Yojana, and ESIC (Employment State Insurance Corporation).

3. Initiatives taken to manage public awareness

- For public awareness, weekly IEC activities were conducted in all the zones for the awareness of citizens about the toll-free number 14420 used for septic tank desludging.
- Wall paintings were done in every zone to generate awareness of the "MalAsur" septic tank desludging done every three years and The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013.
- IEC and wall paintings were done to raise awareness about the illegal open dumping of faecal sludge and the fines imposed upon it. Notifications were also published in newspapers.

Outcome

- In addition to the above, the SafaiMitra Suraksha Challenge also introduced the mandatory use of safety equipment, capacity building of the sanitation-related human resources, and also the proper mechanisms for IEC pertaining to proper sanitation infrastructure such as strict adherence to IS codes for design and construction of on-site sanitation infrastructure such as septic tank, twin pit latrines, and maintenance of both on-site sanitation and sewer network connections.
- Moreover, there has been the inclusion of training and recognition of the SafaiMitras by providing them additional hazardous allowance and recognition of best-performing workers. There are additional marks for ULBs who have provided entitlements to all of their SafaiMitras with at least 3 government welfare schemes such as Ayushman Bharat, ration cards for subsidized food grains, insurance schemes, etc.
- Improvement of the eco-system through implementing a ban on hazardous entry (without comprehensive safety gear) and creation of Sanitation Response Units (SRU) of all private service providers to improve the condition of the non-government workforce. Also, emphasis on imposing fines and collection of user charges not only prevents malpractices from happening but also promotes sustainable sanitation through improved sanitation-related revenue collection.



Ghaziabad's journey: From Manhole to Machine hole



Figure 1 - Desludging vehicle



Figure 2 - Sanitation worker training



Figure 3.1 - Sanitation workers wearing authorized PPE kits



Figure 3.2 - Sanitation workers wearing authorized PPE kits



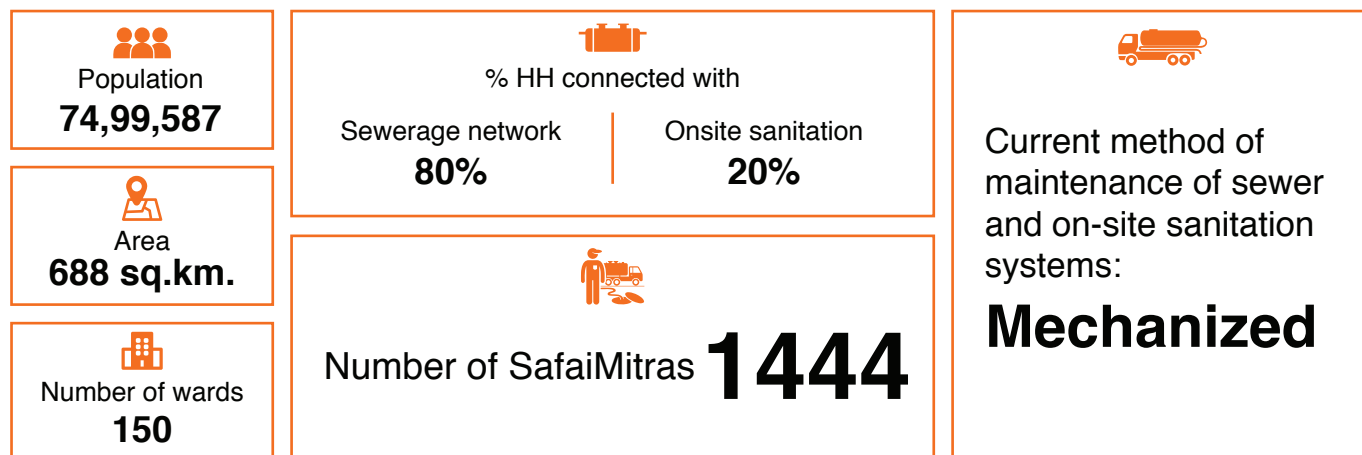


CASE 13 - HYDERABAD

TELANGANA

ULB: Greater Hyderabad Municipal Corporation | **State:** Telangana

ULB Profile



Journey of the ULB

In order to completely mechanize sewer operations in the city of Hyderabad, it had introduced 72 Mini Sewer Jetting Vehicles (Hydro Jetting Machines) in June 2017. Prior to 2020, nearly 85 Mini Sewer Jetting Vehicles and 57 Sewer Suction cum Jetting Vehicles (Hydrovac machines) were under use in the Greater Hyderabad Municipal Corporation (GHMC) area, with complete elimination of manual sewer operations. Further, Standard Operating Procedures (SOPs) for mechanical sewer operations were developed in association with the Administrative Staff College of India (ASCI, Hyderabad) & training was given to sewer workers on safe operations.

The GHMC has worked towards actively purchasing equipment (as per CPHEEO standards) like hydrovac sets, grabbers/desilting machines, septic tank vehicles. The ULB has also focused on getting special equipment like sewer inspection cameras, jetting machines, power bucket machines, power rodding apparatus and sewer root cutters and safety gear equipment like safety tripod, nylon rope ladders, air compressor, gas monitors, breathing apparatus, safety harness sets, full body wader suits and gas masks.

O&M of sewer lines, machine holes are monitored by the in-house staff working under General Manager (E), O&M Divisions / CGMs(E), O&M Circles reporting to Director (Operations-I) & Director (Operations-II). At regular intervals in-house staff submit proposals for maintenance works such as replacement of existing damaged sewer lines, machine holes and also to take up new sewer lines wherever required.

Hyderabad Metropolitan Water supply & Sewerage Board (HMWSSB) is levying sewerage cess to the extent of 35% of water cess in monthly water bills. This amount caters the needs of sewer maintenance and improvements in addition to budgetary support from the State Government.

At present HMWSSB employed 670 permanent sewer men and 774 outsourced sewer men.

HMWSSB conducts training programs and refresher courses at the field level and keeps the staff abreast with the techniques to be employed to make their job easier. The Training was organized in association with Administrative Staff College of India (ASCI, Hyderabad). Standard Operating Procedures (SOPs) were designed for mechanized operations and training was given.

Earlier, septic tank cleaning vehicles were operated privately which normally disposed the collected septage into water bodies or open areas. However, upon HMWSSB's initiative of setting up FSTP & Co-treatment plants at existing STPs, around 77 desludging vehicles are empanelled, thereby licensing them to convey the fecal sludge from septic tanks to nearest FSTP & co-treatment plants at STPs for safe disposal. HMWSSB has also launched the Dial – A – Septic Tank Facility (155313 and 14420) in which the HMWSSB directs the sanitation worker after receiving the request from the consumer to desludge their septic tank and safely dispose it off.

HMWSSB has launched a unique programme of participation by the sanitation workers in 2017, where the successful bidders have procured mini sewer jetting machines through bank loan, supported by Startup

India scheme & T-Pride of Telangana Govt., and engaged them on hire with HMWSSB.

Approach to mechanization under SafaiMitra Suraksha

MOM Initiative:

- HMWSSB has entered a contract for Manning, Operation and Maintenance (MoM) of sewer system under Fathenagar, S.R.Nagar & Boats Club Sections jurisdiction for a period of two years with the agency M/s.Ananya Enviro Engineers, on pilot basis.
- The MoM agency will take up the regular Preventive Maintenance, Emergency Maintenance and Post Operative Maintenance.
- The MoM agency is using sewer crock with camera (wherever required), silt grabbers of latest technology. As a result, the number of sewer complaints regarding sewer overflows, chokages have reduced by which the consequent Water Supply Pollutions has come down to "ZERO". Prior to MoM, the complaint redressal efficiency (resolutions within SLA period) was only 45%, which increased to 97% after MoM in the said sections.
- Complaint redressal time has been reduced to under 24 hours in various cases, thereby improving customer satisfaction.
- After successful implementation of the above MoM under Fathenagar, S.R.Nagar & Boats Club Sections jurisdiction, it will be extended for other Sections jurisdictions of HMWSSB.

Empanelment of Desludging Vehicles & Operators:

- For the areas where the residents are having the septic tank system and do not have proper disposal of fecal sludge, empanelment was done with the desludging vehicles along with operators for safe desludging of septic tanks and also proper treatment & disposal at designated FSTPs.
- The desludging operators are well trained and provided with safety gear kits. Further, a proposal for health coverage of 2 lakhs and accidental cover of 10 lakhs is in process.
- All the desludging vehicles are fitted with a GPS instrument to monitor the movement of the vehicles.

- HMWSSB already constructed one 40 KLD FSTP at Nallacheruvu and another 2 FSTPs are under construction at Injarpur & Nagaram locations. Further, co-treatment facilities were developed at 7 existing STP locations of Amberpet, Nallacheruvu, Peddacheruvu, Nagole, Khajaguda, Miralam & Nanakramguda, for treatment of fecal sludge. Desludging vehicles are licensed and mandated to dispose of their collected sludge into these co-treatment plants or FSTPs only.
- Dial-A-Septic-Tank Cleaning Vehicle (155313 & 14420) service was launched with a view to ensure seamless booking and cleaning services to citizens by desludging vehicle operators, trained in scientific management and cleaning of septic tanks, thereby discouraging illegal hiring of septage cleaners by public.
- Regular septic tank cleaning has been promoted by the ULB periodically i.e. once every 3 years for its effective functioning.
- Awareness programs are conducted in coordination with the Engineering Staff College of India (ESCI) in 66 wards of GHMC to educate the citizens about the scientific management of their individual septic tanks.

Mechanized Sewer Cleaning:

- HMWSSB has made innovative solutions for mini sewer jet machines as a game changer of quality of life in middle class localities, and thereby eliminated manual scavenging.
- The sewer overflows on the roads and particularly lanes and bylanes in middle class localities is a constant problem, which were catered by newly introduced Mini Sewer Jetting Vehicles.
- HMWSSB introduced 72 numbers of Mini Sewer Jetting Vehicles to provide improved sewerage services in slums and middle class localities with narrow lanes. These vehicles are an innovative modified technology with innovative financing, as it has clubbed various government incentives and subsidies for the successful bidders, and it is socially inclusive and entrepreneurial innovation, as the machines have been provided to former Safai Karmacharis and to the dependents of Safai Karmacharis.
- After deployment of Mini Sewer Cleaning Machines, manual scavenging is banned in the city of Hyderabad. Chokages of sewer lines and overflow of sewage on roads is reduced.



2. Key initiatives taken for mechanization

- Sewer cleaning machines with suction & high pressure jetting have been procured for sewer maintenance on major roads.
- Mini sewer cleaning machines with jetting facility are also procured to clean the choked up drains in residential areas and in small by-lanes of the city.
- Mechanized Silt Grabbers for cleaning of manholes are deployed on hire basis.
- Mechanical Sewer Root Cutters (Sewer Crocs) deployed on hired basis.
- Organized desludging vehicle operators by empanelling them and mandating safe disposal.

3. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- Welfare activities are carried out for sanitation workers by providing uniforms, soaps, oils etc. Training on safety measures are conducted and also provided with Safety Suit, Gum Boots, Helmet, Torch Lights, Oxygen Cylinders, Ropes, Ladders.
- By introducing mini sewer jetting machines including tools like grabbers, sewer cleaning rods, spades, crow bars, buckets, red mark cloth the manual entry of sanitation workers is banned.
- Health checks up are conducted regularly & medicines are provided at free of cost at HMWSSB dispensary and health insurance is provided upto ₹3 lakhs and accidental insurance upto ₹10 lakhs.
- Permanent employees are provided with the following facilities:
 - National pension scheme contribution for employees who joined on or after 01-09-2004.
 - Old pension scheme for employees joined prior to 01-09-2004.
 - Health insurance for an amount of ₹3 lakhs.
 - Accident Insurance of ₹10 lakhs in case of mishap during work.
 - Compassionate appointment to dependents, in case of a death during service.
 - Gratuity and leave encashment upon retirement.
- Outsourced employees are provided with the following facilities:
 - Employees Provident Fund Contribution.
 - Employee State Insurance Contribution.

- All the SafaiMitra Employees (i.e., Permanent & outsourcing sewer men, empanelled vehicle drivers & cleaners) are provided with the following.
 - HMWSSB conducts regular health checkups camps and also has a dedicated dispensary being maintained by a doctor.
 - The medicines are given free of cost to the workers and to all the SafaiMitras.
 - ₹1000/- per month as a special allowance towards their hygiene needs are paid to all the SafaiMitras.
 - Covid-19 vaccination two doses are given to all the SafaiMitras.
 - Conducting periodical training.

4. Initiatives taken to manage public awareness

- Under the SafaiMitra Suraksha Challenge Protocol – 2021, HMWSSB conducted public awareness activities on promoting the safe desludging practices & availability of call centre numbers (155313 & 14420) for booking desludgers. This was conducted for a period of 1 month in association with the Engineering Staff College of India, Hyderabad, by roping in 15 NGOs, Self Help Group Women, Resident Welfare Associations, Slum level Federations to reach the public at the field. Further, training was also conducted for the desludging vehicle operators.
- Currently, HMWSSB is promoting public safety in monsoons, asking to not remove machine hole covers to drain rain water to avoid mishaps and to contact the department when need arises, through caller tunes to all HMWSSB employees' contact numbers and automatic calls to HMWSSB consumers. Further, GHMC is sending SMS messages to the public on the same.
- HMWSSB Conducted filed level public awareness & worker training programmes for a Fortnight in the name of "Bhadrata Pakshotsav" in the years 2021 & 2022. During the programmes, the sewerage workers are refreshed on the safety practices and rallies are conducted by workers in respective localities to educate public on non-hiring of illegal workers and non-disposal of solid waste into sewers.



Outcome

- Through mechanized interventions, HMWSSB could successfully eliminate the manual intervention in sewer cleaning operations in Hyderabad City.
- Mechanized cleaning has improved the quality of life of SafaiMitras and improved their health conditions.
- The sewer maintenance needs of narrow lanes, where erstwhile big sewer cleaning vehicles failed to enter & warranted manual interventions, have been successfully catered through the introduction of Mini Sewer Jetting Vehicles. It has been a game changer in the sanitation of slum and middle class localities.
- Through various awareness activities and plying of mechanical sewer cleaning vehicles since the past 5 years, the public are sensitized on the hazards of deploying private labour for sewer operations and the effectiveness of using sewer cleaning vehicles vis-a-vis manual operations.
- Further, the mechanical sewer operations have been addressing consumer grievances quickly within the SLA period, thus improving customer satisfaction levels.



Hyderabad's journey: From Manhole to Machine hole



Figure 1 - Awareness programmes - rally



Figure 2 - Mini Sewer Jetting Vehicle



Figure 3 - Hydrovac - Sewer Jetting cum suction



Figure 4 - Sewer Croc (Robotic sewer cutter)



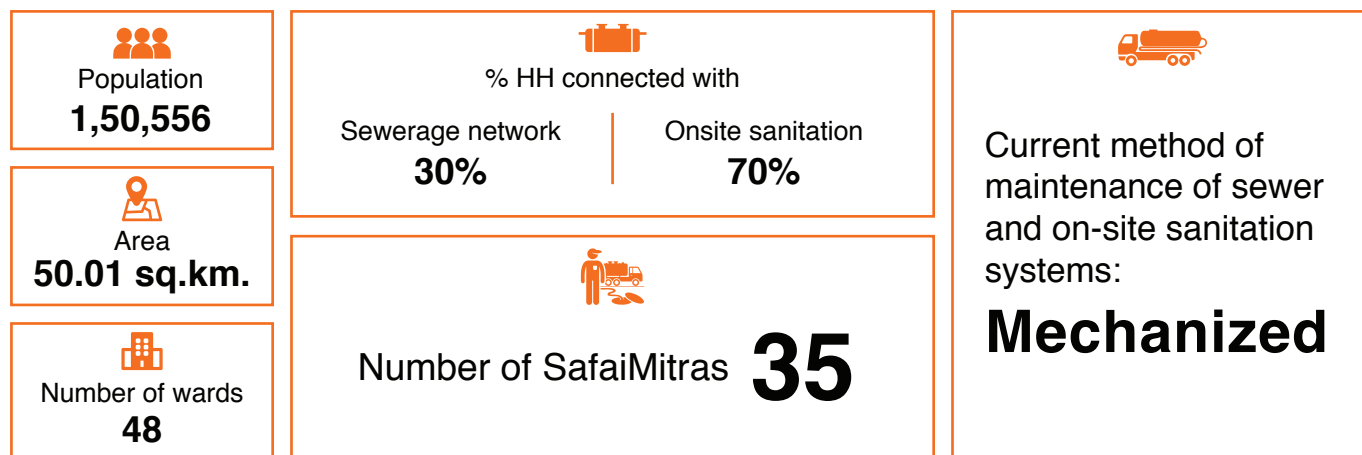


CASE 14 - JAGDALPUR

CHHATTISGARH

ULB: Municipal Corporation Jagdalpur | State: Chhattisgarh

ULB Profile



Journey of the ULB

- Before the SSC 2020, the ULB only owned 2 vacuum emptiers for cleaning of the septic tanks, without any safety equipment and the safety gear was inadequate
- There were only 3 core SafaiMitras and they were under-skilled. No training or benefits were provided to sanitation workers
- There were no PSSOs empaneled in the sanitation service delivery
- There were very few efforts made to raise awareness about - cleaning of septic tanks every three years by a registered desludging operator

Post the SafaiMitra Suraksha Challenge, the city has taken active steps towards mechanization as well as ensuring the well-being of its workers. SafaiMitras are now linked to various beneficiary schemes such as the Pradhan Mantri Awas Yojana, Deen Dayal Antyodaya Yojana - National Urban Livelihoods Mission (linkage to bank and loans), and the Mukhyamantri Slum Swasthya Yojana (health and medicine). A gendered lens has been taken through the initiatives where any woman can obtain menstrual products at nominal rates under the the scheme or at the community toilets.

In terms of mechanization, the ULB already has 4 hydrovac machines and 2 desludging vehicles. Other safety equipment such as nylon rope ladder, safety tripod sets, breathing apparatus, full body wader suit, etc. are under tender process. All equipment is owned and maintained by the ULB itself. The current funding for the procurement of such equipment comes from the 14th Finance Commission and has so far proven to be sufficient.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- An ERSU has been constituted for continuous monitoring of the cleanliness of sewer networks and septic tanks in the ULB, in which the Commissioner is the president and senior engineers and sanitation inspectors work as members
- PSSOs have been identified and registered with the ULB for the cleaning of septic tanks. All necessary permissions have been given.
- Regular meetings and training have been undertaken with senior ULB officials to orient them toward the safety of SafaiMitras with regards to mechanization and resolving problems on-ground
- The ULB is rendering tenders and work contracts for the procurement of mechanized equipment

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- To promote the safety of workers, adequate PPE has been purchased. Sanitation workers have been made aware of the penal action associated with not wearing PPE. The PPEs include safety helmets, masks, gloves, and protective eyewear to ensure an accident-free workplace.
- Sanitation workers are now linked to schemes such as Ayushman Bharat, Jan Dhan Yojana, and the Mukhyamantri Slum Swasthya Yojana

- In order to improve the recognition and dignity of sanitation workers, they have been provided with proper uniforms and ID cards. Worker achievements are also recognized from time to time
- In order to ensure the financial empowerment of workers, loan fairs have been organized by the local authorities. Additionally, sanitation workers are also provided with hardship allowances

3. Initiatives taken to manage public awareness

- The toll-free number 14420 has been constituted and promoted amongst citizens to make them aware of desludging services as well as provide them with a platform to register complaints
- Awareness campaigns have also been launched and centered around educating the public on the importance of cleaning septic tanks every 3 years

- The focus of the campaigns has been especially on the role of licensed operators

Outcome

With the advent of the SafaiMitra Suraksha Challenge, the ULB has been able to move in a direction towards mechanized cleaning with proper guidelines having been received to ensure procurement and availability of safety gear and equipment in adequate quantity. The SSC has ensured that all the sanitation workers in the city have been successfully linked to some form of beneficiary scheme which allows them to live with financial stability and dignity. The SSC has also led to an increase in the registration of private operators and desludgers, ensuring them a regular source of income.



Jagdalpur's journey: From Manhole to Machine hole



Figure 1.1 - IEC tools for desludging activities



Figure 1.2 - IEC tools for desludging activities



Figure 2 - SafaiMitras being given their safety equipments



Figure 3 - SafaiMitras in their PPE gear

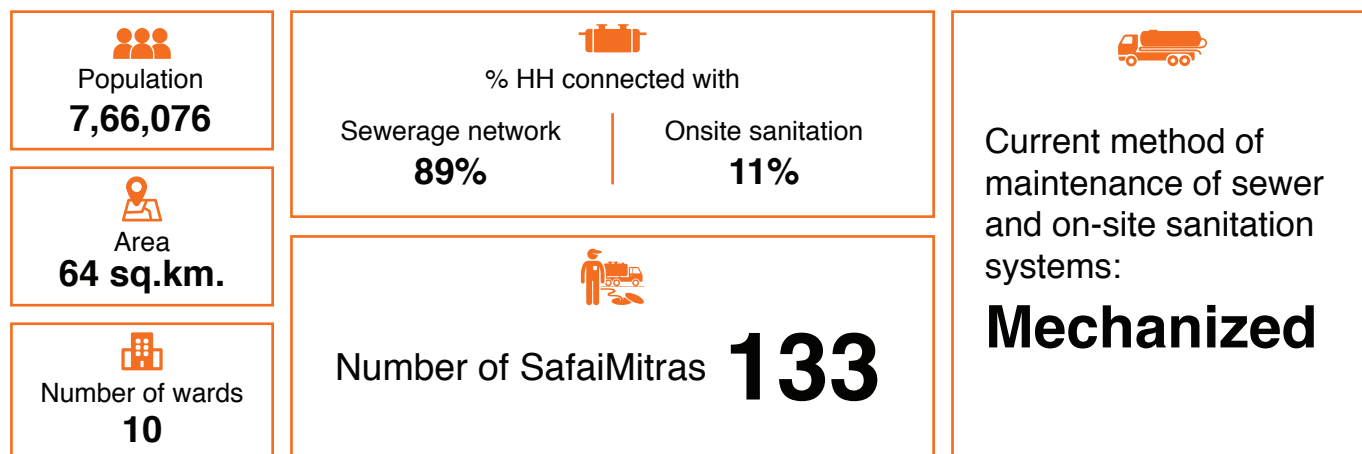




CASE 15 - JAMSHEDPUR JHARKHAND

ULB: Jamshedpur Notified | **State:** Jharkhand | **Support Partners:** Tata Steel Utilities and Infrastructure Area Committee, Services Limited Towaso Private Limited

ULB Profile



Journey of the ULB

In 2017, a fatal accident was recorded in which one man was reported to have lost his life. As per a few claims it happened during manual cleaning of a septic tank, and since then the city administration has started focusing on the mechanization of cleaning activity. As there were very few desludging operators, manual cleaning was prominent and common. Between 2017 and 2020, the city mechanized more than 50% of cleaning activity related to septic tanks and sewer networks. Before 2020, there was a high risk for SafaiMitras, as they were doing 50% manual work. During 2020 to 2021 a focused approach was towards mechanizing the cleaning of sewers and septic tanks. In 2020 there were two super suckers when there was a need for three.

