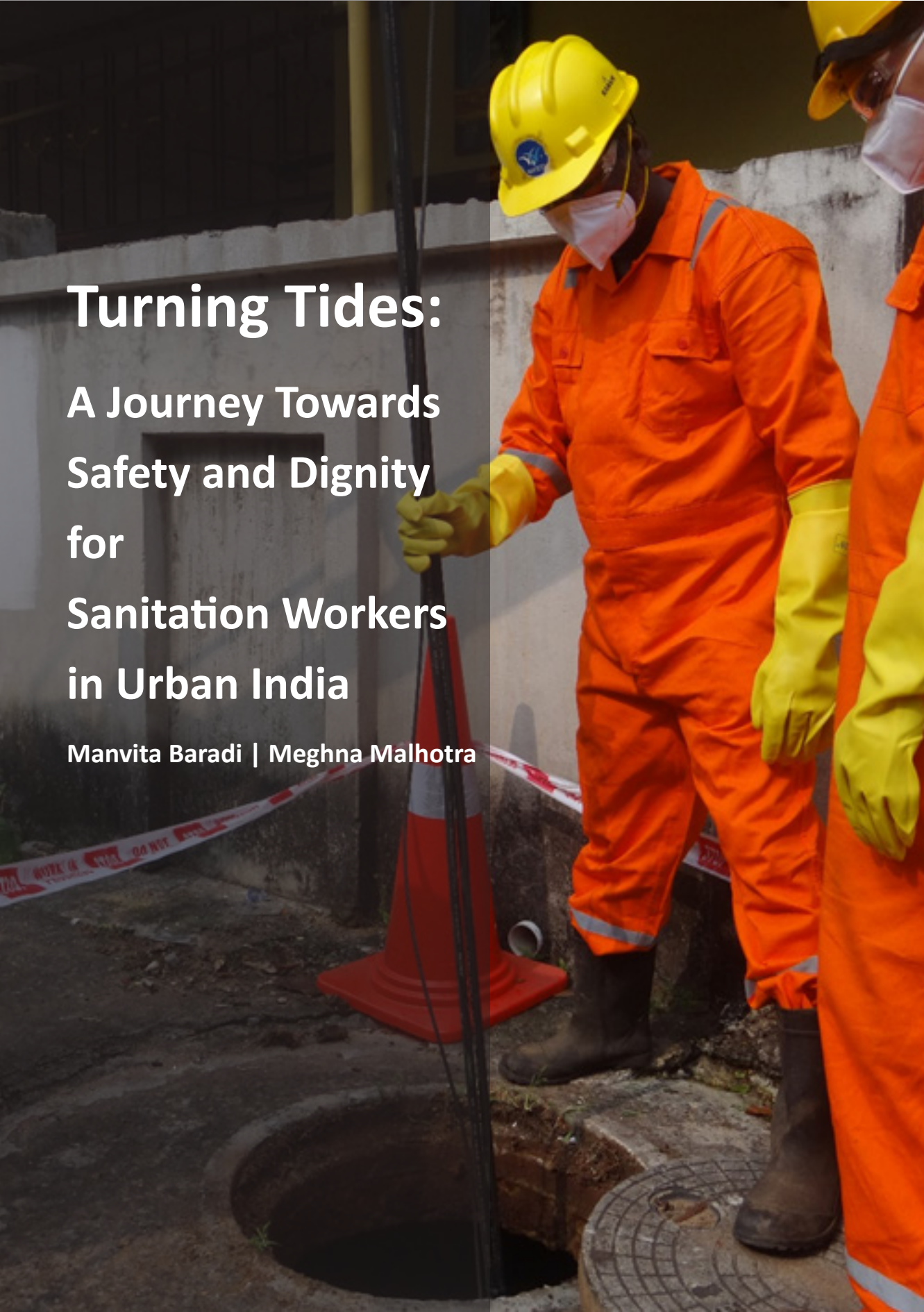


Turning Tides: A Journey Towards Safety and Dignity for Sanitation Workers in Urban India

Manvita Baradi | Meghna Malhotra



About UMC

Urban Management Centre is a non-profit organization dedicated to building resilient systems for inclusive and equitable development. We work with governments to strengthen local governance and build lasting institutional structures. We also work directly with vulnerable people to ensure that they have the tools and support they need.