Though there were awareness campaigns organized on the Manual Scavenging Act 2013, not everyone was aware about it. SafaiMitras were not aware of the loan facilities available to them.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Initiatives undertaken for public awareness

- The ERSU was established on February 14, 2020, and is run by a Special Officer of the JNAC.
- The ULB also purchased required equipment such as hydro-vac equipment (2), desilting machines (4), desludging vehicles (8), sewer inspection camera apparatus (6), hydro jetting machines (5), power bucket machine (2), power rodding apparatus (6), and

Hydraulic sewer root cutter (3) to ensure mechanized cleaning.

- Workers were given specialized training and safety equipment to handle motorized equipment.
- From 1st January 2021 manual entry into the sewer network is completely prohibited across the city and the city has achieved transformation from manhole to machine hole.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- To improve the capacity of the workforce, there are daily toolbox talks, mass meetings are held on a monthly basis regarding safe working procedures for each piece of equipment, mandatory PPE usage, mandatory safety training, and conversion of manholes to machine holes.
- Machine holes are covered with grills that prevent the entry of SafaiMitras into the machine holes during any accident. As these grills are made locally they benefit local businesses.
- The ULB is also organizing an annual fest in which all the officials serves the food to SafaiMitras for their dignity.
- On monthly basis, ULB also gives recognition to SafaiMitras for their work.
- SafaiMitras are linked with at least three governmental schemes.

3. Initiatives taken to manage public awareness

- Awareness campaigns were organized in schools to spread awareness on regular cleaning of septic tanks and using only licensed desludging operators as well as the process of reporting if anyone is carrying out the work without proper PPE usage.
- Toll-free number 14420 is also promoted by ULB.
- Wall paintings on all public and community toilets related to cleaning of septic tanks done every three years with regards to engaging licensed operators, and penal provision if anyone engaged without proper safety.
- The notice is also published in the press and mentions IS Code 2407.

- Every two months, there is a client contact program in each locality.
- Two TSUISL apps are employed for helpline purposes. I.e., JUSCO Sahyog and Zimmedaar Nagrik.

Outcome

Since 1st January 2021, the city of Jamshedpur is having machine holes, no SafaiMitras is allowed to enter into it. Septic tank cleaning is done using licensed desludging operators only. SafaiMitras are linked with different schemes such as mandatory EPF, ESIC, also PM-SYM, PMJJBY, PMSBY. Quarterly health checkup camp is also organized for SafaiMitras. Recognition is also given to best workers on monthly basis as per their work performance.



Jamshedpur's journey: From Manhole to Machine hole



Figure 1 - Officials serve food to SafaiMitras



Figure 2.1 - SafaiMitras perform duties with mechanized equipment



Figure 2.2 - SafaiMitras perform duties with mechanized equipment



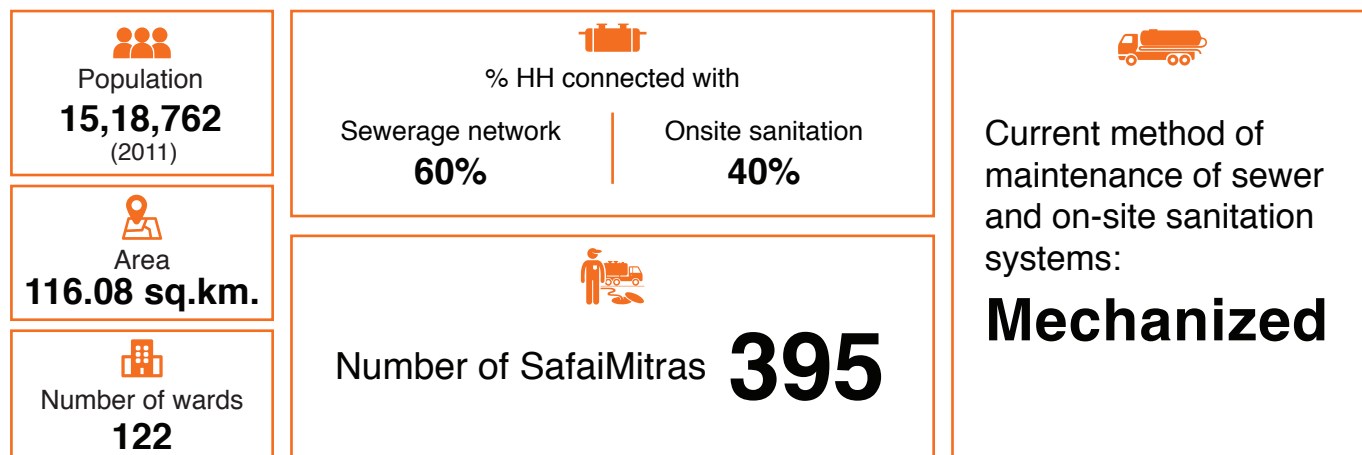


CASE 16 - KALYAN

MAHARASHTRA

ULB: Kalyan Municipal Corporation | **State:** Maharashtra | **Support Partners:** Accord Water Tech, Kaam Foundation

ULB Profile



Journey of the ULB

Prior to 2020, the Kalyan Dombivali Municipal Corporation had only 5 SLCMs (sewer line cleaning machine) to undertake cleaning of sewer lines and septic tanks. These vehicles were operated by workers engaged with the concerned department. O&M was carried out based on complaints received. The approximate cost of undertaking O&M was nearly INR 210 Lakh per annum, which was insufficient to maintain the 225km long sewer network. The source of funds for O&M was from the revenue budget of the Kalyan Dombivali Municipal Corporation which too had its own limitations.

Initially, only 8 drivers and 18 workers were available to undertake all O&M operations. Some of these workers were transferred from MJP in the year 1995. These workers were above the age of 45 years and were not aware of the scientific process required to carry out operations. Also, they were not given any technical training regarding the safety and usage of the machinery. Housing societies undertook cleaning of septic tanks themselves by engaging informal workers. The septage was then disposed into open drains.

Currently, the Kalyan Dombivali Municipal Corporation has 8 SLCM vehicles for septic tank desludging. All the O&M tasks have been outsourced to an external private agency. Advanced machinery has been deployed for the said work and qualified and trained workers are hired for the usage of machinery.

Equipment like air compressor for blowers, air breathing apparatus, masks, full body suits, gloves, helmets, safety belts, goggles, etc. have been provided

to the employees engaged in cleaning of sewer/septic tank by the ULB along with jetting machines, suction machine, hydraulic operated trolley, grab bucket, manual rods, shovels, spades drainages cleaning machines and steel scrapers with handles, hoses and washing instruments among others.

All the workers, be it the ULB staff or private, are provided with proper uniforms and PPE kits depending upon the seasonal demand. Safety gears are provided before doing any hazardous work. Workers undergo health checkups every six months. Training programs regarding safety, rules, and regulation of manual entry into chambers and maintenance holes are conducted every year for the capacity building of SafaiMitras.

The Kalyan Dombivali Municipal Corporation has not filed any cases of workplace related deaths in the last 10 years. It has always tried to mobilize the best machinery and workforce for the job.

Approach to mechanization under SafaiMitra Suraksha Challenge

Cleaning of septic tanks has been under the Kalyan Dombivali Municipal Corporation's scope of work. The collected sludge is The collected sludge is disposed into the nearest sewer chambers which are connected to the main sewerage network. which is connected to the sewerage network. This network carries the sludge to the respective STP where the sludge is co-treated with the sewage water.

The process of cleaning and maintaining the sewer network and maintenance/machine holes is fully mechanized. The entire task of O&M is carried out by private organizations who are equipped with advanced machinery for undertaking the work. Also, the workers

engaged are properly trained on occupational safety and in the usage of the machinery.

With the emergence of the SafaiMitras Suraksha Challenge, we came across more advanced and specific machinery for the cleaning and maintenance work. The Kalyan Dombivali Municipal Corporation is now working on procuring this machinery and safety gear through a newly revised tender document. The new machinery will soon be procured and deployed on field.

1. Key initiatives taken for mechanization

- Private organizations have been engaged in cleaning and maintenance of the sewer network and proper machinery has been purchased by the Kalyan Dombivali Municipal Corporation.
- The ULB has also set up the Emergency Response Sanitation Unit to meet sanitation emergency requests.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- The Kalyan Dombivali Municipal Corporation distributes uniforms twice a year to all workers and also according to the requirements of the workers.

- All the essential PPE kits are provided before the start of work.
- The Kalyan Dombivali Municipal Corporation also issues a yearly bonus to all workers

3. Initiatives taken to manage public awareness

- The Kalyan Dombivali Municipal Corporation has conducted extensive door-to-door awareness campaigns and put hoardings for the 14420 helpline, information on periodic desludging, and for reporting illegal practices.

Outcome

Due to outsourcing, the working staff is now technically qualified. Advanced and high-end machinery and vehicles are easily available and the responsibility of vehicle maintenance lies with the operator which reduces the burden on the ULB. The 24/7 complaint mechanism has been made available to citizens since the workers of the external agency work in double shifts. The complaints are solved in minimum time and repeated complaints have been reduced.



Kalyan's journey: From Manhole to Machine hole



Figure 1 - IEC for desludging activity



Figure 2 - SafaiMitras performing desludging activity



Figure 3 - SafaiMitras with thier safety gears and equipment



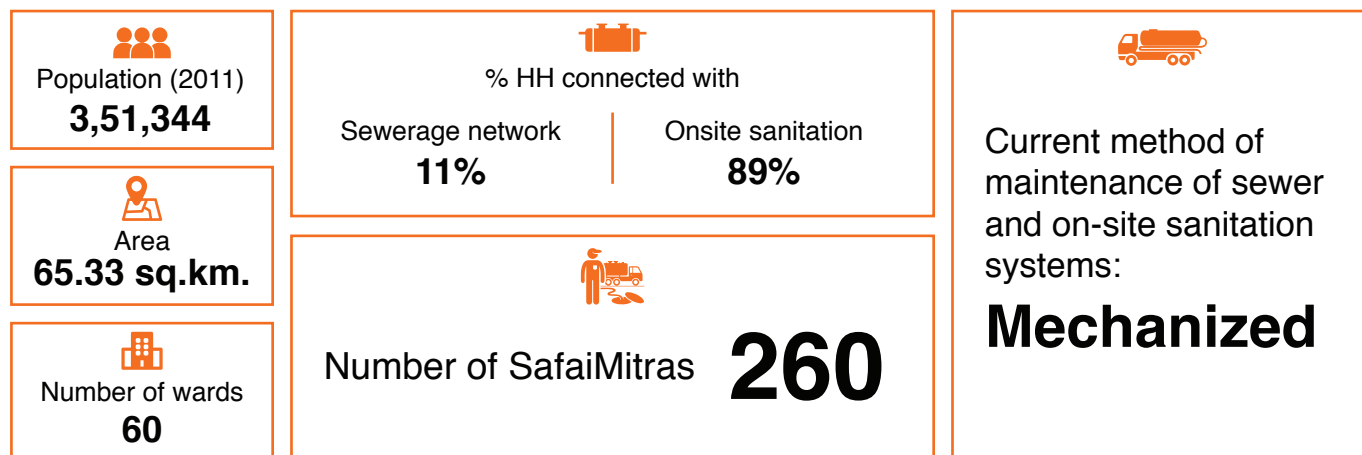


CASE 17 - KARIMNAGAR

TELANGANA

ULB: Karimnagar Municipal Corporation | **State:** Telangana | **Support Partners:** ASCI, Prakuti and Ramananda NGOs

ULB Profile



Journey of the ULB

Prior to the launch of SSC, the municipal sanitation workers cleaned the sewerage system and performed desilting of drains and private operators were engaged for desludging of septic tanks with limited safety precautions and mechanical equipment. Also, the health camps and benefits under various schemes were made available only for municipal workers as the private operators were not empanelled with ULBs. Due to lack of proper training and poor skills, the private desludging workers were engaged on daily wages basis i.e. ₹300 to ₹500 per day.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

Post the SafaiMitra Suraksha Challenge, an Emergency Sanitation Response Unit (ERSU) was constituted under the guidance and monitoring of a Responsible Sanitation Authority (RSA). Assessment of the number of vehicles required was done and an approval was accorded from the SRU for its procurement. Thereafter, 5 jetting machines, 1 desilting vehicle, 12 sewer route cutters, 1 sewer inspection camera and 12 desludging vehicles were acquired. Furthermore, IoT/sensor-based monitoring of machine holes and desludging activities is now being implemented to track any leakages.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

To ensure safety and dignity of SafaiMitras, uniforms and PPE kits were distributed to all 260 SafaiMitras and training was provided. All the SafaiMitras were linked with minimum 3 government social benefit schemes, health camps and yoga programs as well. Also, an initiative was taken to provide an additional 10% hardship allowance to all SafaiMitras per month. Further, 5 beneficiaries have been identified for availing loans under Swachhta Udyami Yojana (SUY) of NSKFDC. Out of these 5 applications, loans to 2 beneficiaries with an amount of ₹15 lakhs each have already been disbursed. These beneficiaries have also procured septic tank cleaning vehicles and have been formally engaged by ULB for the cleaning of septic tanks.

3. Initiatives undertaken for public awareness

- Various awareness campaigns in the form of street plays, door-to-door and school campaigns, wall murals, and through swachh autos were conducted on 14420, periodic desludging of septic tanks and reporting of illegal practices across the city duly involving NGO partners and SHG groups.
- Branding of sewer and septic tank cleaning vehicles with MalAsur campaigns and messages promoting 14420 and periodic desludging were undertaken for wider outreach.
- Information Education and Communication (IEC) campaigns covering print, electronic and social media, through murals/paintings to educate citizens, other stakeholders as well as ULB employees have been conducted.

Outcome

A total of 260 SafaiMitras were linked with Govt. schemes and regular health camps were conducted. All these SafaiMitras were provided with 10% hardship-allowance and safety / PPE equipment thereby ensuring safety and economic well being.

After the SafaiMitra Suraksha Challenge, 2 beneficiaries were provided with loans. These two beneficiaries were previously engaged in cleaning of machine holes and septic tanks informally and as a result of these loans, they have procured vehicles and now operate their own desludging vehicles. Further, they have created employment opportunities for 4 more supporting workers in their business. They have moved from being employees to business owners.



Karimnagar's journey: From Manhole to Machine hole



Figure 1.1 - Procured machinery through SSC



Figure 1.2 - Procured machinery through SSC



Figure 2 - Street-plays by Kalajatha teams



Figure 3 - Yoga Camp for SafaiMitras



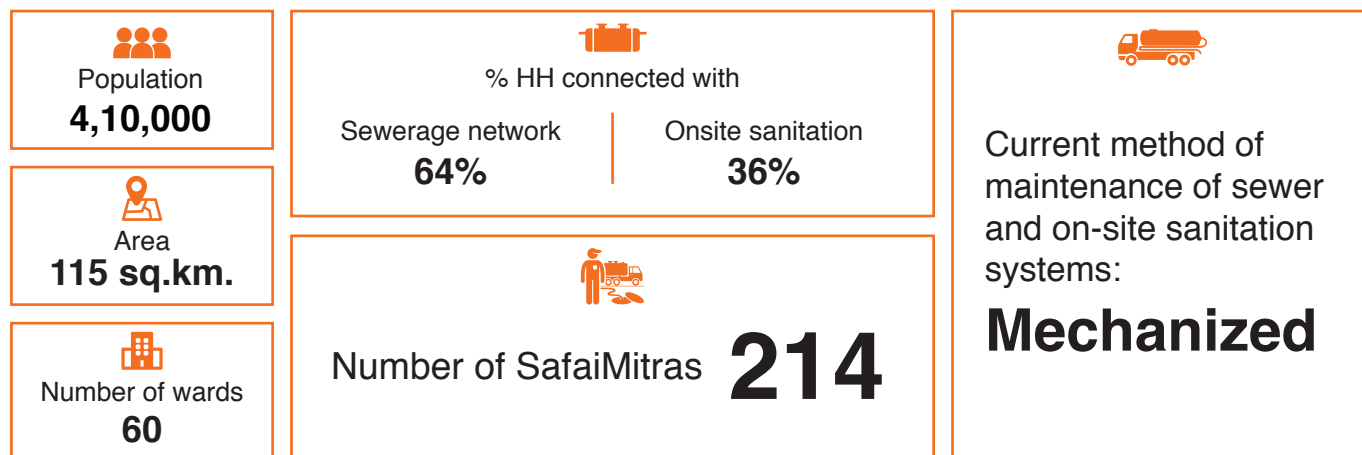


CASE 18 - KHAMMAM

TELANGANA

ULB: Khammam Municipal Corporation | **State:** Telangana | **Support Partners:** Administrative Staff College of India

ULB Profile



Journey of the ULB

Before the SafaiMitra Suraksha Challenge, 2020 the cleaning of drains and sewers was outsourced to a private operator and manual cleaning was done.

The citizens were not aware about the construction of septic tanks as per CPHEEO standards or regular desludging of septic tanks or the safety measures to be taken by the sanitation workers. Due to lack of a helpline number, the citizens were also uninformed about the desludging operators.

The SafaiMitras were engaged as informal workers previously. The workers were untrained with no proper safety measures taken. There was also no provision of health benefits.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- Post the SafaiMitra Suraksha challenge, the Municipal Corporation has empanelled 17 private desludging operators and purchased the required machinery as per the CPHEEO manual.
- Identification of hotspots has been done and the schedule has been prepared for the cleaning of hotspots and machine holes.
- Daily monitoring of sanitation activities is undertaken by the Sanitary Inspector and fortnight review of the same is done by the Commissioner.
- A 4 members team has been appointed as Sanitation Response Unit for monitoring, campaigning and enforcement of the activities.

- A toll-free helpline number - 14420, has been set up for grievance redressal of desludging services.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- Identification of informal SafaiMitras, beldars and masons in and around the municipality has been undertaken. Empanelment has been done for these workers and they have been provided with government schemes.
- Training and workshops have been conducted for the sanitation workers and desludging operators on usage of PPE, machinery and cleaning of septic tanks.
- A training program and workshop was conducted for masons on the construction of standardised septic tanks as per IS-2470.
- Parking space for vehicles and restrooms have been provided for workers.
- The Municipality has provided Personal Protective Equipment (PPE) and safety gear kits to the SafaiMitras.
- The Municipality conducted regular health check-ups on a weekly basis.
- Hardship allowance has been provided to the SafaiMitras.
- Various kinds of games and competitions have been conducted for the well-being and the entertainment of SafaiMitras.
- Yoga activities were conducted by well-trained yoga teachers in order to help SafaiMitras relax from their hectic work and to keep them in good health.

3. Initiatives taken to manage public awareness

- Campaigns have been conducted on 14420 through social media and WhatsApp groups. IEC boards have been placed every 50 meters in the commercial areas and wall paintings have been done in every street which covers all the residential areas to raise awareness of desludging activities.
- In order to raise awareness among the citizens, a special program called Kalajathara Street plays has been organized.
- IEC campaigns have been conducted through door to door collection vehicle with mike announcement.
- Desludging vehicles has been painted with IEC messages and 14420.

Outcome

As part of the SafaiMitra Suraksha Challenge, the ULB has empanelled 17 private desludging operators. Training has been provided to the all the SafaiMitras working in the ULB. SafaiMitras are also linked to government schemes as per their eligibility. A centralized call centre has been established with 14420 toll-free number. A dedicated 4-member team has been appointed as Emergency Sanitation Response Unit for monitoring of overall activities. Systematic schedules have been created for the cleaning of septic tanks, drains and sewer lines.



Khammam's journey: From Manhole to Machine hole



Figure 1 - Yoga Program conducted for SafaiMitras



Figure 2 - Conducted outdoor games for SafaiMitras



Figure 3 - Capacity building program conducted for SafaiMitras

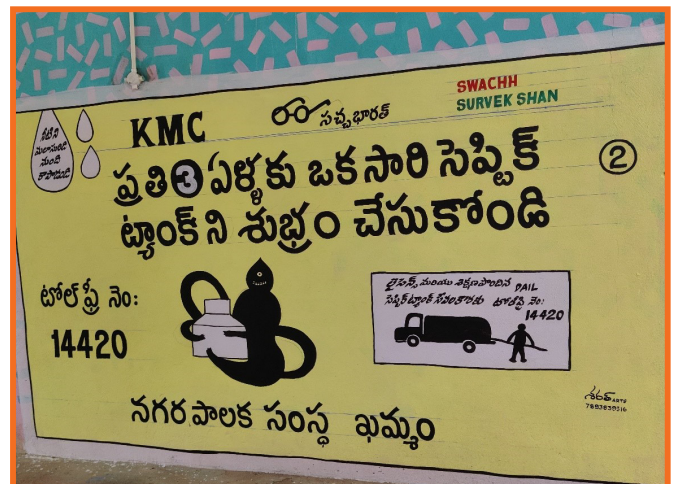


Figure 4 - IEC campaigns through wall painting



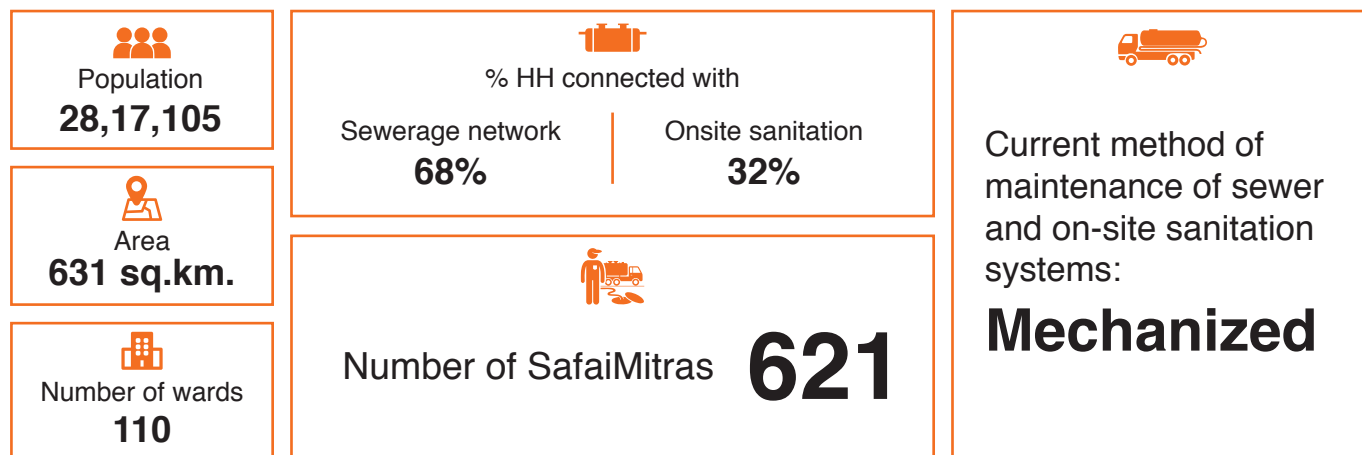


CASE 19 - LUCKNOW

UTTAR PRADESH

ULB: Lucknow Municipal Corporation | **State:** Uttar Pradesh

ULB Profile



Journey of the ULB

The city of Lucknow has a population of 28,17,105. Before the SafaiMitra Suraksha Challenge, there were 621 sanitation workers in both permanent and temporary engagement, 21 desludging vehicles and 9 hydro jetting machines. The workforce was provided with safety equipment and PPE kits as well. The number of machines and equipments were increased with the increase in demand. PMC from Jal Kal Vibhag is the implementing partner whereas the funds have been provided by the state government. Cesspool tankers of the Jal Kal Vibhag as well as the private operators are used for desludging the septic tanks across the city. Post desludging, the sludge collected is discharged in the STPs for treatment.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- The ULB has initiated the process of mechanization through the purchase and deployment of desilting and super sucker machines.
- The ULB has also outsourced work contracts to PSSOs such as M/s SUEZ India Pvt. Ltd. to help with the process of mechanized service delivery.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- Reinforcing no manual scavenging and zero fatal accidents on site.

- An initiative of safety week in the months of both March and April was taken by the safety officers wherein measures were taken to sensitize and train the workers along with a pledge to never put one's life in danger.
- The Municipal Corporation is also setting up a SafaiMitra Griha for its workers

3. Initiatives taken to manage public awareness

- The Lucknow Municipal Corporation organized radio campaigns to spread awareness against the pollution of open drains.
- An initiative was also taken at the school level to educate the children about the hazards of drain pollution.
- The ULB has also launched mass media awareness campaigns to educate sanitation workers on safety operation norms and discourage manual scavenging.
- An SMS campaign was launched in tandem with SSC for the citizens of Lucknow.

Outcome

As an outcome of the cumulative efforts under the SafaiMitra Suraksha Challenge, 1112 SafaiMitras were linked to various health and financial government schemes. Septic tank cleaning is now 100% mechanized in Lucknow with the Municipal Corporation now using a GPS system to track effective waste disposal. Evidence suggests 100% compliance when it comes to PPE usage. Sanitation workers receive safety training every 3 months. In 2021, all machine holes were GIS tagged for tracking.

Lucknow's journey: From Manhole to Machine hole



Figure 1 - Safety week campaign



Figure 2 - Fire drill



Figure 3 - Chlorine leak arrest drill



Figure 4 - Safety equipment workshop for ward counselors



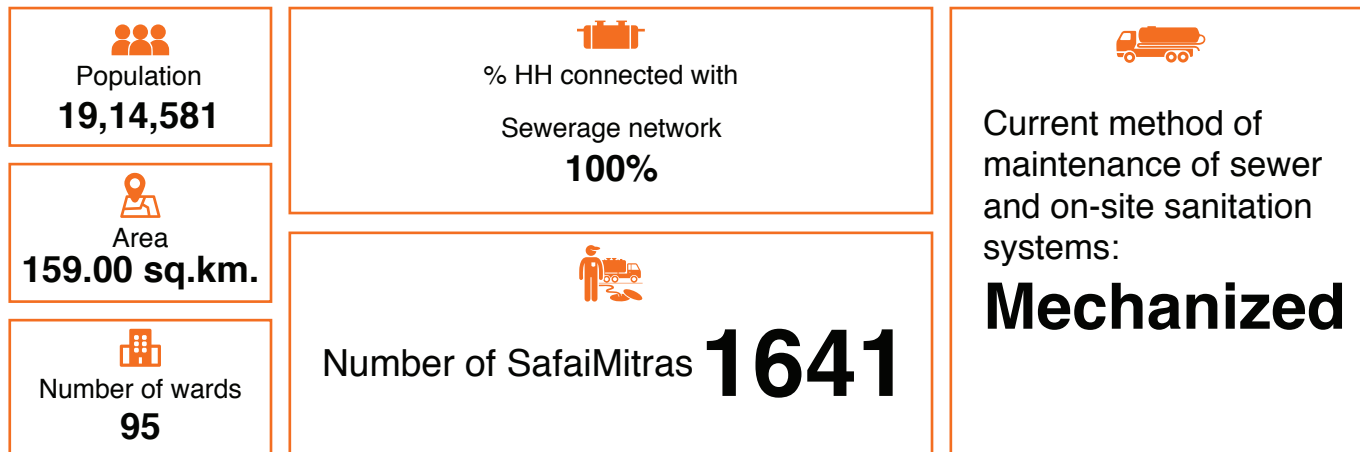


CASE 20 - LUDHIANA

PUNJAB

ULB: Ludhiana Municipal Corporation | **State:** Punjab

ULB Profile



Journey of the ULB

Ludhiana Municipal Corporation had a mechanized sewer cleaning system for many years. Post the SafaiMitra Suraksha Challenge, the ULB set up an ERSU and RSA in the city and started the new helpline number 14420 for complaints of sewer blockages and unsafe practices of sewer cleaning. This helpline number reached the masses via advertisement through posters and wall paintings on jetting machines and offices respectively.

Before the SafaiMitra Suraksha Challenge, power bucket machines were used to de-sludge the sewer lines and the safety gears available were of lower quality. All the machinery and equipment were owned by the ULB. The source of funding was the fund of the Municipal Corporation and Smart City Mission. Currently, the ULB owns over 16 different types of mechanized equipment such as grabbers/desilting machines, hydro jetting, inspection cameras, sewer root cutters, power buckets, hydrovac sets, etc which are 100% in compliance with CPHEEO norms.

The Ludhiana Municipal Corporation has sufficient workforce as per CPHEEO norms & all of them are engaged in sanitation activities. The SafaiMitras are trained through various training programs & awareness campaigns.

Health checkups are conducted periodically & benefits of hospitalization due to any injury are done free of cost under the ULB hospitals. The Ludhiana Municipal Corporation has been providing service contracts by tendering for cleaning of the particular length of the sewer by appropriate machinery (super suction machines) with proper safety gears.

Earlier no financial support was available for SafaiMitras for training and equipment which is now available through the National Safai Karamcharis Finance & Development Corporation (NSKFDC-A Government of India undertaking under the Ministry of Social Justice and Empowerment).

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- Manual scavenging has been totally omitted and sewers are unblocked via various equipments like jetting machines, grabbers, super suction machines, and hydrovac machines. SafaiMitra Suraksha Challenge.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- SafaiMitras have been provided PPEs kits and have also been trained for its use to ensure safe execution of work.
- All sanitation workers are provided entitlements of free health benefit schemes by the government hospitals.
- Ludhiana Municipal Corporation has also helped in providing Aadhaar cards & government ID cards along with life insurance cover to all the SafaiMitras (up to ₹10 Lakhs).
- Loan Melas have been organized to ensure worker empowerment and financial stability.

3. Initiatives taken to manage public awareness

- Awareness campaigns for the public/citizens were carried out by posting on billboards and the Ludhiana Municipal Corporation official websites for use of toll-free no. 14420 to report illegal practices on desludging.
- Awareness campaigns were also conducted through posters on tankers, jetting machines, wall paintings, ULB offices, and wall murals (Eg. walls of corporation offices, etc.)

Outcome

Due to the mass awareness campaigns citizens are now aware of 14420 and the chance of workers to become an entrepreneur has been increased due to the activities like Loan Mela etc. Awareness on safety of all the workers have increased due to the training programmes & skills enhancement workshops.



Ludhiana's journey: From Manhole to Machine hole



Figure 1 - SafaiMitras performing their duties



Figure 2 - Vehicles for desludging



Figure 3 - Vehicles for desludging



Figure 4 - IEC activities for desludging activities











CASE 21 - MALEGAON

MAHARASHTRA

ULB: Malegaon Municipal Corporation | **State:** Maharashtra

ULB Profile

 Population 5,90,998	 % HH connected with Onsite sanitation 100%	 Current method of maintenance of sewer and on-site sanitation systems: Mechanized
 Area 67.5 sq.km.	 Number of SafaiMitras 84	
 Number of wards 21		

Journey of the ULB

The Malegaon Municipal Corporation had already initiated the mechanized cleaning of septic tanks before the launch of the SafaiMitra Suraksha Challenge.

The Municipal Corporation had 4 standard septic cleaning machines with a capacity of 5000 liters. There were 11 formal and registered sanitary beldars (SafaiMitras) engaged in cleaning services directly working with the corporation and there were no other informal workers identified.

Citizens who wanted to have their septic tanks cleaned had to manually register complaints and pay a fee of INR 1000 to the corporation for 1 trip for the cleaning of tanks. Since the advent of the SSC, the corporation has arranged many awareness programs for both SafaiMitras and citizens on the importance of safely cleaning septic tanks across the city.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- **Assessment** - The Malegaon Municipal Corporation had a total of 4 standard septic tanks in 2020. However, after the SafaiMitra Suraksha Challenge, the ULB has done assessment of its human resource as well as availability and capacity of equipment based on the CPHEEO calculator. Post this assessment, 4 new standard septic tank cleaning machines have been procured by the corporation.

- **Setting up of an ERSU** - An ERSU has been set up by the Municipal Corporation in 2021

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- **PPE standardization and procurement** - The Municipal Corporation has provided PPE kits to all its 1100 sanitation workers as of May 2021
- **Uniforms** - To provide a sense of identity to sanitation workers, the Municipal Corporation has also procured 31 standard SafaiMitras dresses for 31 SafaiMitras working in on-site sanitation services
- **Benefits** - All 1100 sanitation workers have been linked to the Suraksha Vima Yojna Scheme as of September 2021

3. Initiatives taken to manage public awareness

- **14420 help-line** - The Municipal Corporation has started the 14420 help-line for easy and fast registering of complaints with regard to septic tank-related issues. Hoardings, banners, and posters regarding the helpline and its use have been posted all over the city to make citizens aware of the same.
- **Periodic desludging** - In relation to the SafaiMitra Suraksha Challenge, the Municipal Corporation has created wall paintings and murals across the city to display the message of the importance of periodic desludging
- **Reporting of illegal practices** - In continuation with the SSC, the Municipal Corporation has erected banners, hoardings, and wall paintings throughout the city to warn citizens of the penalties associated with illegal desludging practices

Outcome

The Malegaon Municipal Corporation has actively worked toward fulfilling the objectives of the SafaiMitra Suraksha Challenge. While prior to the SSC, the city faced certain difficulties but through the effective awareness campaigns carried out by the

corporation, the citizens are now more aware about the importance of desludging services and safety of sanitation workers. Around 1100 sanitation workers in Malegaon city have been linked to key schemes - the Pradhan Mantri Jivan Jyoti Yojana, the Atal Pension Yojana the Sukanya Samruddhi, Ayushman Bharat, etc. All sanitation workers are now trained to safely manage on-site sanitation work.



Malegaon's journey: From Manhole to Machine hole



Figure 1.1 - IEC campaign for SafaiMitras Suraksha Challenge



Figure 1.2 - IEC campaign for SafaiMitras Suraksha Challenge



Figure 2 - Pledge campaign for SafaiMitras Suraksha Challenge



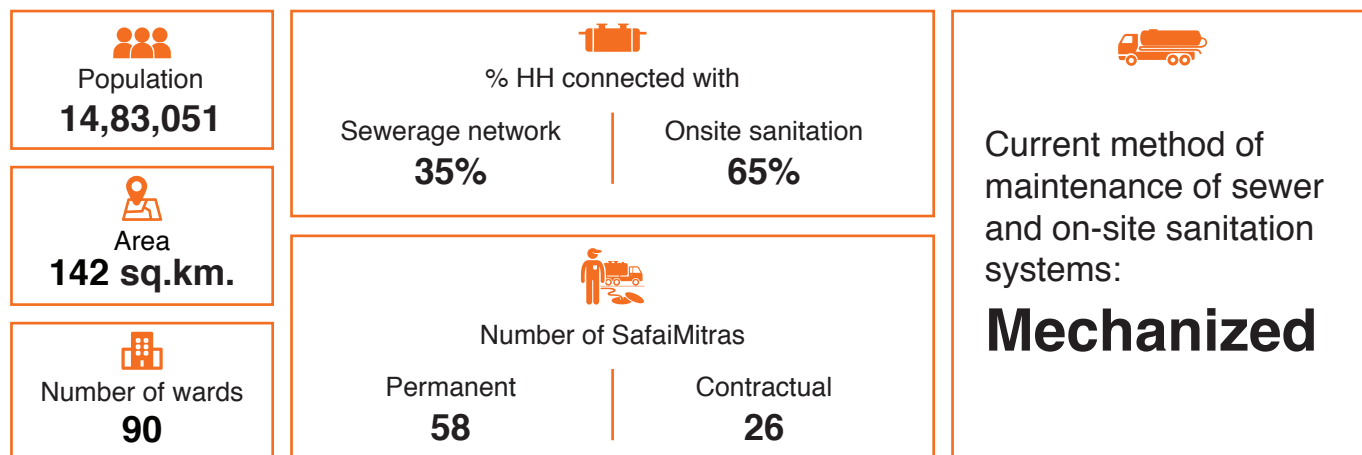


CASE 22 - MEERUT

UTTAR PRADESH

ULB: Meerut Municipal Corporation | **State:** Uttar Pradesh | **Support Partners:** Webag Pvt. Ltd.

ULB Profile



Journey of the ULB

Since the SafaiMitra Suraksha Challenge, Meerut has taken active steps to ensure the mechanization of sanitation service delivery. The city has septic tank desludging vehicles, gas monitors as well as hydro jetting machines. The city also provides private sanitation services through 13 private desludging operators registered in the ULB.

In terms of workforce, the city has total 84 SafaiMitras out of which 58 are sewer men which are permanent workers while 26 are sanitary beldars hired as contractual workers. For the safety of the workers, the city has already begun to take precautionary measures by providing PPE such as reflective jackets, mask, gumboots as well as gloves.

All SafaiMitras at the Corporation are private employees. Despite this, all SafaiMitras have benefitted from three schemes with the support of the Municipal Corporation - the Pradhan Mantri Ujjawala Yojna, ESI, and Provident Fund. The corporation has also provided training to all the SafaiMitras.

Before SafaiMitra, the public grievance system was very poor but now the public grievance system has been updated. As the city has private sanitation service providers, the complaints come on the ULB grievance system and then it gets forwarded to the concerned private sanitation service provider. Now, with the updated grievance system, the complaints are being resolved on time.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- The Meerut Municipal Corporation in line with the SSC has set up an ERSU to ensure the safety of its workers.
- To increase the pace of mechanization, the Municipal Corporation has also launched initiatives to engage PSSOs for desludging.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- The Municipal Corporation had provided standardised uniforms and PPE kits to all its SafaiMitras.
- The Municipal Corporation has provided SUY Loans to SafaiMitras to promote their financial stability.

3. Initiatives taken to manage public awareness

- The Municipal Corporation has launched a promotion campaign for help-line 14420 for periodic desludging and reporting of illegal desludging activities.

Outcome

The Meerut Municipal Corporation has launched a promotion campaign for the awareness of mechanized desludging. SafaiMitras have benefited from three schemes which are -The Pradhan Mantri Ujjawala Yojna, ESI and Provident Fund Scheme. The ULB also trained the SafaiMitras for the use of PPE and other activities. For public awareness, The Meerut Municipal Corporation uses social media platforms like

Facebook, Instagram, Twitter and other media platforms to raise public awareness in each ward on the importance of schedule desludging and safety norms for SafaiMitras.

100 sanitation workers were also linked with health and financial benefits and 300 loans disbursed to sanitation workers to purchase vehicles etc. Workers turned entrepreneurs and this led to the collectivization of SHGs.



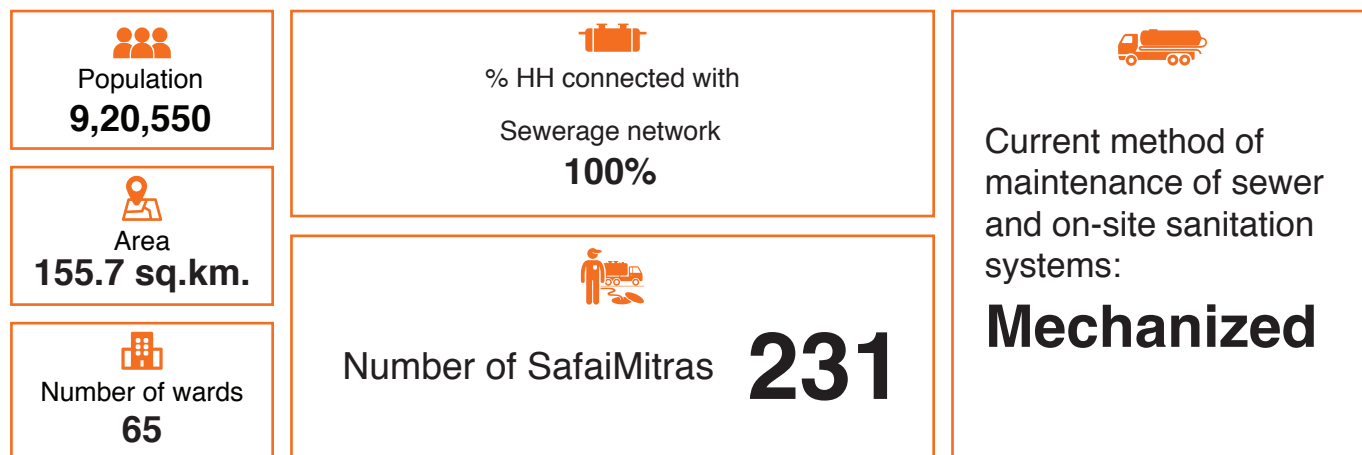


CASE 23 - MYSURU

KARNATAKA

ULB: Mysuru City Corporation (MCC) | State: Karnataka

ULB Profile



Journey of the ULB

Before the SafaiMitra Suraksha Challenge, MCC owned 13 jetting machines, 13 desilting machines, and 23 rodding machines. Post the SafaiMitra Suraksha Challenge, the MCC owns 17 jetting machines, 15 desilting machines, 25 rodding machines along with 2 hydraulic sewer root cutters, and 1 bandicoot robot. Purchase orders also have been placed to procure one sewer inspection camera. The O&M of these machines are given out on a contractual basis for a period of one year. Upon termination of the contract, fresh tenders are again invited. The funding source for the procurement of machines is largely through the 14th finance commission grants and the corporation's own funds while the O&M of these machines is funded through corporation's fund.

In terms of workforce, MCC had sufficient workforce of 231 SafaiMitras on an outsourced basis.

All the SafaiMitras are grouped in 7 teams, each team consisting of 2 sewer entry professionals. Before the SSC, the SafaiMitras were only trained on usage of equipment, but after the SSC, SafaiMitras are being regularly trained on areas such soft skills, appropriate method for handling safety gear and equipment as well as on the PEMS Act, 2013. The SafaiMitras are also provided with PPE kits and safety gear equipment.

MCC is also organizing health camps twice a year through tie-ups with the reputed hospitals of the city for regular health checkups and medical treatment if necessary for the SafaiMitras. ESI facilities are also provided for the treatment of the families of SafaiMitras.

Apart from that, Ayushman Bharat Arogya Karnataka Card has been issued to all the SafaiMitras and their family members to get the benefits from the collective schemes of both the State and Central Government.

As there is no dependency on on-site sanitation systems, no private desludging operators have been engaged by MCC.

The MCC is consistently conducting awareness programs regarding safe cleaning and the prevention of illegal hiring of workers through street plays, group discussions, newspaper media, radio interview programs, radio jingles, posters, banners, hoardings, wall writings, etc

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- Purchase of 4 additional jetting cum suction machines & artificial intelligence-driven bandicoot robots.
- Purchase of additional sewer root cutters, and planting of canna plants for improving wastewater treatments.
- Setting up of an ERSU and emergency task force for addressing emergency sanitary situations in the city.

2. Key initiatives for promoting safety, dignity, and entrepreneurship of sanitation workers

- Purchase of safety gear items and PPE kits to ensure safety of SafaiMitras. Training was also provided on the usage of PPE.

- Arranging of yoga training, and health camps and issuing Ayushman Bharat Arogya Karnataka Card to all family members of SafaiMitras.
- Providing uniforms for ensuring dignity and providing confidence to workers while working on field.
- Arranging marathons, and sports competitions to keep up the motivation and inculcate socialization amongst workers.

3. Initiatives taken to manage public awareness

- Street plays.
- Radio Interviews, Radio Advertisement Jingles.
- Posters, Banners, Hoardings.

Outcome

Mysuru has now fully mechanized the cleaning of its sewerage system and sanitary workers are provided a safe and healthy ecosystem. Their families are also covered under Ayushman Bharat Arogya Karnataka Scheme. MCC is ensuring all the efforts to improve the life standard of SafaiMitras and to protect their dignity in society.



Mysuru's journey: From Manhole to Machine hole



Figure 1 - Mechanized equipment



Figure 2.1 - Sanitation Workers with their mechanized equipment



Figure 2.2 - Sanitation Workers with their mechanized equipment



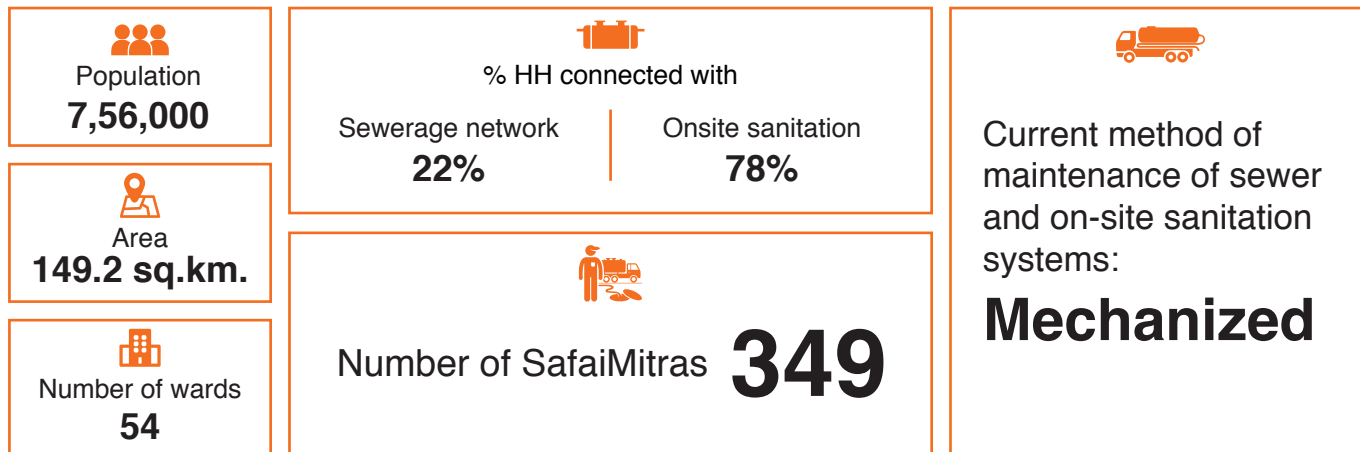


CASE 24 - NELLORE

ANDHRA PRADESH

ULB: Nellore Municipal Corporation | **State:** Andhra Pradesh

ULB Profile



Journey of the ULB

Before the SafaiMitra Suraksha Challenge, the private and government sanitary workers didn't have safety equipment but after the SafaiMitra Suraksha Challenge, the private workers were officially employed under Nellore Municipal Corporation (NMC) and all sanitary workers were provided with proper safety equipment such as safety uniforms, shoes, eye-glasses, safety helmet, masks, safety tripod set, blower with air compressor, gas monitor, gas mask among other gears.

Various workers who are involved in the cleaning of the septic tank or sewer lines were identified and registered with NMC. Sanitation workers were also then graded based on their financial and social status to provide them with various government schemes for their upliftment.

Earlier, desludging operators were unregistered and unregulated without any scientific means, following conventional and hazardous practices without proper equipment and training. The NMC has identified desludging operators within the corporation limits and they were given licenses to operate. Now, the whole process is being regulated and controlled by the NMC under a single platform in a systematic way. This has helped to train desludging operators in scientific ways, overcoming their conventional and hazardous practices.