Over the last 25 years, UMC and its teams have developed fundamental innovations in urban and rural development challenges such as performance assessment, capacity building and decentralized institutional strengthening.

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December 2023

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First Edition: © Urban Management Centre, December 2023

ISBN Number : 978-93-6128-539-4

This book is published, produced and distributed by the Urban Management Centre.
(Urban management Centre is registered under section 25 of the Indian Companies Act, 1956)

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Authors: Urban Management Centre

Photographs in this book have been taken by the staff and associates of Urban Management Centre unless mentioned.

Courtesy: Housing & Urban Development Department, Government of Odisha; Municipal Administration and Water Supply Department, Government of Tamil Nadu; National Safai Karamchari Finance Development Corporation, Ministry of Social Justice and Empowerment, Government of India; city governments of the state of Odisha and Tamil Nadu; Ahmedabad Municipal Corporation, Gujarat

Preface

Sanitation work stands out as one of the most perilous professions, fraught with hazards such as toxic gases and exposure to faecal sludge. Many workers are engaged informally, intensifying the vulnerability of workers, leaving them without access to social, financial, and occupational safety nets. In India, sanitation work is deeply entrenched in caste dynamics, placing workers among the most marginalized within the urban poor. They remain invisible to the system, lacking identity and recognition for their labour, and are often ostracized. They grapple with serious occupational and environmental health risks that jeopardizeWhile the COVID-19 pandemic briefly brought these workers to the forefront, likening them to medical professionals and police – a stark disparity persists. Is their participation in sanitation work a choice for them? Are they adequately compensated for their labor and contribution to society?

India has been striving to achieve Sustainable Development Goal (SDG)6 — ensuring clean water and sanitation for all. However, this pursuit often comes at the expense of SDG3 — health and SDG8 — decent work and livelihood, particularly for the workers themselves.

At Urban Management Centre, we have been working passionately in the urban sanitation space and with the people engaged to clean sewer lines, desludge our septic tanks, clean open drains that are also overflowing with water from the toilets, clean community and public toilets and manage STPs and FSTPs and our work has unveiled the intricate layers of this profound problem. It's a convergence of issues related to sanitation infrastructure, enforcement, contract management, and deeply rooted caste-based prejudices.

Our efforts began by enabling convergence between the Swachh Bharat Mission (SBM) and the National Urban Livelihoods Mission (NULM). We've supported the formation of Self-Help Groups (SHGs) among sanitation workers, facilitating direct procurement by Urban Local Bodies (ULBs) and the establishment of their enterprises. The SHG platform offers the dual advantage of simplified procurement for ULBs and an avenue to integrate social and financial entitlements.

We have furthered this work through institutional support to several governments in implementing a comprehensive program to achieve occupational safety for all sanitation workers, alongside institutionalised social security for anyone performing hazardous sanitation work.

Acknowledging the commendable steps taken by the Government of India and several state governments, we are extremely grateful to have gotten the opportunity to partner with the Government of Odisha, the Government of Tamil Nadu and with the Ministry of Social Justice and Empowerment (MoSJE) in their endeavors towards setting these centuries of injustice right. We are also very thankful to our funders Ms. Madhu Krishna, Mr. Rohan Raj Shrestha and Ms. Sakshi Gudwani, from the Bill and Melinda Gates Foundation to support us in this journey.

This publication serves as a consolidation of our experiences, learnings, collaterals, and digital tools. Our intent is to provide decision-makers with valuable insights to ensure the safety of sanitation workers within their jurisdictions.

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1 | Situation of sanitation workers and the legal framework for their safety in India

The plight of sanitation workers in India, rooted in centuries of social ostracization and stigmatization, highlights the persistent challenges embedded in their circumstances. While they face risks and hazards on a regular basis in their work environment, almost little or no protective equipment is provided to them resulting in regular accidents leading to injuries and loss of life. Although sanitation workers contribute to the local economy, public health and safety, and environmental sustainability, they bear multiple stigma of offensive and unclean work, low wages, low social status, deplorable living conditions, and scant support from society.



Photo courtesy: Ravi Choudhary

In conjunction with Article 17 of the Indian constitution which states that “untouchability” is abolished and its practices in any form is forbidden, manual scavenging still remains a bleak reality. To eradicate this issue, the Government of India (GOI) introduced acts such as the Civil Rights Act, 1955, and the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993. However, sanitation workers continued to engage in unsafe,

undignified hazardous cleaning even after 2 decades of such acts coming into play. Recognizing this ongoing issue, the Prohibition of Employment of Manual Scavengers and their Rehabilitation Act, 2013 (PEMSR Act, 2013) was enacted that bans engagement of sanitation workers as manual scavengers across the country and focuses on rehabilitation of manual scavengers and their families. For this purpose, the Act laid down guidelines for conducting surveys to identify manual scavengers and initiating rehabilitation for the workers identified as manual scavengers. Under the Act, the identified manual scavengers are to be given one-time cash assistance, identification card, livelihood skill training, loan subsidy for alternate livelihood, residential plot/ house/ financial assistance to construct a house, scholarship for their children as per the relevant central or state scheme and legal and programmatic assistance. The Act also lays down an institutional framework with roles and responsibilities of various implementing authorities and penalties in case a worker is involved in scavenging.

Owing to the taboo and stigma around sanitation work, the number of sanitation workers in India is also unknown. The Socio Economic Caste Census data of the 2011 Census shows close to 18,80,657 workers engaged in sanitation work, while the survey that was



Photo courtesy: Ravi Choudhary

conducted by the Ministry of Social Justice and Empowerment in 2018 identified 63,246 manual scavengers across 17 states and 172 districts of India. Since then, there have been no surveys to indicate how many sanitation workers are there in the country.

City governments were mandated to comply with this Act; however, most of the cities could not meet the requirements due to a lack of detailed guidelines and actionable measures for government departments. In 2013, the Ahmedabad Municipal Corporation (AMC) confronted this challenging issue and sought the guidance of the Urban Management Centre. UMC drafted a meticulous action plan after conducting a detailed survey and gaining a comprehensive understanding of the challenges from a systemic perspective on behalf of the AMC. Additionally, the AMC collaborated with local vendors to develop indigenous machines specifically designed for cleaning sewerage lines and septic tanks. Since then, this has become a basis for many other studies in the country.

The Government of India (GoI) launched its National Urban Sanitation Policy (NUSP) in November 2008 with the goal of making India “community driven, totally sanitized, healthy and



liveable cities and towns.” The policy advocates that all cities would become open defecation (OD) free, all human waste and liquid wastes will be collected and safely treated and adequate resources will be available for the operation and maintenance of the sanitation facilities.

MoHUA, Government of India (GoI) launched the Swachh Bharat Mission in 2014 on a war footing to rid India of open defecation.



Subsequently, the Atal Mission for Rejuvenation and Urban Transformations (AMRUT) program supports cities to develop systems for wastewater management. Over the past few years, with increased funding and support in sanitation, many newer forms of sanitation infrastructure have proliferated. Cleaning and maintaining this sanitation infrastructure involves unsafe sanitation work and often manual scavenging. Indian cities will continue to require an army of skilled human resources across the sanitation value chain – including cleaning septic tanks, toilet pits, drains and sewerage systems, and in cleaning railway

“ While SBM 1.0 focused on ensuring access to toilets for all; the focus of the SBM 2.0 will be on sustaining the sanitation and solid waste management outcomes including used water management.”

tracks and other open defecation spots where sanitation workers directly interface with faecal matter. Sanitation related work is mostly caste-based, and cleaners are often from disenfranchised communities.

In 2018, a report brought out that there are 5 million sanitation workers across the country, out of which about 2 million are engaged in urban India, but this large workforce remains “invisible”. Nearly 2 million of these workers are engaged in “high risk” sanitation work (Dalberg, May, 2021).

Sanitation work crucial for achieving Sustainable Development Goal (SDG) 6 - clean water and sanitation for all, poses significant hazards like toxic gas exposure and contact with faecal matter. The informal nature of the profession compromises on SDG 3 – health and wellbeing and SDG 8 – decent work and economic growth.

The key challenges and barriers towards ensuring safety and dignity of sanitation workers are:



Sanitation Workers in India - An urgent call for action, report by Dalberg, May 2021

It was in this background that the Government of Odisha recognizing the imminent need to ensure the safety and dignity of Core Sanitation Workers (CSWs), launched the Garima Scheme in September 2020 in collaboration with the Urban Management Centre's technical support, and support from the Bill & Melinda Gates Foundation.