Various training sessions were conducted for SafaiMitras and desludging operators on how to clean septic tanks and sewer machine holes using cleaning equipment and PPE kits. Onsite practical training

sessions were conducted to train desludging operators and SafaiMitras with practical implications. Training sessions also elaborated on how to wear PPE kits while cleaning septic tanks and sewer machine holes. The training also included the health hazards that would be avoided wearing PPE kits along with penal provision against non compliance under the PEMS Act, 2013.

The septage cleaners initially had no reliable source of income, and their standard of living was quite low. Because of the low economic profile, they were not able to complete their basic education. They were not eligible for any state or federal government welfare programs (Like Ammavodi, Housing for All and Aarogyasri). The SafaiMitras were working without any basic protection equipments.

The government of India has already recognized NMC for identifying rag pickers and for taking necessary steps in sanctioning loans to them through NSKFDC. There were a total of 34 beneficiaries (17 males and 17 females) with a total amount sanctioned being ₹2,97,19,824.

The NMC believe that technology is essential to be productive and to be aware of the current trends. The NMC is available on most of the social media networks to create public awareness for the best practices regarding septic tank desludging.

NMC has developed a web portal to receive complaints or grievances. This portal is backed up by a happiness code that notifies how satisfied a citizen is with the service. Any unsatisfied complaint i.e. with code less than 4 would be reopened until the citizen gets satisfied with the service.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- As all the criteria are fulfilled by the ULB as per the CPHEEO norms, no further contracts for private engagements and mechanized equipment are carried out by ULB.
- As per CPHEEO norms, the NMC has distributed PPE and safety gear items such as safety uniforms, shoes, eye-glasses, safety helmet, masks, safety tripod set, blower with air compressor, gas monitor, gas mask among other gears.
- Through the organization of loan melas and entrepreneurship activities, SafaiMitras has purchased 27 vehicles with the support of NSKFDC under the Swachatha Udyami Yojana scheme (SUY) through the Ministry of Social Justice and Empowerment. NMC has taken up all necessary steps for getting sanctions and loans for SafaiMitras to improve their livelihood.
 - Total Beneficiaries - 34 (Male - 17 and Female -17)
 - Total Vehicles - 27
 - Total Amount Sanctioned - ₹2,97,19,824.00
 - Subsidy Amount Sanctioned - ₹1,16,81,955.00
 - Balance Amount Sanctioned - ₹1,80,37,869.00
- NMC provides one time cash assistance of ₹40,000 to identify manual scavengers. NMC has enrolled 43 safaimitras under the scheme for a monetary benefit of ₹40,000 for each with a total benefit of ₹17,20,000.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- The NMC has conducted various health camps for regular checkups for SafaiMitras. Also, Covid-19 vaccinations have been prioritized for SafaiMitras and all doses including booster dose have been given to them.
- SafaiMitras are given a standard source of income after being recognized by the NMC. SafaiMitras are also benefitted from various government programs (such as Ammavodi, Housing for All, and Aarogyasri) and their overall drop out ratio has also been reduced.

3. Initiatives taken to manage public awareness

- The NMC has created the NMCFORYOU app for being easily accessible even through mobile phones. 24X7 Helpline number, portal, and WhatsApp number are in place and operational to help citizens in registering their complaints and provide their resolution status on a real-time basis.
- Public awareness campaigns and various IEC

activities have been conducted by NMC to create public awareness regarding best practices and penal actions. A few of such campaigns and activities included mural arts, wall writings, street plays, door to door messaging, radio announcements and promotions through various social media platforms like YouTube, Twitter, Facebook, Instagram, etc.

- The NMC has conducted nearly 1,06,000 IVRS calls to the general public at large to confirm whether citizens are aware of 5 questions, which are related to the SafaiMitra scheme, helpline number to complain about the overflow of manholes, 24x7 helpline, maintenance of septic tanks every 3 years and use of PPE kits and safety gears.

Outcome

SafaiMitra's Social Dignity

The NMC has identified the SafaiMitras and encouraged them to stop manual scavenging, lead to self-liberation. Introducing the social schemes, which includes Ammavodi, housing for all, etc. which has improved their living conditions.

Improvement in their health parameters

Monthly health check-ups are being conducted by NMC, especially for SafaiMitras in order to ensure that they are healthy and encourage them to use precautionary measures while they are working on the field. SafaiMitras are provided with safety kits which includes gloves, gas masks and boots.

Source of income

A year ago, SafaiMitras used to follow the traditional occupation of scavenging as there was no other alternative. After providing the NSKFDC loans, it not only created a dignified occupation but also helped them to join mainstream society. These loans created income-generating activities. Overall, it helped their socio-economic upliftment which includes their children having access to education, improvement in economic conditions, and more importantly, a drastic reduction in malnutrition-related issues in infants.

Groundwater pollution

Previously, most often sewage waste or black water was dumped openly and used to damage the groundwater stems, causing air pollution with sewage stinking in pipes generating toxic gasses. The after-effects would result in the spread of pathogens causing illness, and lead to long-term diseases. Most of these issues have been resolved after the construction of FSTP at Haranathapuram which is equipped to handle 110 KLD and an initiative to clean the septic tank every 3 years.



Nellore's journey: From Manhole to Machine hole



Figure 1 - Need better quality picture



Figure 2 - SafaiMitras with their PPE



Figure 3 - Treatment Plans under SafaiMitra Suraksha Challenge



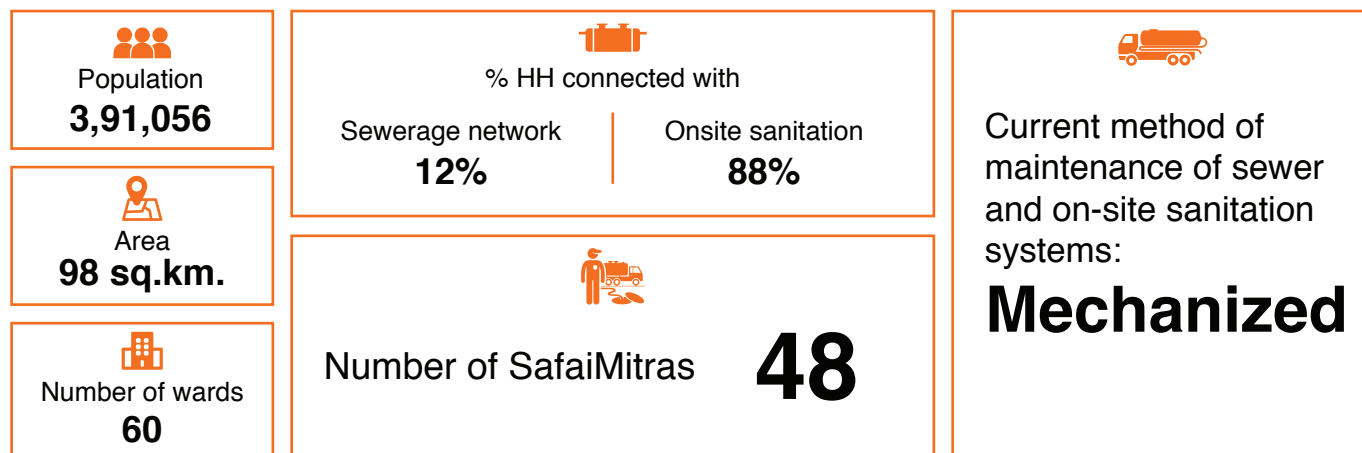


CASE 25 - NIZAMABAD

TELANGANA

ULB: Nizamabad Municipal Corporation | **State:** Telangana | **Support Partners:** Administrative Staff College of India

ULB Profile



Journey of the ULB

Before inception of the SafaiMitra Suraksha Challenge, cleaning of drains and sewer network was carried out by available one jetting machine and septic tanks were cleaned by private operators without any safety measures and precautions due to lack of awareness on usage of safety gears and PPE. There was limited financial support through private lending institutions for the procurement of mechanised equipment.

There was only one jetting machine, two trained sewer men, and 10 sanitary beldars available in 2020. Only one private desludging operator with just one vehicle was empanelled and licensed by the Nizamabad Municipal Corporation. The financials of the desludging vehicles were maintained by the private operator and it addressed only the need of hour.

Though proper efforts were made for creating public awareness on the safe cleaning procedures of septic tank and sewer lines, they continued to operate in a haphazard manner and safety procedures fell behind. Untrained professionals were hired for these dangerous activities of sewers and septic tank cleaning. The private operators were sensitized towards ensuring safety while cleaning septic tanks.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

The Nizamabad Municipal Corporation has procured state-of-the-art jetting cum suction vehicle (2), de-silting vehicles (2) and a high-flow suction vehicle

for cleaning choked machine holes. The Nizamabad Municipal Corporation has licensed 5 private desludging operators (PPP model for desludging services) and all private operator vehicles along with the municipality's vehicles are GPS-enabled for monitoring the desludging activities. The sewers are installed with IoT/sensor based monitoring of machine-holes and sewer lines.

The procurement of safety gears like (one each), safety tripod set, nylon rope ladder, blower with air compressor, gas monitor (4 gases), full body wader suit, gas mask breathing apparatus, safety body harness, air line breathing apparatus for the safety of sewer men. For the Emergency Response Sanitation Unit, headed by Collectorate of Nizamabad, District Authority and Sanitation Responsible Unit (SRU), headed by Commissioner of Municipality, and local municipality, an 8 member representative group was formed as the management unit. Periodic assessment are conducted for the number of safety kits available and procurement required for inventory management.

The ULB conducted several training programmes for SafaiMitras and septic tank operators, giving guidelines about the SafaiMitra Suraksha, explaining safety gears usage and information about the PEMSAR Act, 2013. As part of SafaiMitra Suraksha Challenge, awareness on financial support and government schemes, for identifying beneficiaries under SUY and NSKFDC for self-employment of scavengers, operators and sewer men, was also provided.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- Uniforms were given to all sanitation workers for ensuring the dignity of the workers. Uniforms, PPE, safety kits were made mandatory even for the daily attendance call.
- Quarterly, PPE kits are distributed to 60 SafaiMitras. All the workers have been associated to minimum 3 government schemes.
- The Nizamabad Municipal Corporation gave top priority to the health of safai (sanitation) workers. In wake of the second Covid wave, the Nizamabad Municipal Corporation now organizes yoga classes and health camps for the SafaiMitras.
- Hardship allowance (10%) is given to 240 SafaiMitra workers
- Mandatory health camps are organised quarterly by the ULB and insurance assistance is provided by leading insurance companies along with paying ESI & EPF charges.
- The Nizamabad Municipal Corporation is taking rigorous steps for promoting safety and dignity of SafaiMitras by providing timely wages, conservancy articles, awareness campaigns etc.,

3. Initiatives taken to manage public awareness

- The Nizamabad Municipal Corporation established the 14420 helpline number for desludging of septic tanks and machine holes with safety and to stop manual cleaning and it also acts as a complaint center for reporting illegal desludging and desilting practices.
- The Nizamabad Municipal Corporation provided licenses to local private desludging vehicles, conducted awareness campaign across the city through wall paintings, door to door campaigns & erection of hoardings at residential colonies.

- The public has been made aware of 14420 through street plays by youth students, campaigns in schools, training sessions for masons, wall murals, and swachh autos.
- Measures were taken for the maintenance of septic tank cleaning machines. People were told to clean septic tanks every three years and septic tanks in the city were geo-tagged.
- "MalAsur" paintings were showcased on the walls of public toilets of public toilets and hoarding at public places.
- Penal consequences of hazardous cleaning of sewer and septic tank were highlighted to the public (maximum punishment of two years imprisonment and a fine of ₹2 lakhs for the first offence, and five years imprisonment and a fine of ₹5 lakhs for subsequent offence).

Outcome

The Nizamabad Municipality Corporation linked all types of govt. benefits to the sanitation workers along with providing PPE kits to all. It also conducted training program for all sanitation workers regarding safety measures & safe cleaning of sewer lines and septic tanks. The SSC has improved lives and dignity of 65 sanitation workers. The workers have been recognized and have availed many govt schemes. Even the vehicular fleet of the Nizamabad Municipality Corporation has improved. There are now 5 private de-sludging vehicles in the city. Operations and maintenance of the vehicles and wellbeing of the staff is taken care by the de-sludging operators.



Nizamabad's journey: From Manhole to Machine hole



Figure 1 - Campaign for 14420



Figure 2 - IEC paintings on desludging vehicle



Figure 3 - Distribution of PPE kits for workers

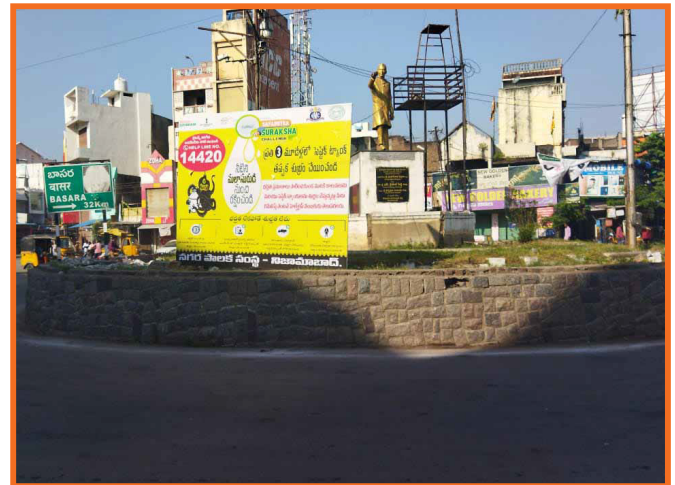


Figure 4 - MalAsur hoardings at junctions

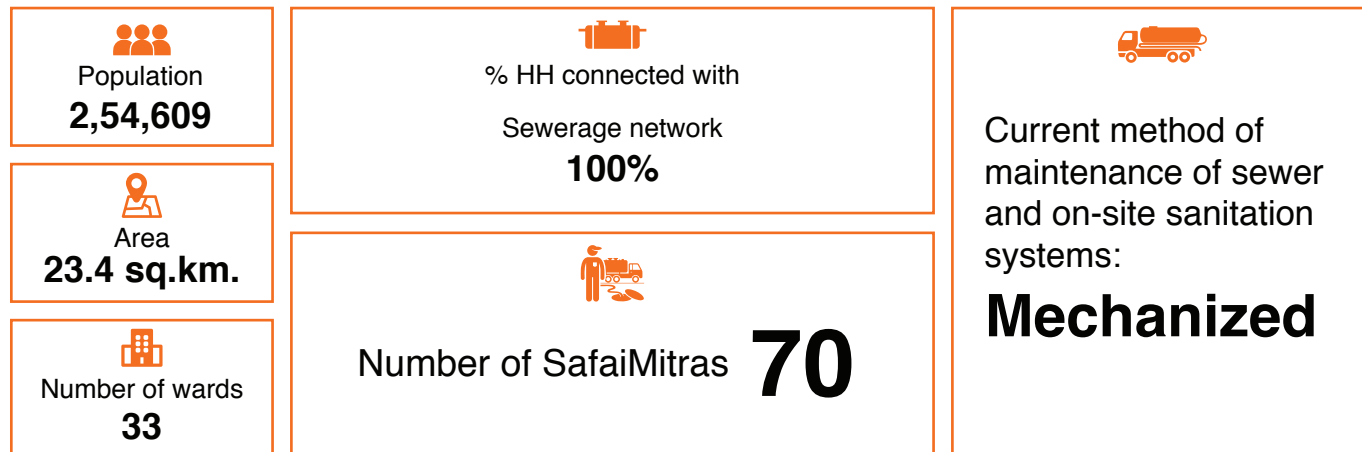




CASE 26 - NIZAMPET TELANGANA

ULB: Nizampet Municipal Corporation | **State:** Telangana | **Support Partners:** ASCI, SHGs

ULB Profile



Journey of the ULB

The Nizampet Municipal Corporation was formed in 2020 with the merger of 3 major gram panchayats. Before the ULB was formed, there was no mechanized cleaning but after the formation of the corporation around the same time the SafaiMitra Suraksha Challenge was introduced which helped the corporation to move towards mechanized cleaning.

There are total 318 sanitation workers in the ULB who are involved in garbage collection, sweeping and drain cleaning. After the launch of SafaiMitra Suraksha Challenge, ULB has dedicated 70 workers as SafaiMitras out of 318.

Approach to mechanization under SafaiMitras Suraksha Challenge

1. Key initiatives taken for mechanization

- Private desludging operators were empaneled for private desludging of septic tanks.
- Initially, there were no mechanized equipment available in the ULB, but the ULB took the initiative and has engaged few mechanized equipment on contract basis to ensure the safety of the workers. The ULB is also planning to procure multipurpose equipments for the work.
- Responsible Sanitation Authority (RSA) and Emergency Sanitation Response Unit (ERSU) were constituted which act as monitoring authorities of SafaiMitras in the ULB.

- For the identified SafaiMitras, capacity building program is conducted on quarterly basis and training for Disaster Epidemic Response is given by qualified fire department staff.
- The ULB has also established the toll-free call centre with 14420 for grievance redressal.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- PPE kits were distributed to sanitation workers twice in a year to ensure and prioritize their safety and wellbeing.
- All the SafaiMitras were provided with several govt. schemes like healthcare and 10% monthly hazardous allowance for entering maintenance hole in unforeseen circumstances. Their families are also provided with education and medical health schemes. Regular health checks and medical facilities are also provided.
- All the SafaiMitras are enrolled under at least three government schemes/policies that would provide them with health and financial benefits.
- SafaiMitras are acknowledged and felicitated on a regular basis for their work.
- Outdoor games and competitions are conducted for the well being and entertainment of the SafaiMitras.

3. Initiatives taken to manage public awareness

- Citizens has been made aware of 14420 helpline number through campaigns, wall murals, and announcement through swachh autos.
- Notification was issued in the ULB regarding schedule desludging every 3 years & geo-tagging of septic tanks.
- Swachhata App and ULB App are also equally promoted for effective grievance redressal.
- Desludging vehicles are painted with the toll-free number and IEC messages.
- In order to raise awareness among the citizens, a special program called "Kalajathas" was organized. A visual representation of the "SafaiMitra Suraksha Challenge" was presented on stage in the form of songs and dances.

- Awareness on PEMS Act, 2013 is promoted through IEC, BCC hoardings, paintings at high footfall places and through various social media platforms.

Outcome

As a part of the SSC, ULB has moved to the mechanized cleaning which leads the ULB to go on contract basis instead of purchasing. Mechanisation substantially increased the work efficiency as compared to manual practices. The idea of eradicating manual entry into sewer also embodies the safety of SafaiMitra's at the same time. The 70 SafaiMitras are given special attention, training programs and linked to health schemes such as ESI and PF. All the SafaiMitra were provided with PPE kits to ensure their safety.



Nizampet's journey: From Manhole to Machine hole



Figure 1 - SafaiMitras wearing distributed PPE kits



Figure 2 - Street play on SafaiMitra Suraksha



Figure 3 - Yoga program conducted for SafaiMitras



Figure 4 - IEC campaigns through wall painting



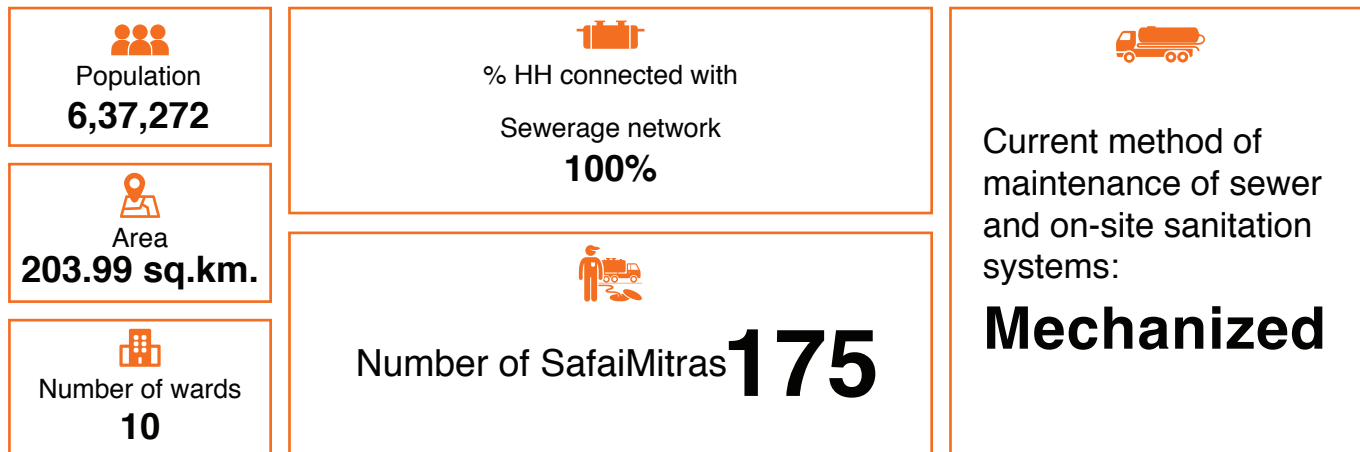


CASE 27 - NOIDA AUTHORITY

UTTAR PRADESH

ULB: NOIDA | State: Uttar Pradesh

ULB Profile



Journey of the ULB

New Okhla Industrial Development Authority (NOIDA) is connected with sewer lines and the de-sludging operators are registered with the ULB. The ULB has published a public notification stating that the practice of open dumping of fecal sludge will incur a fine of INR 30,000. After publication of the circular, no such activity has been observed in the city.

According to the ULB statistics, NOIDA has a negligible number of properties connected to onsite sanitation systems. Almost all properties are connected to the sewer network. The small number of septic tanks that exist are cleaned once in every 3 years. NOIDA carries out sewage management at its 6 STPs and 86 types of ancillary equipment.

NOIDA does not incur any expenditure or generate revenue from desludging services. The ULB has provided license desludging operators to undertake desludging services. These operators are paid a minimum of INR 500 per septic tank for providing these services to make this model sustainable. Expenditures incurred for other sanitation services (sewerage network, STP maintenance, etc) are being covered as part of the collection of water utility bills and sale of treated wastewater from residents and institutions.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- NOIDA has been contracting with private operators to achieve the criteria of the SafaiMitra Suraksha Challenge and also to fulfill the requirement of NOIDA's sanitation infrastructure.
- There is a 100% ban on manual scavenging and the city has recorded zero instances of such practices.
- Training of SafaiMitras is being provided for the purpose of safe use of equipment and machines.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- Monthly Recognition is given to SafaiMitras to keep them motivated towards contributing to the betterment of NOIDA.
- Additional monetary funds provided to sewer entry professionals.
- Life insurance is provided to all SafaiMitras as an assurance of their safety.
- Equipment and PPE such as full body suits, oxygen tanks, respirators, etc. have been purchased to promote safety of workers.

- NGOs are providing training to SafaiMitras to ensure their safety.
- Manual hazardous entry (without safety gear) is banned in the city.
- Initiatives were undertaken to enforce Prevention of Sexual Harassment (POSH) in the workplace.

3. Initiatives taken to manage public awareness

- Promotion of 14420 was done by IEC tools especially through beautiful and educative paintings that got recognition by the MoHUA's official Twitter handle and was visited by ministry officials.
- Quick Response Team (QRT) was established by NOIDA to urgently resolve the complaints received on a daily basis.