Similarly, the Government of Tamil Nadu realizing the need to conform with the PEMSR Act, 2013, initiated designing a state scheme in 2021, and approached the Urban Management Centre to provide technical support. The State eventually launched the Sanitation Workers Development Scheme in December 2022.

The Ministry of Social Justice and Empowerment (MoSJE) of the Government of India is the nodal agency to implement the provisions of the Act. The National Safai Karamcharis Finance Development Corporation (NSKFDC) was set up as a Section 25 Company as a wholly owned Government Undertaking under the aegis of Ministry of Social Justice & Empowerment in 1997. NSKFDC was set up for the socio-economic development of Safai Karamcharis and their dependents through its various schemes including the Self Employment Scheme for Rehabilitation of Manual Scavengers (SRMS). In 2023, MoSJE formulated a scheme called National Action for Mechanised Sanitation Ecosystem (NAMASTE). All existing components of SRMS have been kept as components of the NAMASTE scheme. This is a convergent scheme with the Ministry of Housing and Urban Affairs (MoHUA). UMC continues to support the implementation and convergence of this scheme through the financial support of the Bill and Melinda Gates Foundation.

2 | Ensuring dignity: transformative actions for sanitation workers' safety at city, state and national levels

Ahmedabad, the largest municipal corporation of the state of Gujarat and the seventh largest city of India, is amongst the first few cities to have implemented a city-wide underground drainage system. As of December 2012, 85% of the city's area was covered by the sewage network, whereas 90% of the residential properties in AMC had access to the city's sewer network.

The Ahmedabad Municipal Corporation (AMC) had several machines and devices for the maintenance of this vast sewer network ranging from tempo mounted jetting machines, super sucker machines, high flow jetting machines, jetting cum suction machines, power rodding machines. Despite these equipment, manual cleaning of manholes was reported by the media.

AMC had also developed an indigenous machine to mechanically lift human and animal manure from roads.



Manure lifting machine developed by AMC

AMC also undertook several efforts targeted towards sanitation with a focus on slums and other disadvantaged communities. It conducted a slum survey (in 1976) identifying more than 82,000 huts in 1200 slum pockets and provided each family with a card, making them eligible to receive individual services. During the early 1980s, AMC introduced a 'Toilet Scheme' to provide individual toilets to poor households with 80:20 ratio of funding by AMC and the beneficiaries, later modified to 90:10. In 1996, AMC introduced the 'Slum Networking Program' (SNP) to provide land tenure and individual water-sanitation facilities to slum households. In 2001, AMC conducted a fresh slum survey and introduced the NOC-500 scheme to provide individual water-sanitation facilities. Under the Nirmal Gujarat Sanitation Program (NGSP) of the Government of Gujarat, AMC constructed individual toilets in the city (Mehta & Mehta, 2011).

In 2010, Honourable Gujarat High Court passed an oral order to conduct a survey for finding practice of manual scavenging in the city. In 2011, AMC initiated preparation of the City Sanitation Plan (CSP) for Ahmedabad. AMC conducted a technical audit of around 1600 public conveniences in Ahmedabad in 2012. They also prepared Solid Waste Management (SWM) master plan to achieve zero waste, Information-Education-Communication (IEC) campaign for SWM, road map for zero waste in partnership with United Nations Centre for Regional Development (UNCRD) and public health bye-laws.

The action plan identified vulnerable areas where manual scavenging could occur and identified the issues for each vulnerable area. The action plan then provided preventive strategies and action points to AMC to address the issues and in turn, would prevent any violation of the Act. The recommendations included improvements in process and operating procedures, infrastructure and equipment provision, training and capacity building of sanitation workers, and methods to strengthen AMC's monitoring of sanitation activities. The action plan also provided a block cost budget to AMC for one-time investment and a recurring annual cost to sustain the initiative.

Mehta, M., & Mehta, D. (2011). Reaching the poor: Slum Networking Project in Ahmedabad, India. World Water Week in Stockholm. Stockholm: Stockholm International Water Institute.

Odisha brings out the Garima Scheme, 2020

In 2011, Odisha became the first state in India to notify an urban sanitation policy and strategy, to strengthen the vision of transforming urban areas into sanitized, safe, and healthy settlements through community-driven processes managed by the Urban Local Bodies (ULBs). This policy underwent a revision in 2017, evolving into the Odisha Urban Sanitation Policy (OUSP), broadening its focus beyond Solid Waste Management (SWM) and networked sewer systems.

Since 2021, the Government of Odisha has increasingly focused on City-Wide Inclusive Sanitation (CWIS) and gender transformative outcomes, prompting a revision of the Odisha Sanitation Policy to reflect the inclusive approaches already adopted in the sanitation interventions as well as to incorporate explicitly an inclusive lens into its policy framework.

The Government of Odisha recognized the need to transform the plight of the sanitation workers and to correct the generational injustice done to them. The Garima scheme envisions **“zero fatalities of sanitation workers and creation of an accident-free work environment for sanitation work in urban Odisha whilst creating an enabling environment to ensure their safety and dignity in Odisha”**. The term Garima means dignity in Odia and Hindi. The scheme was introduced by the H&UDD, Government of Odisha, under the 5T Governance framework (Transportation, Technology, Teamwork, Time, and Transformation).



Hon'ble Chief Minister of Odisha, Shri Naveen Patnaik launched the Garima scheme with senior government official in September 2020 amidst Covid 19

To develop the contours of the scheme, H&UDD formed an advisory committee which included national activist Mr. Bezwada Wilson, convener of Safai Karamchari Andolan (SKA) and Jan Sahas – a community and survivor-centric nonprofit organization, representatives from ULBs, and with Manvita Baradi, Meghna Malhotra - sector experts from the Urban Management Centre (UMC), Bill & Melinda Gates Foundation and other sanitation experts. After several rounds of discussion, the components of the Garima scheme were finalized.



Shri G Mathi Vathanan (IAS), Principal Secretary, H&UDD, Govt. of Odisha signing an MOU with UMC

The scheme was eventually launched by the Hon'ble Chief Minister of Odisha, Shri Naveen Patnaik, in September 2020. The scheme is being implemented in all 115 Urban Local Bodies (ULBs) of the state. A dedicated corpus fund initially with Rs. 50 crore has been assigned to extend financial support for implementation of the scheme.

The components of this scheme are categorized into three main areas

1. Technical modalities which address ensuring safe service delivery; setting up Emergency Response Sanitation Units (ERSU); provision for Personal Protective Equipment (PPE) & safety devices.
2. Service Benefits which ensure assured minimum wages; risk & hardship allowance; health and life insurance;

reduced working hours; health and safety, issuance of caste certificates; post service and retirement benefits

3. Social Security Benefits which assures pucca houses; mobility support; mobile phones; education of children, empowerment of women family members; livelihood opportunities

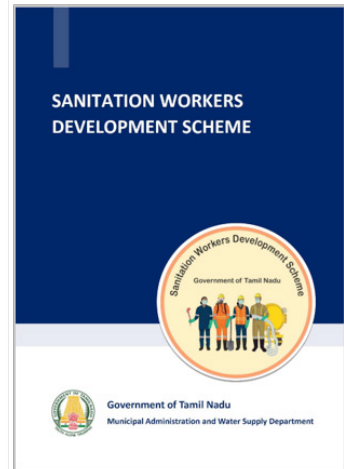


Sanitation Workers' Development Scheme of Tamil Nadu, 2022

Tamil Nadu is the most urbanized state of the country with 48.45 % of population residing in its 649 urban local bodies (as per Census 2011). Being a large state, and organically developed cities, a predominant proportion of urban households still depend on on-site sanitation systems (septic tanks). Based on the learnings from the Garima scheme, the Government of Tamil Nadu (GoTN) took initiative for safety and dignity of sanitation workers and sought support from the Urban Management Centre (UMC).

In April 2022, the GoTN also acknowledged this challenge and expressed willingness to take action to ensure the safety of the Core Sanitation Workers (CSWs) in the state's budget assembly.

The Honorable Chief Minister of Tamil Nadu, Shri MK Stalin, launched the Sanitation Workers Development Scheme (SWDS) on 9th December 2022 for safety and dignity of formal and informal sanitation workers engaged in core sanitation services in urban areas of Tamil Nadu.