Outcome

- All of the 175 SafaiMitras of NOIDA are being linked to various government benefits.
- NOIDA was one of the founding cities to set up an SRU and RSA.
- Wall paintings made under SafaiMitra Suraksha Challenge IEC were recognized by the MoHUA's official Twitter handle.
- Citizens of NOIDA are now more aware of 14420 and safe sanitation practices.
- SafaiMitras of NOIDA are now trained in using the appropriate equipment.

NOIDA's journey: From Manhole to Machine hole



Figure 1.1 - SafaiMitras in their PPE



Figure 1.2 - SafaiMitras in their PPE

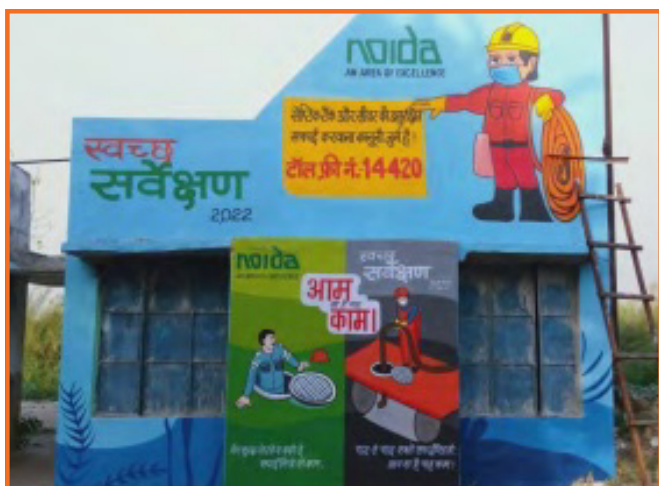


Figure 2.1 - IEC for desludging activities



Figure 2.2 - IEC for desludging activities

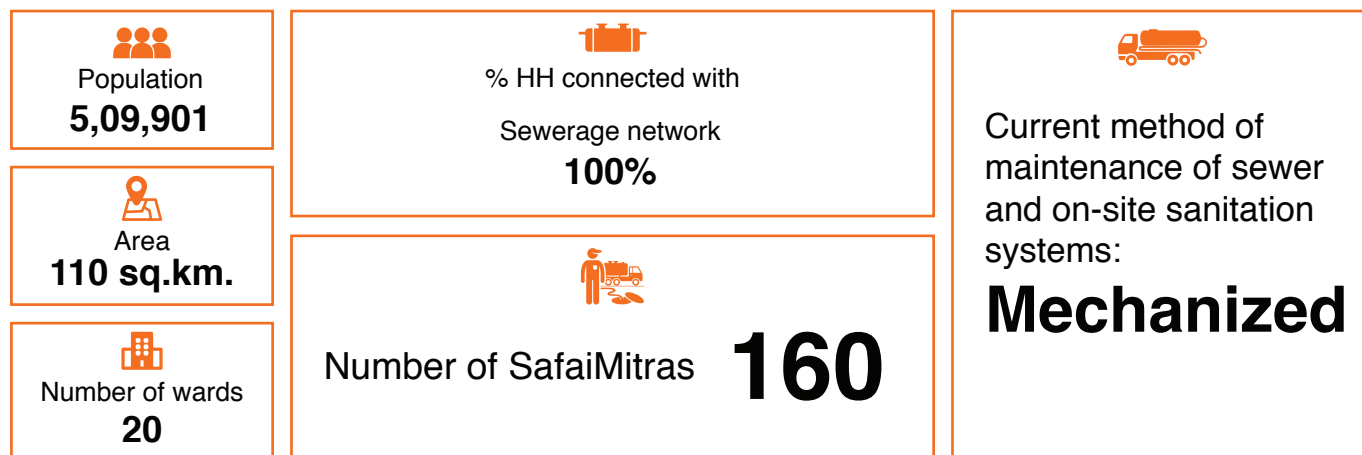


CASE 28 - PANVEL

MAHARASHTRA

ULB: Panvel Municipal Corporation | **State:** Maharashtra

ULB Profile



Journey of the ULB

The Panvel Municipal Corporation began gradually implementing mechanized sewer cleaning over the past 4 to 5 years, and thanks to the SafaiMitra Suraksha Challenge, the mechanization process was fast-tracked, and 100% mechanization has now been achieved. The Panvel Municipal Corporation has set up an ERSU and RSA in the city and the helpline number 14420 for sewer-related complaints has been instituted. Through IEC activities, awareness about illegal practices and correct sanitation practices has been spread across the city.

The Panvel Municipal Corporation had limited gear & equipment and most of the work was done manually. Post an unfortunate mortality event in Kalundre while entering the sewer line, the Panvel Municipal Corporation coordinated with the CIDCO and outsourced the equipment, gears, and O&M requirements since the last five years to a third party on a contractual basis. The Panvel Municipal Corporation is also in the process of buying all necessary equipment and hiring all necessary personnel for the sanitation value chain to operate seamlessly. Prior to SSC in 2020, there were no criteria to determine the number or type of equipment and safety gear required for ULBs; however, after 2020, the quantity of equipment was calculated according to the design calculation sheet, making it easier for the municipality to set a target and form a strategy for the procurement of these types of equipment and gear.

Previous to SSC in 2020, the overall number of workers was a total of 65 persons. Following the launch of SSC in 2020, the workforce requirement was calculated

according to the calculation sheet (CPHEEO norms), and then saturated in accordance with the requirement. The Panvel Municipal Corporation has deployed a total of 160 SafaiMitras. Before the SSC 2020, the ULB had 51 sewer men and 14 sewer entry professionals. Currently, there are 90 sewer men and 70 sewer entry professionals outsourced by the Panvel Municipal Corporation as well as an SRU team of 5 employed directly by the ULB.

Before the SafaiMitra Suraksha Challenge, training was provided by supervisors and outstation training visits were planned. Now, training for O&M is given by qualified engineers.

Training was also provided by drainage and safety supervisors that included interaction and practicals. Departmental outstation training and visits to state headquarters were also planned. Training for O&M was given by the Corporation's CIDCO engineers,

machine manufacturers and qualified engineers. All the SafaiMitras are engaged with the Panvel Municipal Corporation.

The ULB has also taken active measures to ensure the well-being of its Safai Mitras which includes conducting health camps, linking SafaiMitras to various benefits and schemes, providing canteen facilities for workers as well as accidental death insurance coverage. The Panvel Municipal Corporation has also made efforts to identify informal workers and link them to the soft loan schemes via the NSKFDC.

The PSSOs (Private Sanitation Service Operators) were disorganized pre-SSC 2020. The Panvel Municipal Corporation gathered them all together and began offering licenses and service contracts through tendering for services, machines, safety gear, PPEs, and

so on as per the MoHUA guidelines. The ULB also coordinated with the development agency CIDCO and outsourced the equipment, gears, and O&M requirements for three years to a third party on a contractual basis until the ULB could procure all the necessary equipment and hire all the necessary personnel for the job. All the equipment provided by the PSSOs is as per the set standards, and the manpower provided is trained and smoothly runs the O&M services for the Panvel Municipal Corporation.

Approach to mechanization under SafaiMitra Suraksha

1. Key initiatives taken for mechanization

- Currently, all sewerage network cleaning, maintenance, and repair work is performed by the necessary core equipment with correct designated gears and PPE kits, and 100% mechanization has been achieved strictly following the rules of the PEMSR Act, 2013.
- The Panvel Municipal Corporation has an established sewerage network which covers 100% of properties. It currently has 6 core mechanized cleaning and maintenance equipment embedded with a GPS system for monitoring and tracking. There are 19 equipment which include a CCTV camera system, a power rodding machine, and a root cutter.
- The hiring of personnel for operations and maintenance is in process along with additional equipment to fulfill the demand of the department. The Panvel Municipal Corporation has an established sewerage network that covers 100% of properties.
- The Panvel Municipal Corporation set up an Emergency Response Sanitation Unit (ERSU) in 2020 for timely resolution of sewer-related issues.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- The Panvel Municipal Corporation has initiated health check-up programs with the assistance of the health department.
- The Panvel Municipal Corporation has provided PPE kits and uniforms to all the SafaiMitras.
- All SafaiMitras were linked with social welfare schemes viz. Pradhan Mantri Awas Yojana (PMAY-U) and ₹15 lakhs in insurance coverage is being provided for the worker's families in case of accidental death on the job.
- SafaiMitras have been linked with various health benefit schemes such as GSLIS, NPS, NDCPS, etc.; provided with more than 10% hardship allowances in addition to their salary, and their children have been enrolled in government schools.
- The Panvel Municipal Corporation has introduced the Pradhan Mantri Awas Yojana - Urban (PMAY-U) for SafaiMitras and is helping them in the application process for the same.

- A dedicated canteen for sanitation workers has been provided.
- After the complete ban on informal desludging activities, The Panvel Municipal Corporation identified informal SafaiMitras throughout the cities and introduced Govt. of India's soft loan scheme i.e., National Safai Karamchari Finance Development Corporation (NSKFDCC) to them and invited application for the same.
- The ULB has also helped in providing ration card & aadhaar card to SafaiMitras and a dedicated canteen for sanitation workers has been provided by The Panvel Municipal Corporation.
- The ULB also provides job opportunities to the kins of SafaiMitras.

3. Key Initiatives to raise awareness

- The Panvel Municipal Corporation conducted various awareness campaigns and public service announcements such as a prohibition on manual scavenging, a penalty for non-compliance to the same, a helpline number 14420 for scheduled desludging complaints, and a complaint management portal/app, the importance of PPE kits/safety clothes, and so on.
- To raise awareness, posters, hoardings, and wall paintings were displayed throughout all 20 wards, and banners were displayed on all O&M vehicles.
- Furthermore, door-to-door awareness was done by public addressing system of garbage collection vehicles, street plays were performed and broadcast on digital billboards, jingles were recorded and broadcast on garbage collection vehicles and sewer maintenance vehicles, messaging was done on all 58 CT/PTs, and monthly group discussions with slum dwellers were also held.

Outcome

The SSC programme had a substantial influence on the lives of SafaiMitras. Although the Panvel Municipal Corporation has made numerous initiatives to raise awareness about hazardous cleaning, this program has expanded the scope of IEC activities, awareness events, street plays, integrating SafaiMitras with livelihood options, and so on.

There has been a visible change in the lives of SafaiMitras in terms of adopting maximum use of PPE kits and Safety gears and abandoning the traditional practice, following the ban on manual scavenging, and learning skills of operating mechanized equipment, securing their lives by integrating with government life insurance, health insurance, and pension schemes, enjoying the benefits of ration cards by meeting their basic needs, prioritizing their children's education, and a few others.



Panvel's journey: From Manhole to Machine hole



Figure 1 - IEC campaigns for sanitation



Figure 2.2 - Vehicles for desludging



Figure 2.3 - Vehicles for desludging



Figure 3 - Sanitation workers with mechanized equipment

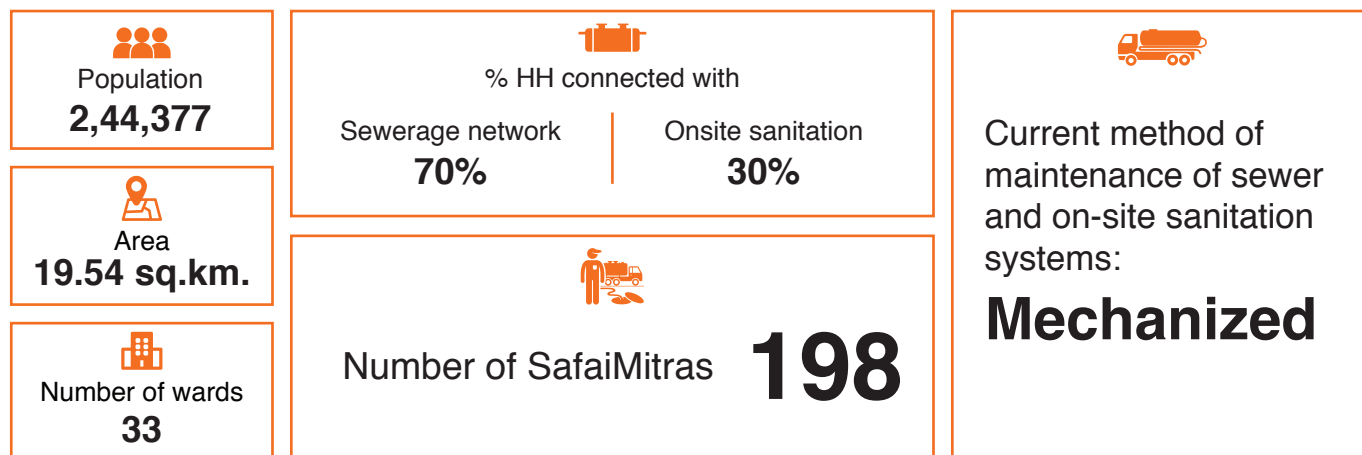




CASE 29 - THE UNION TERRITORY OF PUDUCHERRY

ULB: Puducherry Municipality | **State:** UT of Puducherry | **Support Partners:** Public Works Department (PWD Puducherry)

ULB Profile



Journey of the ULB

The Union Territory (UT) of Puducherry has adopted sewer cleaning in a mechanized for many years, due to the guidance from SafaiMitra Suraksha. The UT of Puducherry has set up an ERSU and RSA in the 2 districts of Puducherry and started the emergency helpline no. 14420 for complaints regarding unsafe practices of sewer cleaning and raised awareness on the same.

The UT has 7 desludging vehicles, 1 of which is owned by the Municipality and 6 of which are private vehicles from the PWD on a rental basis. To increase the pace of mechanization the Municipality has approached the NSKDFC to avail loan for purchase of additional mechanized equipment.

Puducherry has a total of 198 SafaiMitras and the Municipality has actively worked towards providing benefits to workers in the form of health camps, ration cards, and bank account access. ULB has appointed 10 out of 198 SafaiMitras as beldars to work under ERSU which is under the process of being notified.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- The Local Administration Department has assessed the requirement for mechanization and submitted the proposal to MOHUA to provide the fund for the mechanization of SafaiMitra Suraksha. The same proposal has been sent to PWD (IA) to initiate from their end.
- The PWD (IA) have contacted the NSKDFC for a loan to procure the equipment.
- The RSA has been notified and the ERSU notification is under progress.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- The UT conducted "SafaiMitra Samman Samaroh" for sanitary workers to provide safety gear, PPE kits, and facilitated the linkage of workers with welfare schemes and other facilities.
- Workers were also provided with free health benefits and provided help in accessing Ration Cards & Aadhaar Cards. They were also supported in the process of setting up bank accounts.
- Initiatives have been undertaken to build the capacities of workers at various levels through training programs.
- Health Camps for sanitation workers have been conducted on a regular basis.

3. Initiatives taken to manage public awareness

- 14420 is now operational and is receiving requests for regular desludging. Efforts are being taken to increase the awareness among citizens on the same.

Outcome

The Urban local bodies from UT of Puducherry have conducted several training programmes for SafaiMitra workers on their rights, roles workplace safety measures. So far, the local bodies have trained more than 300 workers through NSKDFC and key experts from local bodies. Everyone has received their training completion certificates. The public awareness campaigns have allowed citizens to become knowledgeable on the importance of safe and scientific waste disposal. the workers too have gained awareness on issues of workplace safety. Many of the workers have also started to explore the possibility of becoming entrepreneurs in the sector.

Puducherry's journey: From Manhole to Machine hole



Figure 1.1 - Vehicles used for desludging



Figure 1.2 - Vehicles used for desludging



Figure 1.3 - Vehicles used for desludging



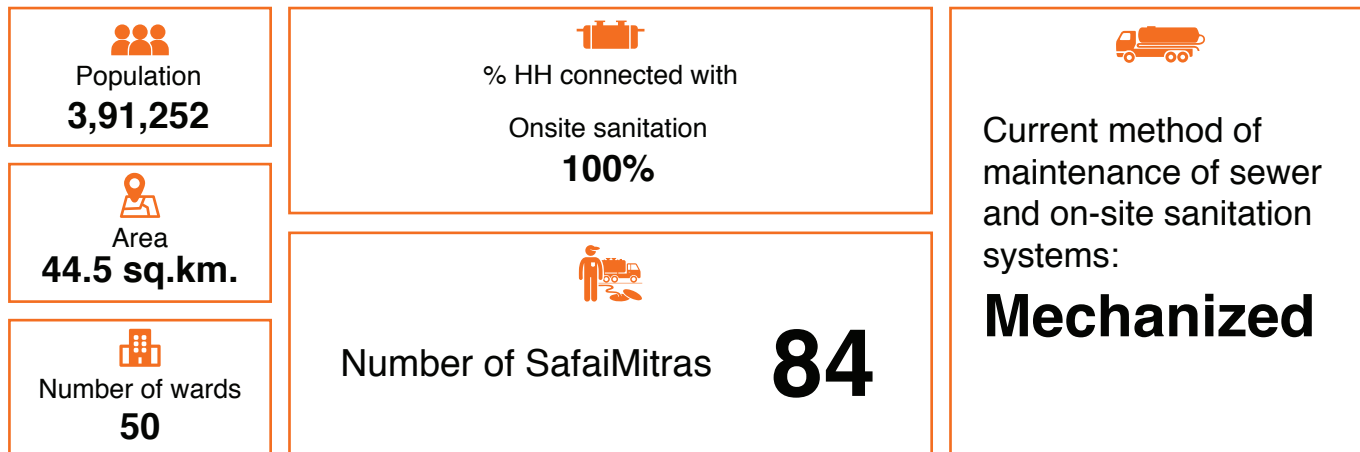


CASE 30 - RAJAMAHENDRAVARAM

ANDHRA PRADESH

ULB: Rajamahendravaram Municipal Corporation | State: Andhra Pradesh

ULB Profile



Journey of the ULB

Before the SafaiMitra Suraksha Challenge of 2020, septic tank cleaning was done in an unorganized manner. Desludging of septic tanks and other OSS systems across the city were carried out by private agencies that were engaged for the job. This was primarily due to the fact that these agencies were equipped with mechanised and semi-mechanised machinery. Knowledge of scientific methods for desludging and desilting operations was limited and none of the SafaiMitras had safety equipment and PPE kits for their daily operations. Most of them were prone to hazardous/unsafe working conditions as they had to manually enter and clean the septic tanks. There was no proper channel for workers to approach concerned authorities and departments to access loans for procuring mechanized equipment, availing welfare schemes, and livelihood opportunities provided by the government. The septage collected from the cleaning operations was disposed into water bodies in an unscientific manner. This posed a threat to public health and environmental pollution.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- The ULB signed an agreement with desludging operators to carry out city-wide mechanized operations.
- To prevent unscientific disposal of sludge and septage, the ULB has constructed an FSTP in the city.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- Appropriate PPE was provided to workers and they were also facilitated to apply for loans to purchase vehicles and become entrepreneurs.
- Workers were provided with ID cards for recognition and formalization.
- The city took efforts to link workers to government schemes.
- Loan melas were arranged to encourage financial stability and empowerment amongst workers.

3. Initiatives taken to manage public awareness

- The 14420 toll-free call center was established for scheduled desludging.
- Wall painting and stickers on the importance of periodic desludging have been created.
- Hoardings and wall writings on unsafe desludging and penalties imposed.
- The entire process of billing is done through an app and a customer receipt is generated post the payment. This process is done through the ward secretariat system.

Outcome

The SafaiMitra Suraksha Challenge has made many changes in the process of carrying out desludging activities in Rajahmundry. A centralized control room was established where citizens can easily contact desludging operators at a reasonable price for their septic tank cleaning needs. The Rajahmundry Municipal Corporation has distributed PPE kits to all sanitation

workers. Now, all the workers make use of the safety gear on field thus ensuring safety of their health. Workers are also provided with different government schemes like rice cards, housing, Amma Vodi, health cards, Vidya Deevena, Aasara, etc. They also have procured loans under SRMS, and SC&ST corporations and are now financially more stable. The ULB has signed an MoU with city desludging association, and has provided ID cards to all the operators.



Rajamahendravaram's journey: From Manhole to Machine hole

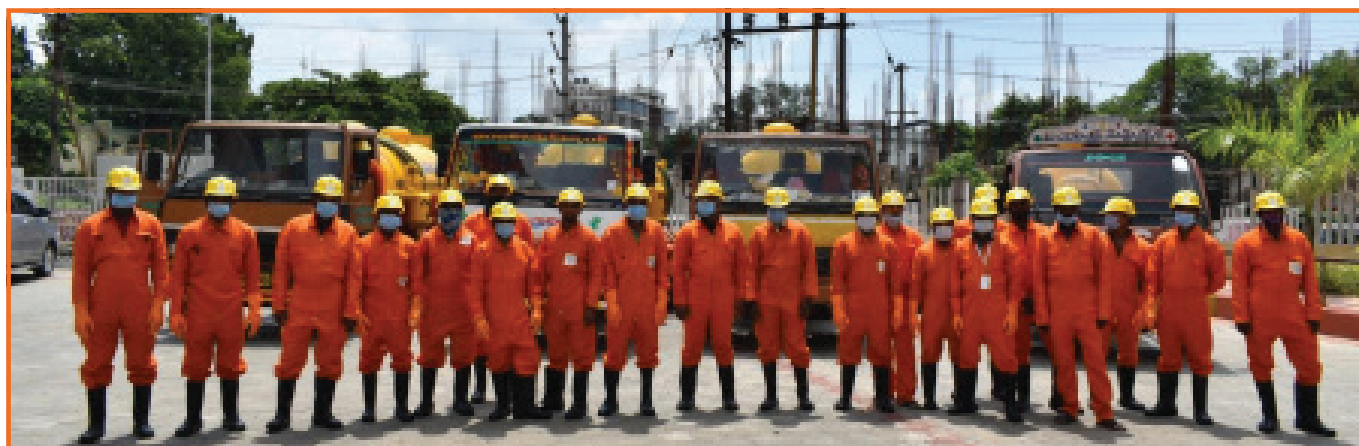


Figure 1 - Sanitation workers wearing PPE



Figure 2 - Periodic desludging



Figure 3 - SafaiMitras Performing duties with appropriate equipment.



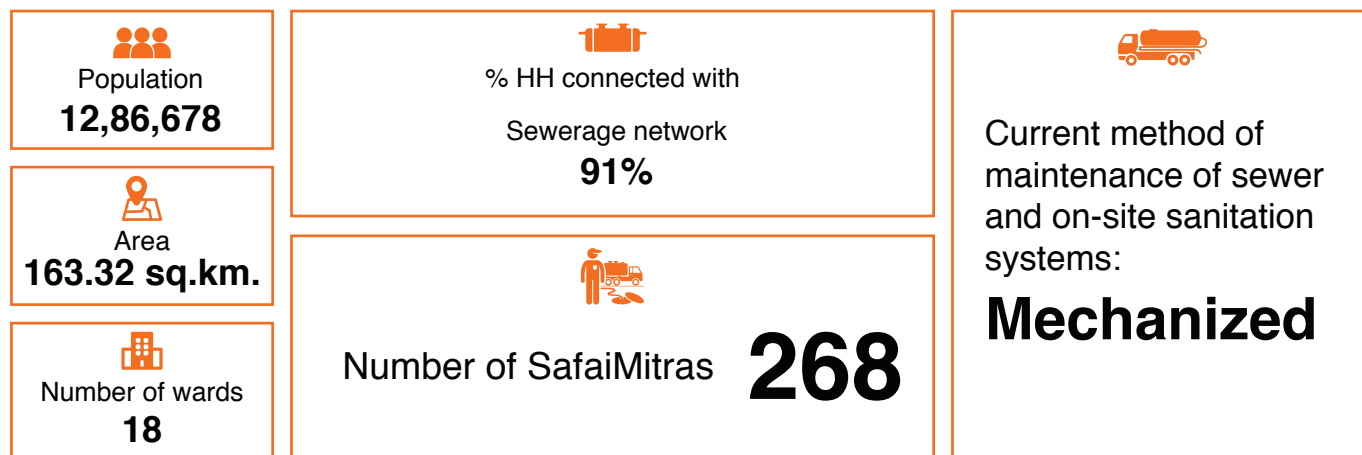


CASE 31 - RAJKOT

GUJARAT

ULB: Rajkot Municipal Corporation | State: Gujarat

ULB Profile



Journey of the ULB and approach to mechanization under SafaiMitra Suraksha

1. Key initiatives taken for mechanization

- Since 2020, Rajkot has taken efforts to increase the procurement of mechanized equipment such as grabbers, hydro jetters, power buckets, and power rodding machines.
- The Municipal Corporation has also increased its procurement of safety equipment such as tripod sets, gas monitors, breathing apparatus, safety harnesses, etc.
- The Municipal Corporation has taken active efforts towards the purchase of mechanized equipment for sewerage cleaning post the SafaiMitra Suraksha Challenge of 2020.
- Similarly, contracts have been awarded to PSSO (M/s. Powerline sales and service, Rajkot) for sewer cleaning machinery with three years of comprehensive O & M for RMC-owned machinery.
- Rajkot has an SRU and ERSU team.

2. Key initiatives for promoting safety, dignity, and entrepreneurship of sanitation workers

- The Rajkot Municipal Corporation has a large part of its workforce outsourced, with the exception of the SRU and ERSU teams. Prior to 2020, training of this workforce was undertaken by the drainage supervisor; now there are dedicated qualified engineers and machine manufacturing experts to support the capacity building of workers to use equipment safely and effectively.

- Sanitation workers working with PSSOs are provided with benefits such as Provident Fund, ESIC, Workmen Compensation Policy, overtime charges, emergency medical facilities, safety gear and uniforms.
- The Municipal Corporation has provided appropriate protective equipment to sanitation workers of PSSOs as well as conducted bi-annual health camps for worker safety.

3. Initiatives taken to manage public awareness

- While initially, before 2020, there were no active awareness campaigns as such, but since then the Municipal Corporation has taken active efforts to arrange street plays, hoardings, and training programs to inform the larger public of the importance of safe working conditions for SafaiMitras.
- The desludging helpline 14420 was set up and actively promoted.

Outcome

Five SHGs groups are currently working with the designated PSSOs. Workmen's Compensation Policy is regularly enforced by the PSSOs, which also provide benefits as well as periodically arrange training programs for machine operators as well as general worker safety programs. A Loan fair for sanitation workers was arranged in January 2021 to create awareness among SHG members and sanitation workers regarding the loans and subsidy available for starting a sanitation livelihood.

Rajkot's journey: From Manhole to Machine hole



Figure 1 - SafaiMitras performing their duties with mechanized equipment



Figure 2 - SafaiMitras performing their duties with mechanized equipment



Figure 3 - SafaiMitras performing their duties with mechanized equipment



Figure 4 - SafaiMitras performing their duties with mechanized equipment



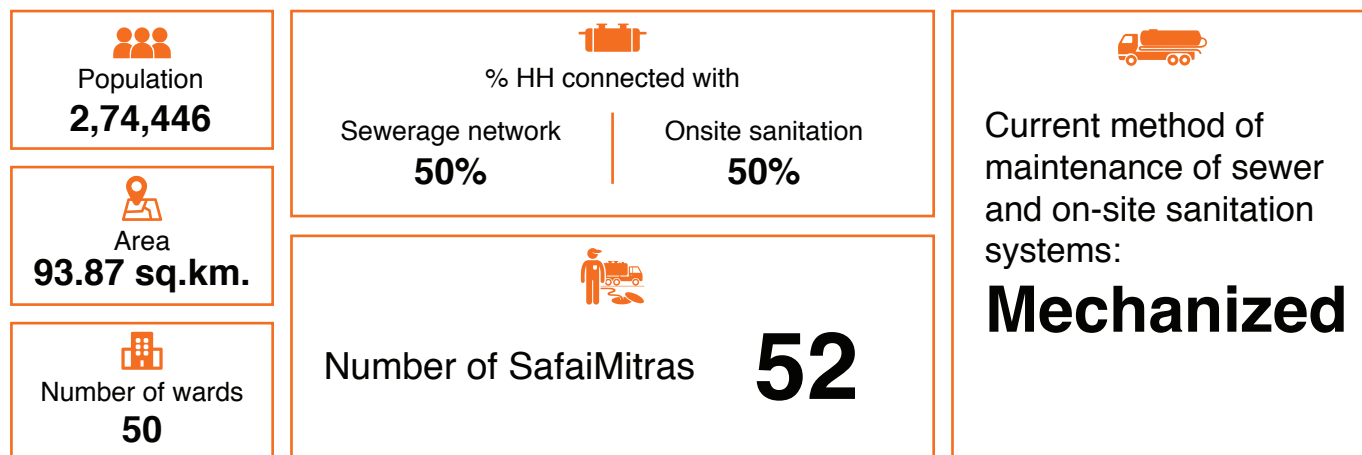


CASE 32 - RAMAGUNDAM

TELANGANA

ULB: Ramagundam Municipal Corporation | **State:** Telangana | **Support Partners:** Administrative Staff College of India, Hyderabad

ULB Profile



Journey of the ULB

Until the SafaiMitra Suraksha Challenge in 2020, no private operators were engaged in cleaning of septic tanks. There was lack of awareness on cleaning of sewers sensitization to citizens regarding availability of mechanized cleaning. There were no health benefits and government schemes provided for the informal sanitation workers.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- A post assessment review was conducted after the training program for all the masons and construction workers on standardization of septic tanks design and construction. They were also given training regarding the SafaiMitra Suraksha Challenge.
- A team with four officials was set up for Emergency Response Sanitation Unit (ERSU) with a toll-free number, which communicated that only trained and certified workers will be eligible for the cleaning of sewers and septic tanks with machines and equipment.
- In accordance with the CPHEEO manual, the Ramagundam Municipal Corporation has six desludging vehicles as per norms and the ULB has empanelled six private desludging operators, who have been trained in technical support and awarded a license.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- The ULB has provided Personal Protective Equipment (PPE) and safety gear kits to the SafaiMitras which includes a reflecting jacket, safety helmet, normal facemask, hand gloves, gumboots and body clothing.
- All the sanitation workers were provided benefits of 3 government schemes which are Employees State Insurance, Employees Provident Fund, Pradhan Mantri Suraksha Bima Yojana.
- The Ramagundam Municipal Corporation conducts health check-ups for all its sanitation workers regularly at its municipal office.
- Hardship allowance has been provided for the SafaiMitras.
- Various kinds of games and competitions are conducted for the well-being and entertainment of SafaiMitras as a part of the SafaiMitra Suraksha Challenge. All the SafaiMitra karmacharis, desludging operators, and drain cleaners participate in this activity and prizes are distributed to the winners of these competitions.
- Yoga is one of the most effective ways to combat work stress and it helps in making a person mentally and physically fit. Every month, the Ramagundam Municipal Corporation members organize yoga activities on municipality ground conducted by well-trained yoga teachers in order to help our SafaiMitras relax from their hectic work and to keep them in good health. All the SafaiMitras and municipality officials participate in the activity.

3. Initiatives taken to manage public awareness

- The Ramagundam Municipal Corporation has established a call centre with 14420 toll free number for grievance redressal for the public.
- In order to raise awareness among the citizens, a special program called "Kalajathas" has been organized. A visual representation of the "SafaiMitra Suraksha Challenge" was presented on stage in the form of songs and dances.
- The details about the SafaiMitra Suraksha Challenge is hosted on the Ramagundam Municipal Corporation's website. The instructional video appears with the necessary details about SSC and its protocol.
- Desludging vehicles are painted with SSC goals and conditions in order to educate people about the risks of manually cleaning sewers and septic tanks.
- Our workforce has taken on SSC with great responsibility. All walls have been painted with features about SafaiMitra and the challenge to prohibit manual entry into sewers. Quotes and art works are also displayed on the walls to represent SSC that helps to create awareness among the citizens in the ULB.
- A door-to-door campaign has been conducted by the Ramagundam Municipal Corporation to educate the public about SafaiMitra Suraksha Challenge and discussing the risks associated with manual sewer and septic tank cleaning.
- People in slum areas who are about to construct septic tanks have received details regarding the design from our staff. They have provided construction and cleaning instructions for the septic tank. The ULB also communicated the consequences for violating the SSC rules and regulations.

Outcome

As a part of the SafaiMitra Suraksha Challenge, 6 private desludgers have been empanelled and training has been provided. All the sanitation workers in the ULB are provided with the benefits of 3 government schemes like Employees State Insurance, Employees Provident Fund, Pradhan Mantri Suraksha Bima Yojana. Every 6 months PPE kits are distributed to all the SafaiMitras. A centralized call centre has been established for grievance redressal of sanitation activities.



Ramagundam's journey: From Manhole to Machine hole



Figure 1 - Awareness rally conducted in the ULB



Figure 2 - Training program for Masons



Figure 3 - SafaiMitra using PPE while cleaning of machine holes



Figure 4 - Yoga program conducted for SafaiMitras



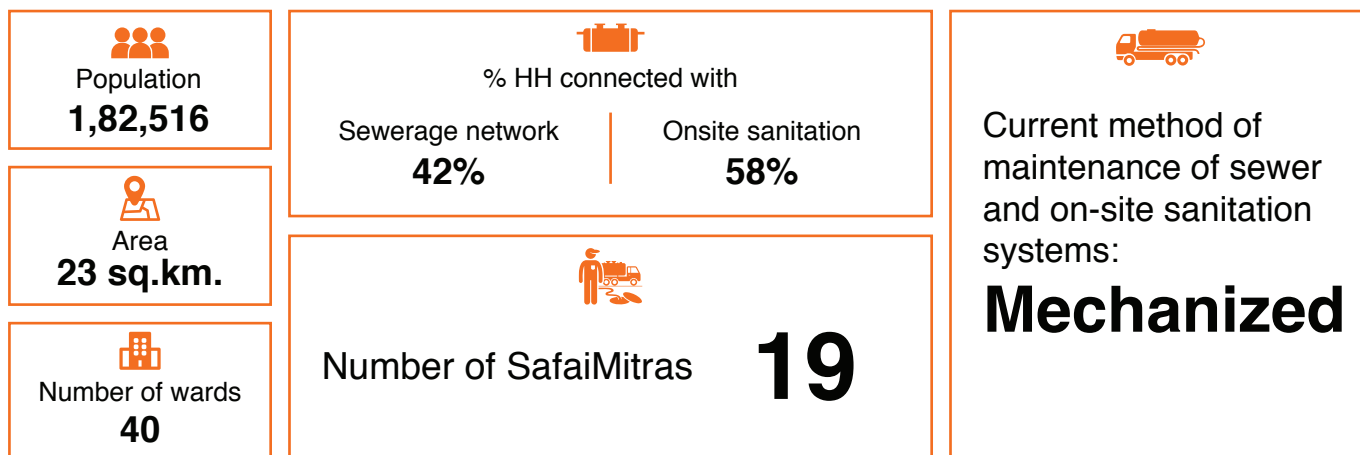


CASE 33 - ROORKEE

UTTARAKHAND

ULB: Nagar Nigam Roorkee | State: Uttarakhand | Support Partners: Jal Sansthan Roorkee

ULB Profile



Journey of the ULB

The Nagar Nigam Roorkee has upgraded its cohort of machines to include 2 septic tank desludging vehicles owned by the ULB as well as hydro jetting, power bucket and super sucker machines (one of each).

The city has also worked towards improving the quality of life of its SafaiMitras. The ULB has 1 permanent sewer cleaning staff and 18 private employees. The Nagar Nigam Roorkee has actively worked towards identifying and integrating informal SafaiMitras with private desludging operators.

The Nagar Nigam Roorkee SafaiMitras have benefited from 3 schemes (ration card, ESI, and Provident Fund schemes) and the training is given to all SafaiMitras by the ULB. Training has been also provided to sanitation workers under the "Udhmita Vikas Sansthan". The ULB adheres to PPE standardization for equipment procured and has provided the same to all its workers.

The ULB has 2 private desludging operators. When the ULB receives grievances or complaints on service delivery, it is typically forwarded to the private operators who work towards resolving the same.

For public awareness, the Nagar Nigam Roorkee uses social media platforms like Facebook, Instagram, Twitter. Digital hoardings, campaigns and other media platforms like street plays and door-to-door messaging is also undertaken. All CT/PTs and desludging vehicles carry public service messages in relation to the SafaiMitra Suraksha Challenge campaign.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- Nagar Nigam Roorkee uses suction machine for sewer dewatering and uses jetting machine for sewer line cleaning through water pressure and a super sucker for manhole desilting every 3 months.
- ERSU assessments have also been set up for the ULB and monthly training is given to SafaiMitras.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- Uniforms are provided to all the workers. The PPE standardization and procurement is undertaken by the ULB.

3. Initiatives taken to manage public awareness

- The ULB has set up the 14420 helpline number for the public complaints.
- The Nagar Nigam Roorkee social media platforms like Facebook, Instagram and Twitter and digital hoardings, campaigns, and other media platforms and has conducted street plays and door-to-door messaging in 40 wards.

Outcomes

The SafaiMitra Suraksha Challenge has brought positive impact in the lives of SafaiMitras by giving them access to safe and dignified working environment, linkages to various government entitlements, access to mechanized ways of cleaning,

etc. Moreover, it has established the required administrative systems to ensure that the city can smoothly transition from “manhole to machine hole”. The citizens are also more aware of their roles and hence, they ensure that they approach the designated people for maintenance requests.



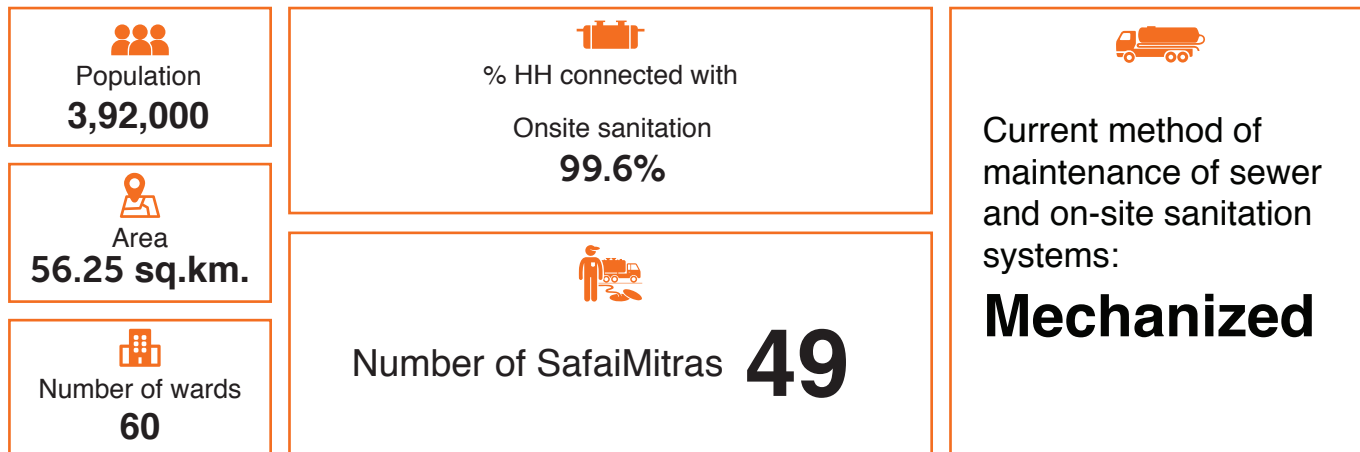


CASE 34 - SHAHJAHANPUR

UTTAR PRADESH

ULB: Shahjahanpur | State: Uttar Pradesh

ULB Profile



Journey of the ULB

The Nagar Nigam Shahjahanpur is a newly formed Municipal Corporation of 56.25 sq. km. area with a population of 3.92 lacs. Earlier, there were no sewer lines in the city hence cleaning of septic tanks was done through 2 suction machines along with few workers engaged in manual cleaning.

There was no proper mechanism to identify instances of manual cleaning of septic tanks. Moreover, the ULB lacked adequate workforce as per the CPHEEO guidelines which affected the efficiency of maintaining septic tanks across the city.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- 4 teams were appointed in all 4 zones of the city to identify the private operators and persons engaged in manual and hazardous cleaning of septic tanks. Teams conducted a household survey and all sanitation workers engaged in hazardous cleaning were identified. The Corporation formed a committee to assess the sanitation team as well as the need for extra equipment. The Corporation also did an assessment of the current workforce/ SafaiMitras and equipments used for septic tank cleaning and made a work plan for mechanized cleaning as per CPHEEO norms. The city engaged these workers in the sanitation team by outsourcing and training them to complete local sanitation taskforce requirements.

- The city started working towards the establishment of an ERSU for quick response to the condition of hazardous cleaning throughout the city. A toll-free no. 14420 was started for public complaints and there was regular monitoring of the received calls.
- After the assessment by the committee, as per the requirement of the Corporation, the city procured mechanized equipments and safety gears for non-hazardous and mechanized septic tank cleaning.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- Uniforms were provided to all the sanitation workers and complete PPE kits were provided to all SafaiMitras involved in septic tank cleaning.
- Exposure of loan melas was provided to SafaiMitras in Ghaziabad to develop entrepreneurship skills and financial strength.
- Health checkups are done on regular basis to check for any diseases or ailments. Safety training is provided periodically as well as linkage to various government schemes has been provided to each SafaiMitra.

3. Initiatives taken to manage public awareness

- Various types of IEC activities were undertaken i.e. hoardings, posters, public announcement systems, street plays, and virtual meetings conducted by the Municipal Corporation to raise awareness about PEMS Act, 2013, hazardous cleaning, and periodic cleaning of septic tanks.
- Toll-free no. 14420 was established and this information was circulated via print media social media, stickers on vehicles, etc. to promote it among the citizens as a helpline for desludging requests.
- Survey and awareness activities were carried out throughout the city for periodic desludging of septic tank once in 3 years.

Outcome

21 sanitation workers engaged in manual cleaning were identified and linked to Nagar Nigam through outsourced agencies. Appropriate PPEs, mechanised equipment and social benefits i.e. uniforms, PPE kits, health check-up facility, access to loan mela, etc. were provided.

All the SafaiMitras are now skilled and trained and linked with a minimum of 3 government schemes. To ensure mechanised cleaning throughout the city, 3 additional suction machines and other safety gears were procured. This helped in ensuring the prevention of hazardous cleaning practices.



Shahjahanpur's journey: From Manhole to Machine hole



Figure 1 - SafaiMitras with PPE



Figure 2 - Awareness campaign for SSC



Figure 3 - Vehicles for desludging



Figure 4 - Vehicles for desludging



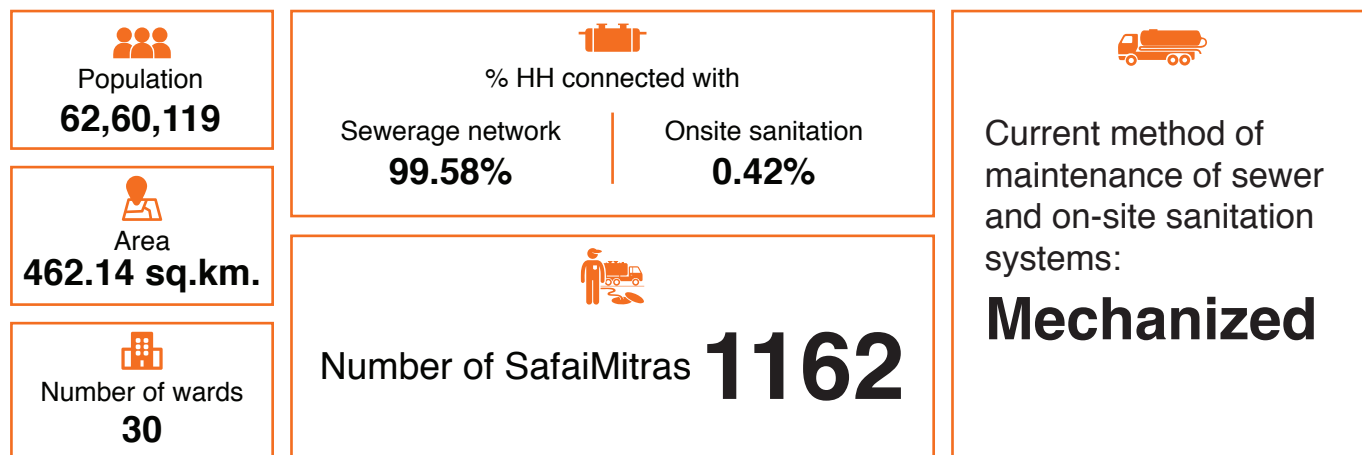


CASE 35 - SURAT

GUJARAT

ULB: Surat Municipal Corporation | **State:** Gujarat

ULB Profile



Journey of the ULB

Prior to the SafaiMitra Suraksha Challenge, the Surat Municipal Corporation owned 186 equipment including both safety equipment such as tripods, gas monitors, airline breathing apparatus etc. as well as core equipment such as hydrovacs, machine hole dredger, super sucker machine etc. Post the launch of SSC 2020 the Municipal Corporation calculated the availability of equipment as per the CPHEEO calculator and concluded that the availability of the equipments was adequate. However, the Municipal Corporation is still actively trying to procure equipment to saturate its requirement, the process of which will be completed before 15th August 2022. Since the SSC, the Municipal Corporation has also procured specialized equipment such as sewer inspection cameras, power rodding apparatus and sewer root cutters.

Previously, 1060 human resources were engaged by the Municipal Corporation which included sewer men, beldars, and sewer entry professionals. Post the SSC, the Municipal Corporation undertook an assessment that indicated they were well placed in terms of human resource. Currently, there are 1162 SafaiMitras engaged with the Municipal Corporation. The ULB had set up 3 ERSU teams at central level with each team consisting of sanitary inspector, sanitary sub inspector, mukaddam and 9 SafaiMitras. Moreover, there are 9 teams at zonal level with 12 members each including SafaiMitras. Additionally, there is one duty supervisor appointed for each zone.

The Municipal Corporation has continued its bi-annual health check-up camps established for sanitation workers pre-2020. It has also continued to improve

working conditions and work safety through the introduction of specialized equipment along with providing hardship allowances and insurance policies for workers. Financial empowerment of workers has also been supported by the Municipal Corporation which has helped informal workers procure equipment through the NAMASTE and NSKFDC schemes.

Since 2020, the Municipal Corporation has expanded its awareness campaigns from hoardings and newspapers to street plays in ward zones, TV and radio advertisements, and monthly training programs to raise awareness on the safety and dignity for SafaiMitras.

Approach to mechanization under SafaiMitra Suraksha Challenge

Surat Municipal Corporation owns 170 mechanized cleaning and maintenance equipment embedded with GPS systems for monitoring and tracking. These have tremendous de-sludging and hauling capacity. Also, there are 146 special equipments which include CCTV camera systems, power rodding machines and root cutters. The Municipal Corporation is in the process of purchasing 4 additional recycler machines which are to be taken on BOO mode. Innovative machine-hole covers, named Apoxy Perforated which retain solid waste entering in them, are also installed. The Municipal Corporation has established sewerage network which covers more than 99% properties and remaining properties are connected to the standardized septic tanks. For regular monitoring of cleaning schedule and safety assurance; geo-tagging of sewer network, storm water drainage network and

septic tanks is in place. Also, 11 STPs are present for treatment of sewage and safe disposal. Few STPs are also equipped with co-treatment facilities for scientific treatment of fecal sludge generated in the city.

1. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

The Municipal Corporation has engaged 1162 SafaiMitras for de-sludging activities of the city and has always ensured safety of the workers and their families.

- They have been linked with various health benefit schemes such as GSLIS, NPS, NDCPS, SMC health book, etc. They are also provided with additional 10% of their salary as hardship allowances and their children have been enrolled in government schools.
- Looking at the complete ban on informal de-sludging activities, SMC has identified 157 informal SafaiMitras throughout the city. These SafaiMitras were introduced to the NSKFDC soft loans and were also invited in the loan mela.
- Moreover, all of them were linked with three social welfare schemes viz. PMSBY, PMJJBY and APY.
- Further, there are 157 informal SafaiMitras who have been provided livelihood opportunity by integration with O&M agencies.

2. Initiatives taken to manage public awareness

- Various awareness activities on topics such as ban on manual scavenging, penalty for the non-compliance, cleaning of septic tanks every 3 years, 24x7 helpline number, complaint management portal/app, significance of PPE Kits/Safety Gears etc. were conducted by SMC.
- 740 posters, 46 hoardings, 348 wall paintings were showcased throughout all 30 wards and 16 slum areas; banners were also put on all de-sludging vehicles for promoting awareness.
- Further, activities such as door to door awareness was done by public addressing system on all 550

garbage collection vehicles. Street plays were conducted and broadcasted on SMC social media pages as well as recreated during the loan mela event. A Jingle was recorded and broadcasted on 5 different radio stations. Awareness was generated via TV scroll, display of messages on all 143 CT/PTs and monthly group discussions with slum dwellers and near the hot-spots.

Outcome

There has been a major impact on SafaiMitras' lives through the SafaiMitra Suraksha Challenge. Although, the Corporation had been undertaking initiatives for creating awareness related to hazardous cleaning, this program provided wider scope of conducting IEC activities, awareness programs, street plays and empowering SafaiMitras with livelihood opportunities, etc.

There has been a drastic change in lives of SafaiMitras in terms of adopting and maximising the use of PPE kits and safety gear and switching from former hazardous practices following the ban on manual scavenging. It also presented an opportunity for them to learn new skills like operating mechanized equipment and securing their lives by linking them with life insurance, health insurance and pension schemes of government. The stature of SafaiMitras was recognised and celebrated in the society and they started to prioritise their children's education to break the chain of intergenerationality in sanitation work.

After increasing the usage of PPE kits and safety gears, the Municipal Corporation has observed an improvement in worker health due to which the medical expenditure and doctor visits have been reduced. Moreover, workers are felicitated with proper uniforms to have their own identity. The ban on manual scavenging is not less than a life saving decision for them. There are around 9 informal SafaiMitras who have agreed to opt for loans and become entrepreneurs, the process of which is underway.



Surat's journey: From Manhole to Machine hole



Figure 1.1 - SafaiMitras with safety equipment



Figure 1.2 - SafaiMitras with safety equipment



Figure 2.1 - SafaiMitras with core and special equipment



Figure 2.2 - SafaiMitras with core and special equipment



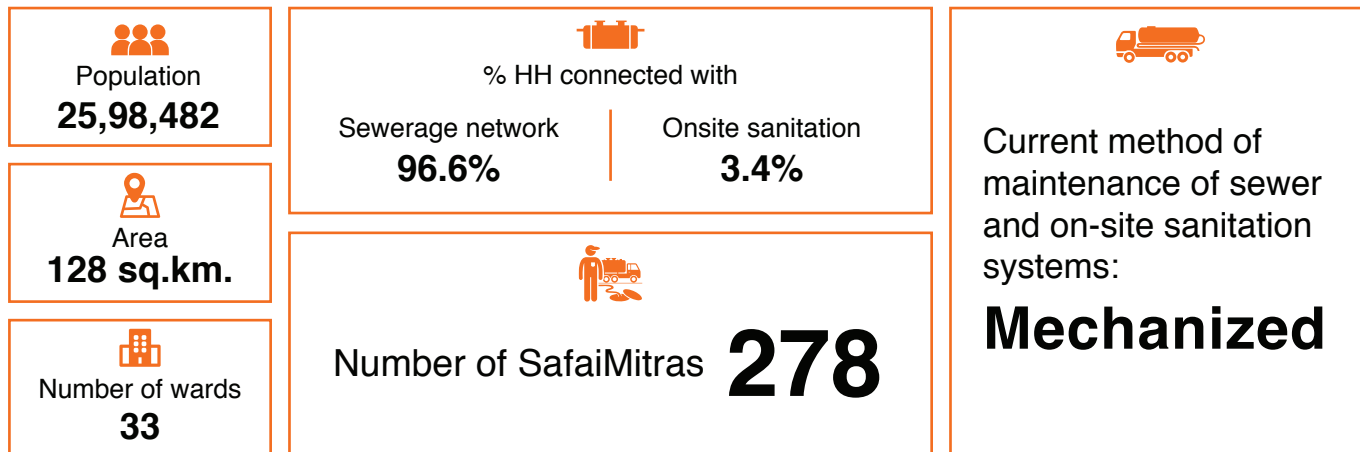


CASE 36 - THANE

MAHARASHTRA

ULB: Thane Municipal Corporation | **State:** Maharashtra

ULB Profile



Journey of the ULB

The Thane Municipal Corporation (TMC) initiated the implementation of mechanized sewer cleaning around 3-4 years ago. With the launch of the SafaiMitra Suraksha Challenge in 2020, with an intention of going from 'manhole to machine hole', mechanization has been achieved. The Thane Municipal Corporation has a Responsible Sanitation Authority (RSA) and Emergency Response Sanitation Units (ERSU) set up where periodic meetings and reviews are taken to ensure the safety of the workers and reduce the overall inconvenience faced by the citizens, especially in monsoon. A 24*7 operational helpline was also set up to register grievances and track them. Apart from these, IEC activities for public awareness of illegal practices and correct sanitation practices were spread across the city.

The Thane Municipal Corporation had limited gear & equipment and most of the work was done manually. Prior to the SSC in 2020, there was no criteria to determine the number of equipments and safety gears required for ULBs; however, after 2020, the required equipments were calculated according to the design calculation sheet, making it easier for ULBs to set a target and form a strategy for the procurement of these equipments and gears.

The Thane Municipal Corporation has procured a variety of equipments and gear like reflecting jackets (25), safety gumboots (25), tripod set (2), blower with air compressor (1), full body wader suit (25), airline breathing apparatus (1), hydro jetting machines (11), among others. The ULB also has standard septic tank vehicles (7), hydrovac sets (11), and hydrovac equipments (11).

Workshops provided informative training on what to do under the SafaiMitras Suraksha Challenge campaign as well as demonstrations were done through various examples and presentations.

The Thane Municipal Corporation initiated health check-up programs with the assistance of the health department, and camps were conducted to assess the well-being of SafaiMitras. Currently, all sewerage network cleaning, maintenance, and repair work is performed by necessary core equipments with correctly designed safety gears and PPE kits, and 100% mechanization has been achieved strictly following the rules of PEMS Act, 2013.

The PSSOs were disorganized under various functional departments such as drainage, solid waste management (SWM), and sewerage departments. The Thane Municipal Corporation gathered them all together and began offering licenses and service contracts through tendering for services, machines, safety gear, PPEs, and so on as per the MoHUA guidelines. The ULB has procured and outsourced the equipment, gears, and O&M requirements. All the equipments provided by the PSSOs are as per the standards, and the workforce provided is trained and smoothly does the O&M services for the Thane Municipal Corporation. The municipality carries out scheduled desludging of all the septic tanks in the ULB area. Hence, there are no private desludging operators in the ULB.

The Thane Municipal Corporation has kept a repetitive timeline of 2 years for scheduled desludging. Hence, the ULB must cover 24 septic tanks out of 17,559 structures on a daily basis. The Thane Municipal Corporation has its own desludging vehicles (suction

cum jetting machines) for cleaning of these septic tanks on a daily basis.

Hence, around 0.129 MLD of sludge is collected from these structures on a daily basis, which is then brought to sewage treatment plants of the ULB. This sludge is then treated with sewage at these facilities and treated sludge is dried at sludge drying beds.

After the complete ban on informal desludging activities, the Thane Municipal Corporation identified informal SafaiMitras throughout the cities and introduced the Government of India's soft loan scheme i.e., National Safai Karamcharis Finance Development Corporation (NSKFDC) to them and invited applications for the same. All SafaiMitras were linked with social welfare schemes viz. Pradhan Mantri Awas Yojana (PMAY-U) and ₹15 lakhs insurance cover for the worker's family whoever died on the job.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

The key initiatives under mechanization include the timely assessment of the existing equipment for effective cleaning and purchase and procurement of any machine required by the ULB. Additionally, to ensure the safety of sanitation workers, safety equipment is essential. The ULB has established a sewerage network that covers nearly 100% of properties. It currently has core mechanized cleaning and maintenance equipment embedded with a GPS system for monitoring and tracking. Also, there is special equipment which includes CCTV camera systems, root cutters, suction & jetting machines, and hydrovacs. The hiring of personnel for operations and maintenance is in process along with additional equipment to fulfill the demand of the department. The ULB also set up an Emergency Response Sanitation Unit (ERSU) in 2020 for timely resolution of sewer-related issues.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- The Municipal Corporation has provided PPE kits and uniforms to all the SafaiMitras and workers have also benefited from schemes related to health benefits in govt. hospitals such as GSLIS, NPS, NDCPS, etc.
- SafaiMitras have also been provided with more than 10% hardship allowance in addition to salary. Additionally, their children have been enrolled in government schools and family members are guided to other job opportunities.

- The ULB has helped in providing ration cards & Aadhaar cards to the workers.
- There is a dedicated canteen for sanitation workers provided by the Thane Municipal Corporation.

3. Initiatives taken to manage public awareness

- The Thane Municipal Corporation conducted various awareness campaigns and public service announcements such as a prohibition on manual scavenging, a penalty for noncompliance, a helpline number, a complaint management portal/app, the importance of PPE kits/safety clothes, and so on.
- To raise awareness, posters, hoardings, and wall paintings were displayed throughout all 33 wards, and banners were displayed on all O&M vehicles.
- Furthermore, door-to-door awareness was conducted and street plays were performed along with broadcasting on digital billboards. Jingles were recorded and played on garbage collection vehicles and sewer maintenance vehicles and messaging was done on all CT/PTs. Additionally, monthly group discussions with slum dwellers were also held.

Outcome

The Thane Municipal Corporation is determined to improve the condition of SafaiMitras in the coming years. 100% mechanized cleaning has been achieved in strict compliance with PEMS Act, 2013. Appropriate efforts have been taken to procure equipment in accordance with CPHEEO set standards. PSSOs have been identified and empaneled to ensure smooth delivery and maintenance of sanitation services. Efforts have also been taken to not only improve the lives of sanitation workers through the provision of benefits but also to their families to ensure that their social status is improved and that they can live in dignity.



Thane's journey: From Manhole to Machine hole

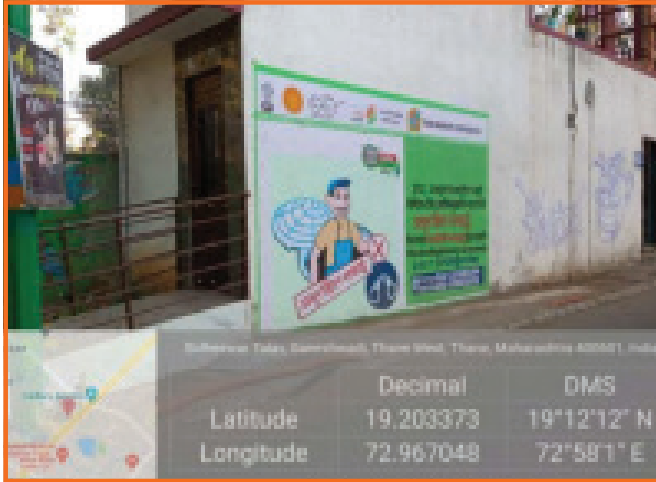


Figure 1 - IEC campaign through wall paintings



Figure 2.1 - SafaiMitras performing their duties



Figure 2.2 - SafaiMitras performing their duties



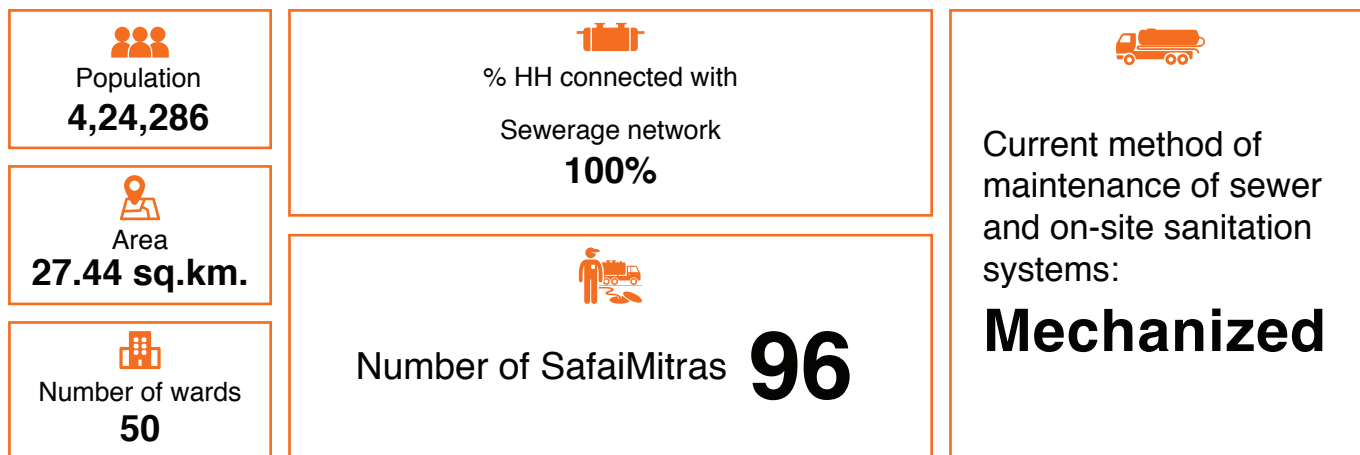


CASE 37 - TIRUPATI

ANDHRA PRADESH

ULB: Tirupati Municipal Corporation | State: Andhra Pradesh

ULB Profile



Journey of the ULB

Before the launch of the SafaiMitra Suraksha Challenge, Tirupati had a sewerage network that covered nearly 60% of properties. With the advent of the SSC in 2020, Tirupati established a 90% sewerage network, strengthened sewer cleaning infrastructure, and achieved “manhole to machine-hole” transformation by January 2021. The Corporation has procured 5 jetting & suction machines, 9 desludging vehicles, 12 power rodding and desilting machines, and provided livelihood to the manual scavengers in a bid to do away with hazardous manual sewer entry. The corporation has also introduced revenue streams such as sewerage charges as well as revenue from reuse of treated water. The entire O & M cost is now covered through the revenue generated from sewerage charge and selling of treated water.

A group of 96 members were selected from the families of Safai Karamcharis and the Municipal Corporation equipped them with the professional training to deal with the UGD (underground) network maintenance. The corporation has also given benefits to its sanitation staff including informal and contractual workers along with permanent staff to support their safety & well-being.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- The ULB has constituted an Emergency Response Sanitation Unit (ERSU)/ Sanitation Response Unit (SRU) & Responsible Sanitation Authority (RSA)

under Municipal Commissioner (Magistrate) to provide a professional, well-trained, motivated, and appropriately equipped workforce for maintenance and management of sewers and septic tanks.

- The ULB has empaneled and provided licenses to the private desludging operators to increase coverage of service delivery
- The Municipal Corporation has procured and strengthened the sewer cleaning fleet under Tirupati Smart City Corporation Funds.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- The ULB has introduced risk and hardship allowance, priority in educational institutions, and provision of health and life insurance for sanitation workers
- The Corporation has trained and distributed PPE and safety gear to all the staff engaged in maintenance of sewers and septic tanks.
- The ULB has identified all the manual scavengers in the city. All the manual scavengers were then trained and integrated into the liquid waste management system by the ULB. The corporation also provided various schemes such as YSR Bima, PMSSY, Jandhan Yojana, health insurance and NSKFDC to all the workers engaged in sewer and septic tank cleaning in order to ensure their safety and dignity.
- The ULB has partnered with Sulabh International for the maintenance of community and public toilets in the city.

3. Initiatives taken to manage public awareness

- The Tirupati Municipal Corporation has established a call center and a dedicated helpline number "14420", has been set up to register complaints and provide real-time solutions on desludging and sewer overflow. Awareness was spread through rallies, door-to-door campaigns, video messages, documentaries, theatre campaigns, and extensive social media campaigns. In order to increase the effectiveness of messaging, The Municipal Corporation made the campaigns inclusive and partnered with various corporates, private companies, SHGs, NGOs, and organizations. Many hotels, SHGs, and professionals came forward to show support for the city. 14420 messages were displayed on walls of toilets, hoardings, billboards, sewer cleaning, and desludging vehicles for effective reach. Social Media channels such as Facebook, Twitter, Instagram, and WhatsApp were used extensively. The social media push helped to gain wide reach. The awareness campaigns were successful as citizens, professionals, businesses, students, and NGOs participated with enthusiasm.
- The corporation has also set up the overall complaints redressal system. The complaints received from the helpline number 14420 goes to the assistant. The assistant then forwards these complaints to the respective Area Supervisors for its redressal. If the complaint redressal is beyond the purview of Area Supervisors, then it gets forwarded to the higher level where Assistant Engineer or Deputy Executive Engineer solves the complaints. The complaint registers and database are also being managed. The corporation also appointed and trained ward-level Amenities Secretaries for the efficient management of the sewerage networks as well as to control illegal practices in the city.

Outcome

90 % of the sewerage network has been established in the city with a focus on mechanized service delivery. The city has achieved a "manhole to machine-hole" transformation. 96 SafaiMitras are linked to welfare schemes and provided education for their children in municipal schools. An E-Health check-up programme has been set up to ensure the well-being of the workforce. SHG groups are now also trained and involved in maintaining CT/PTs. The ULB has also introduced an ICT- based vehicle tracking mechanism and has achieved 100 % treatment and reuse of the treated STP water.



Tirupati's journey: From Manhole to Machine hole



Figure 1 - IEC for desludging activities



Figure 2 - SafaiMitras undergoing training



Figure 3 - Training for sanitation workers



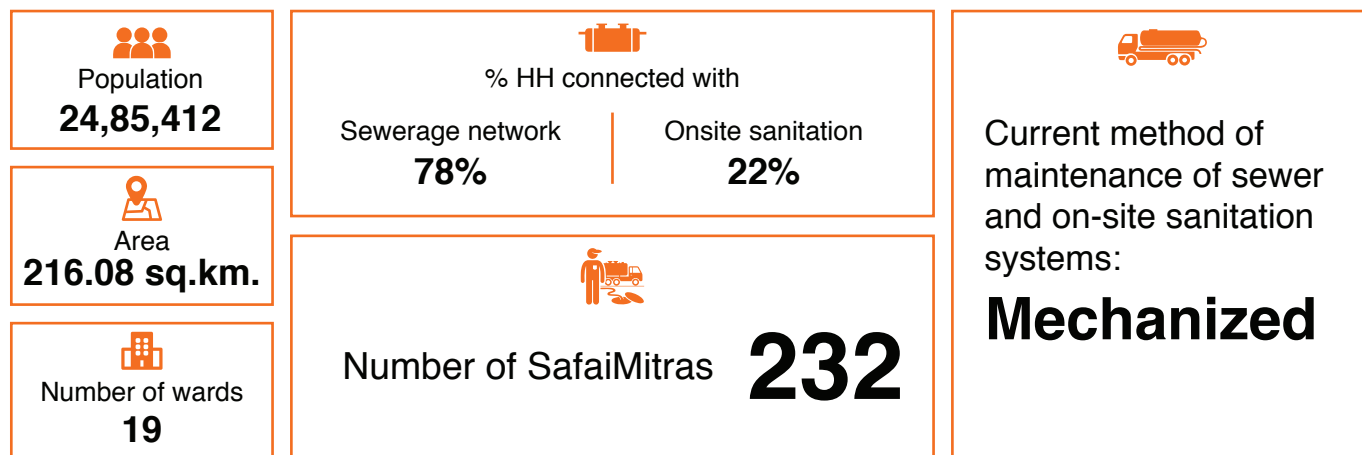


CASE 38 - VADODARA

GUJARAT

ULB: Vadodara Municipal Corporation | **State:** Gujarat

ULB Profile



Journey of the ULB

The Vadodara Municipal Corporation has taken active steps toward the mechanization of sanitation services in line with the SSC 2020. The ULB possesses 11 hydrovac sets (including one recycler machine), 24 grabbers, 12 septic tank vehicles (standard), and 14 hydro jetting machines. All this equipment is owned by the ULB itself and sourced through the ULB's own funds. Given that current funding levels are sufficient, the ULB has not invited tenders from PSSOs with the prospect of increasing the capacity of mechanized equipment. Apart from the equipment, VMC has also provided appropriate PPE to the SafaiMitras who are involved in operating hydrovac sets.

1308 SafaiMitras have been engaged in the maintenance of sewers, septic tanks, and drainage cleaning activities in the city. Out of these, 209 are permanent employees whereas 99 of them are outsourced. They primarily serve as sewer entry professionals and sanitary beldars, though no specific training or skilling was provided to them before the SSC 2020.

Through the initiative of the SSC, the Municipal Corporation has also increased its efforts to improve the lives of its SafaiMitras through the following:

- The organization of periodic health camps and checkups.
- Enforcement of minimum wage for both permanent and outsourced SafaiMitras.

- Statutory benefits for all permanent Safai Karamcharis.
- Superannuation and employment for kin of workers in case of accidental death.
- SafaiMitras are also given preference to choose their desired cadre at the time of promotion if they possess the required qualification.

To prevent the deaths of SafaiMitras and to stop the manual cleaning of drainage and septic tank activities, VMC had issued a public notice in local newspapers dated 25.06.2019 vide PRO No. 194/2019-20 to private companies, public institutions, shops, hotels, private hospitals, and houses in line with the Manual Scavenging Act of 2013.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- An assessment was conducted for identifying the gaps in workforce and machinery using the CPHEEO Calculator. The process has been initiated to overcome the existing shortfall in workforce and machinery.
- Work order has been issued to the agency M/s. Maniar and company, Ahmedabad vide Work Order: Mech Deptt O.W. No. 379/ Dtd. 21.07.2022 to purchase/procure 4 standard septic tank vehicles (suction machines) under Professional Tax Grant (Year 19-20).

- An ERSU has been set up to ensure the elimination of hazardous manual cleaning of sewer lines and septic tanks across the city.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- Initiated the process of purchasing/procuring personal safety gear for all the SafaiMitras.
- It has been planned to conduct more health camps/programs frequently.
- Special reservation for housing provision under the MGAY/PMAY scheme for SafaiMitras engaged as permanent employees.

3. Initiatives taken to manage public awareness

- Helpline number 14420 has become operational for desludging requests.

- An awareness campaign was launched on the Twitter account of VMC to use helpline number 14420 to register complaints about hazardous cleaning /reporting illegal practices.
- Vigorous efforts have been started for desludging, especially in recently added non - sewerred areas under the VMC jurisdiction.

Outcome

- The Municipal Corporation has ensured 100% mechanized sewer cleaning.
- In the coming months, VMC will also organize safety training programs and workshops for sanitation workers and sewer entry professionals.
- 2 Robotic Machinehole cleaning machines are received in form of a donation from L&T and IOCL. These are being operated by VMC.



Vadodara's journey: From Manhole to Machine hole



Figure 1.1 - Sanitation Workers with their mechanized equipment



Figure 1.2 - Sanitation Workers with their mechanized equipment



Figure 1.3 - Sanitation Workers with their mechanized equipment



Figure 2 - SafaiMitras with PPE



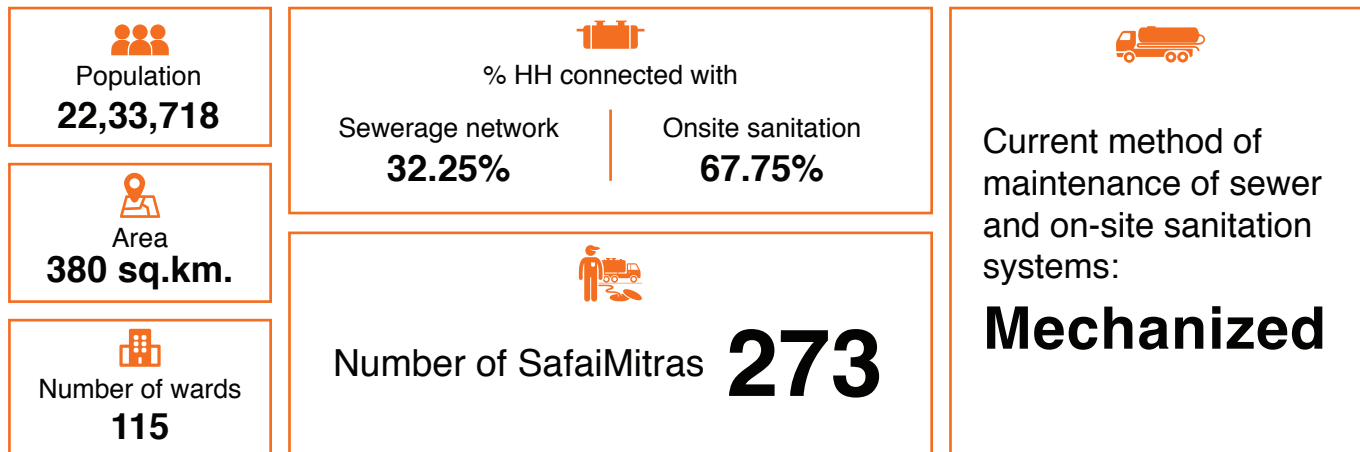


CASE 39 - VASAI VIRAR

MAHARASHTRA

ULB: Vasai Virar City Municipal Corporation | **State:** Maharashtra | **Support Partners:** KAM Foundation

ULB Profile



Journey of the ULB

Vasai Virar is the only metropolitan city (having a population of more than 10 lakhs) in the Palghar District. The Vasai Virar City Municipal Corporation has made laudatory efforts in the last decade to improve Municipal Solid Waste Management (MSWM) and wastewater management by implementing an efficient collection and transportation system which is monitored through GPS. It has an STP plant of 30MLD situated in Bolinj, Virar. The practice of manual scavenging was eradicated in 2013 and the Municipal Corporation simultaneously initiated the process of complete mechanization. No employee is allowed to undergo manual cleaning of septic tanks/storm water drain or handle faecal sludge manually.

Prior to the SSC 2020, however, there was no special emphasis on the purchase of highly mechanized equipment such as suction and jetting machines. There was no active training of SafaiMitras with regard to managing solid and liquid waste safely. PPE standards were not actively implemented. No awareness campaigns were conducted.

Since the advent of the SafaiMitra Suraksha Challenge, the Vasai Virar City Municipal Corporation (VVMC) has taken active efforts to ensure the effective and safe delivery of solid and liquid waste services. The Municipal Corporation has strictly enforced The Prohibition Of Employment As Manual Scavengers And Their Rehabilitation Act, 2013 and has ensured that employers and employees are both held accountable for observance of safety precautions. It has also undertaken training efforts and distributed PPE and equipment for its workers. To fulfill its mechanization

needs it has also purchased additional machinery such as suction cum jetting machines and desludging vehicles. The Municipal Corporation has also set up the 14420 helpline number and actively tried to raise awareness of the same through citizen-oriented campaigns

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- **Setting up an ERSU** - As per the revised order dated 02/07/2021 the formation of a Responsible Sanitation Authority (RSA) and Staff of Sanitation Response Unit (SRU) under the Emergency Response Sanitation Unit (ERSU) has been set up. The staff of the SRU consists of telephone operators, supervisors, and authorized dedicated sanitary workers involved in the sewer line and septic tank cleaning. The Chairman of the RSA is the Municipal Commissioner of the Corporation.
- **Mechanized cleaning of septic tanks and sewers**- 100% mechanization of sewers and septic tanks has been achieved. There are 9 Standard Septic Tank cleaning vehicles with a total capacity of 24 kilolitres. Each vehicle undertakes 4 trips a day.
- **Mechanized cleaning of stormwater drains**- Steps have been initiated to ensure complete mechanization of the cleaning process. The total length of the drains under ULB jurisdiction is 1018 km and a total of 786 sanitation workers have been engaged for cleaning on a contractual basis. To ensure the safety of workers and timeliness of tasks, the Municipal Corporation currently owns 9 trailer-mounted suction cum jetting machines each

of 6000-liter capacity to clean the drains and prevent clogging. The cleaning of stormwater drains is carried out once every three months to ensure compliance with safety standards

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- **Provision of PPE** - Workers are provided with safety gear and PPE kits as per CPHEEO norms consisting of jackets, helmets, disposable face masks, gumboots, etc.
- **Linkages to schemes** - 273 sanitation workers thus far have been provided the following - ration cards, the Pradhan Mantri Suraksha Bima Yojana, and the Pradhan Mantri Jeevan Jyoti Bima Yojana

3. Initiatives taken to manage public awareness

- A 24*7 helpline has been set up with the number 14420 for calling desludging operators or providing feedback/complaints. Similarly, a WhatsApp helpline 8446622280 has been initiated. The Municipal Corporation's Complaint Redressal Module portal also has been initiated to receive feedback from citizens on the quality of service delivery

- Door-to-door campaigning - personal campaigns have been launched to raise awareness on the importance of regularly cleaning of septic tanks among citizens
- Awareness campaigns amongst sanitation workers have been initiated to raise awareness of the penal action associated with illegal desludging practices. All sanitation workers have had to sign self-declarations on the same. Pamphlets and stickers have been distributed throughout the wards to make citizens aware of their duty to report illegal practices

Outcome

The Municipal Corporation has been successful in achieving 100% mechanized cleaning of septic tanks and sewers through the procurement of additional machinery. All its sanitation workers (273) are linked to 3 key benefits as well as provided with the essential PPE and safety equipment to perform their job. Multiple feedback systems have been created for citizens to report and provide feedback on desludging services. Due to the awareness campaigns, every citizen in Vasai-Virar is now aware of the importance of safe and legal desludging activities.



Vasai Virar's journey: From Manhole to Machine hole

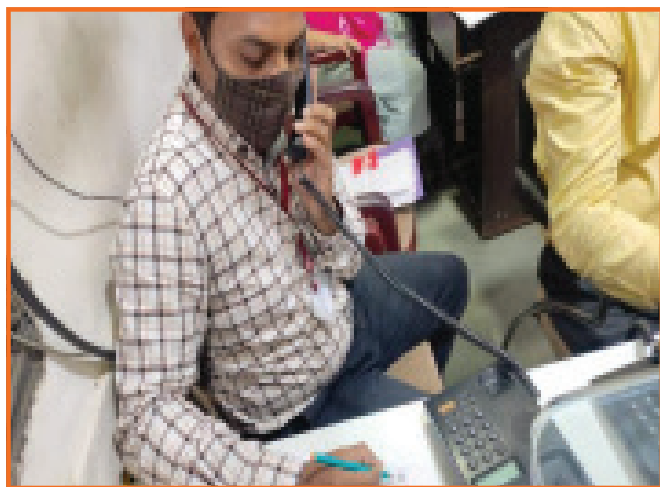


Figure 1 - Complaint being registered at the ULB



Figure 2 - SafaiMitras being given their PPE kit



Figure 3 - Training programme for SafaiMitras



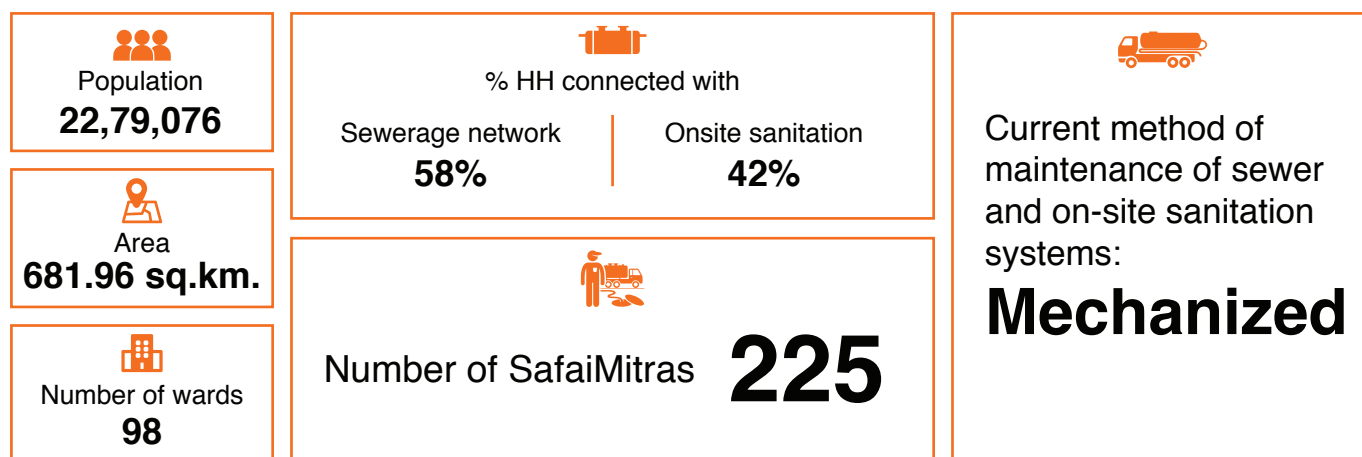


CASE 40 - VISAKHAPATNAM

ANDHRA PRADESH

ULB: Visakhapatnam Municipal Corporation | **State:** Andhra Pradesh | **Support Partners:** Visakha Owners Welfare Association

ULB Profile



Journey of the ULB

Before the SafaiMitra Suraksha Challenge of 2020, the Greater Visakhapatnam Municipal Corporation workers faced difficulty in cleaning the sewer lines and septic tanks. The workers lacked knowledge in terms of safety and appropriate techniques for cleaning. They also had less knowledge of procuring loans for entrepreneurship and government benefit schemes. The Greater Visakhapatnam Municipal Corporation also faced the issue of lack of availability of mechanical equipment.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

- The Greater Visakhapatnam Municipal Corporation procured mechanical equipment such as bandicoot robots, suction, jetting & de-silting machines for cleaning sewers and septic tanks.
- The Greater Visakhapatnam Municipal Corporation entered into an agreement with private de-sludging operators for ease in the cleaning of septic tanks.

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- The Greater Visakhapatnam Municipal Corporation also conducted training & awareness sessions on safety measures for the use of mechanical equipment and streamlined the procurement of safety and sanitary items for workers on an annual basis.

- The Greater Visakhapatnam Municipal Corporation procured PPE kits for workers and conducted awareness on disbursement of the loan facilities available.
- The Greater Visakhapatnam Municipal Corporation also focused actively on procuring loans from the NSKFDC for SafaiMitras.

3. Initiatives taken to manage public awareness

- The Greater Visakhapatnam Municipal Corporation conducted various rallies for increasing the uptake of the 14420 toll-free number and established the 24X7 call center for grievance redressal.
- Various hoardings were put up to inform the public about the importance of periodic de-sludging and the penal actions on illegal disposing of septage.

Outcome

The SafaiMitra Suraksha Challenge has helped to create awareness amongst workers on the importance of wearing PPE during work. The Greater Visakhapatnam Municipal Corporation entered into an agreement with various de-sludging operators for regular cleaning of septic tanks which resulted in reducing unscientific disposal of septage. It also helped in the procurement of mechanical equipment for cleaning of sewer and septic tanks.

Visakhapatnam's journey: From Manhole to Machine hole



Figure 1 - IEC for desludging activities



Figure 2 - SafaiMitras performing desludging operations



Figure 3 - SafaiMitras performing desludging activities



Figure 4 - SafaiMitras wearing their PPE kits



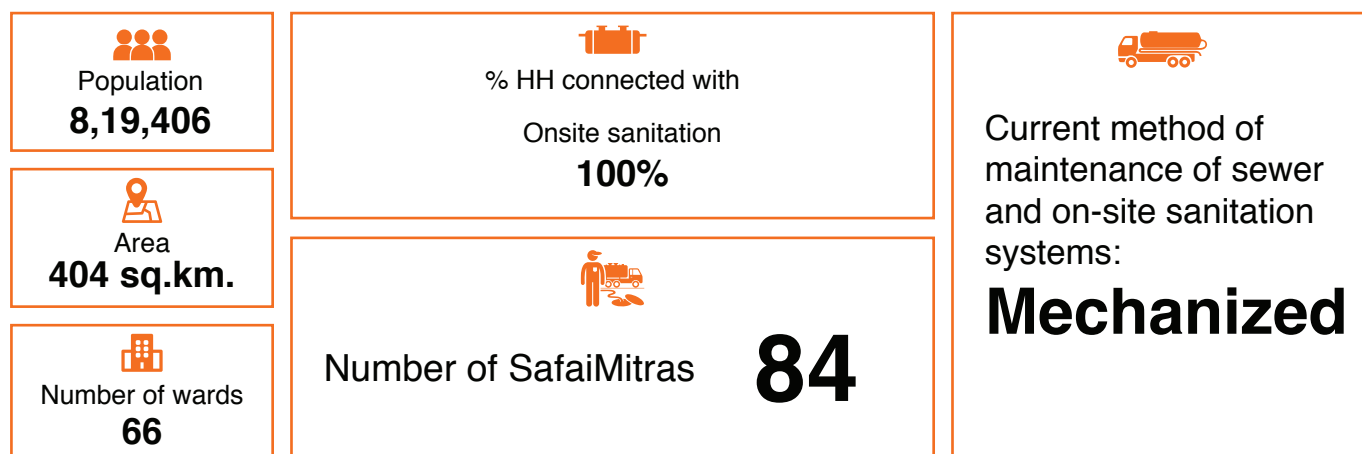


CASE 41 - WARANGAL

TELANGANA

ULB: Greater Warangal Municipal Corporation | **State:** Telangana | **Support Partners:** Administrative Staff College of India (ASCI), Hyderabad.

ULB Profile



Journey of the ULB

Warangal is the first city in the country to operationalize Faecal Sludge and Septage Management Regulations in 2016. This policy is in alignment with the National Policy on Faecal Sludge and Septage Management issued by the Ministry of Housing and Urban Affairs (MoHUA). Under this policy, The Municipal Corporation has licensed 22 desludging operators who are trained to follow safety standards of emptying, including usage of Personal Protective Equipment (PPE). ICT tools are used to monitor the FSM operations continuously. The city has also established a state-of-the-art faecal sludge treatment plant of 15 KLD and 10 KLD capacity using pyrolysis and geo tubes respectively at Ammawaripeta, Warangal. There is no exclusive department to monitor the FSM and SafaiMitras in the city.

Pre- the SSC of 2020, the Municipal Corporation did not possess equipment such as gas masks, body harnesses, gas monitors, full body wader suits etc. These have now been purchased by the ULB in accordance with CPHEEO criteria.

Currently 28 private desludging operators are providing services in the city and the ULB does not have desludging vehicles. Operation and maintenance of the desludging vehicles is ensured by the operators. The current system (demand based) of desludging by private operators does not have price regulation leaving the urban poor households, particularly vulnerable. The private operators charge in the range of ₹2500/- ₹3000/- per trip.

Various welfare initiatives have been undertaken for SafaiMitras like conducting regular health check-ups, loans for procurement of septic tank desludging trucks from NSKFDC, providing PPE kits to SafaiMitras from time to time, enrolling children in schools and ensuring "food security cards" and "health cards" to all SafaiMitras.

Gender initiatives were implemented at ULB level like training women on construction of household toilets, involving Third Gender communities in the operation and maintenance of community toilets and public toilets, involving women Self Help Groups in operation and maintenance of public toilets.

The GWMC is also actively involved in the training of its private operators on areas such as the "Septage Management & Regulation Act 2016", the PEMSR Act, 2013 and other general topics such as PPE safety measures, and O&M of CT/PTs

The private sector has been actively involved in sanitation services like management of public toilets constructed under PPP mode (45 public toilets), desludging operations (28 desludging trucks), and the operation and management of FSTPs. ICT tools are used to monitor the FSM operations of the private sector continuously.

The current practice of "on-demand" desludging, which requires citizens to self-regulate to ensure compliance with the frequency of desludging as per FSM regulation, cannot be expected to help the city meet its Public Health objectives in the near future. Therefore scheduled desludging is proposed as a means to achieve improved public health.

As the ULB requires an addition of 9 more desludging trucks to operationalize scheduled desludging, it has succeeded in mobilizing funds for purchasing 7 desludging vehicles from NSKFDC.

The Greater Warangal Municipal Corporation has conducted several public awareness campaigns on safe cleaning procedures for sanitation like erected hoardings across the city, wall writings and paintings, rallies and door to door campaigns.

Approach to mechanization under SafaiMitra Suraksha Challenge

1. Key initiatives taken for mechanization

As all the criteria are fulfilled by the ULB as per the CPHEEO norms so no further contracts through private engagements and mechanized equipment are carried out by ULB.

- The Municipal Corporation conducted a process to identify, train, license and empanel FSM truck operators.
- The Municipal Corporation undertook the procurement of mechanized cleaning vehicles through the NSKFDC.
- The Municipal Corporation also established and strengthened the ERSU (Emergency Response Sanitation Unit).

2. Key initiatives for promoting safety, dignity, entrepreneurship of sanitation workers

- Government schemes on food security cards, health cards, etc. were leveraged by the Municipal Corporation.
- The SafaiMitras were issued ID-cards and standard PPE kits by the ULB.

- The Municipal Corporation has conducted various health check-ups for SafaiMitras.
- The Municipal Corporation has handed over the operation and maintenance of Public and community toilets to SafaiMitras.

3. Initiatives taken to manage public awareness

The following initiatives had been taken up to manage public awareness regarding 14420, periodical desludging, etc.

- The Regulation Act 2016 was enforced strictly by the Municipal Corporation.
- Mass awareness campaigns across the city have been carried out like door to door campaigns, erection of hoardings, branding of 'Swachh Vehicles' and tractors and wall paintings.
- The Municipal Corporation also carried out Kalajatha programs across the city.

Outcome

- There has been no incident of manual scavenging (no persons is entering into septic tanks).
- 3500 sanitation workers were provided PPE kits.
- 7 SafaiMitras were provided alternative livelihoods by procuring desludging trucks.
- 64 SHGs are involved in operation and maintenance of public toilets.
- Third Gender communities are provided dignified livelihood by involving in operation and maintenance of 7 public toilets.
- 20 families of SafaiMitras have received food security cards and health cards.



Warangal's journey: From Manhole to Machine hole



Figure 1 - New Desludging Vehicle Distribution to Beneficiaries (Through NSKFDC)



Figure 2 - Health Camp for all SafaiMitras



Figure 3 - PPE kit distribution to all SafaiMitras



Figure 4 - Vehicle Branding & Mechanized cleaning



SAFAI, SURAKSHA, SAMMAN: INDIA'S LIGHTHOUSE MECHANIZATION JOURNEY





ABBREVIATIONS

AB-PMJAY	Ayushman Bharat Pradhan Mantri Jan Arogya Yojana
AMRUT	Atal Mission for Rejuvenation and Urban Transformation
APY	Atal Pension Yojana
BCC	Behaviour Change Communication
CBO	Community Based Organisation
CIDCO	City and Industrial Development Corporation of Maharashtra
CPHEEO	Central Public Health & Environmental Engineering Organisation
CT/PT	Community Toilets/Public Toilets
EPF	Employee Provident Fund
ESIC	Employees' State Insurance Scheme
ERSU	Emergency Response Sanitation Unit
GEM Portal	Government E-Marketplace Portal
GSLIS	Group Savings Linked Insurance Schemes
HMWSSB	Hyderabad Metropolitan Water Supply and Sewerage Body
HUDD	Housing & Urban Development Department
IA	Implementation Authority
ICT	Information Communication Technology
IEC	Information Education and Communication
IS	Indian Standards
IVRS	Interactive Voice Response System
MoHUA	Ministry of Housing and Urban Affairs
MSWM	Municipal Solid Waste Management
NAMASTE	National Action for Mechanised Sanitation Ecosystem
NDCPS	Government of India Defined Contribution Pension Scheme
NSKFDC	National Safai Karamcharis Finance & Development Corporation
NULM	National Urban Livelihoods Mission
O&M	Operations and Maintenance

OWA	Odisha Water Academy
PEMSR Act, 2013	Prohibition Of Employment As Manual Scavengers And Their Rehabilitation Act (2013)
PMAY	Pradhan Mantri Awas Yojana
PMDAKSH	Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrah
PMJAY	Pradhan Mantri Jan Arogya Yojana
PMJJBY	Pradhan Mantri Jeevan Jyoti Bima Yojana
PMKVY	Pradhan Mantri Kaushal Vikas Yojana
PMSBY	Pradhan Mantri Suraksha Bima Yojana
POSH	Prevention Of Sexual Harassment
PPE	Personal Protective Equipment
PSSO	Private Sanitation Service Organisations
RSA	Responsible Sanitation Authority
SBM	Swachh Bharat Mission
SEP	Sewer Entry Professional
SHG	Self-Help Group
SLCM	Sewer Line Cleaning Machine
SRU	Sanitation Response Unit
SSC	SafaiMitra Suraksha Challenge
SSY	Sukanya Samriddhi Yojana
STP/FSTP	Sludge Treatment Plant /Faecal Sludge Treatment Plant
SUY	Swachhta Udayami Yojana
TSU	Technical Support Unit
ULB	Urban Local Body
UT	Union Territory
WATCO	Water Corporation of Odisha