Hon'ble Chief Minister of Tamil Nadu, Shri MK Stalin, with Shri Shiv Das Meena (IAS) Principal Secretary MAWS launched the SWDS scheme in December 2022

“UMC continues to support the Govt of TN to implement the Scheme”

SWDS is being implemented by the Municipal Administration and Water Supply (MAWS) department through the 649 Urban Local Bodies (ULBs) of Tamil Nadu. The scheme's primary focus is to create and regulate safe working conditions with respect to the following types of core sanitation jobs:

1. Desludging of onsite sanitation systems
2. Maintenance of sewerage network
3. Operation and Maintenance (O&M) of Sewage Treatment Plants/ Faecal Sludge Treatment Plants
4. O&M of institutional, public and community toilets
5. Cleaning of open drains



National Action for Mechanised Sanitation Ecosystem (NAMASTE), 2023

The Ministry of Social Justice and Empowerment is the nodal agency for implementation of the PEMSR Act of 2013, and has been taking concerted efforts through identification of workers, providing them one-time cash assistance, linking them with skilling programs and providing them access to credit.

The National Safai Karamcharis Finance & Development Corporation (NSKFDC) was set up as a Section 25 Company under the Ministry of Social Justice & Empowerment (MoSJE) in 1997 and is the designated nodal agency for implementation of the Central Sector Self Employment Scheme for Rehabilitation of Manual Scavengers (SRMS).

The existing components of SRMS have been kept as components of the NAMASTE Scheme. This is a convergent scheme with the Ministry of Housing and Urban Affairs (MoHUA) and focuses on two job roles: workers engaged in operation and maintenance of sewer lines, and in desludging of septic tanks.

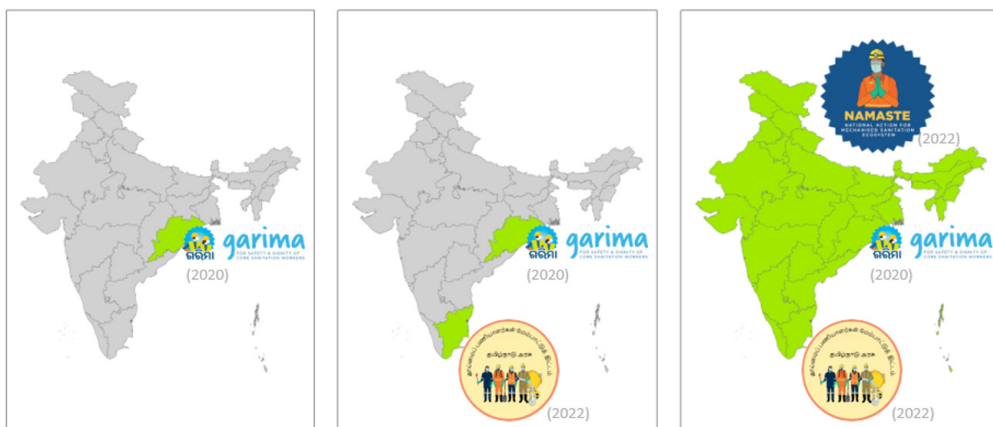
In August 2022, UMC signed a MoU with the National Safai Karamcharis Finance and Development Corporation (NSKFDC) - nodal department of the MoSJE to implement the NAMASTE scheme, to provide them the technical support for implementing the scheme in urban India.



The main features of the scheme to be implemented in all ULBs across India are:-

1. Identification: NAMASTE envisages identifying the Sewer/Septic Tank Workers (SSWs).
2. Occupational training and distribution of PPE kits to workers.
3. Assistance for procuring safety devices to Emergency Sanitation Response Units (ESRUs).
4. Extending health insurance scheme benefits to identified SSWs and their families under the Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (AB-PMJAY).
5. Livelihood assistance: Promote mechanization and enterprise development by providing funding support and subsidy (capital +interest) to sanitation workers in order to procure sanitation-related equipments.

Scaling up of safety initiatives across the country



Supporting Enumeration of Workers | 3

The foundational element for implementing any welfare measures for sanitation workers is to bring visibility to the workforce, entailing the identification and enumeration of individuals engaged in various job roles. While national, state, and local governments have undertaken initiatives to compile lists of sanitation workers, these efforts have often been fragmented. For example, the national survey of manual scavengers in 2018 yielded a list of 54,130 workers, but was conducted in only 17 states and approximately 172 districts across the country. Similarly, the Shehri Safai Mitra Surakshit Sheher initiative in 2021, which is part of the Swachh Bharat Mission (Urban), has led each Urban Local Body (ULB) to gather lists of sanitation workers. Yet, informal workers involved in urban sanitation have often been neglected and remain unrecorded in official documentation.

Hazardous sanitation work happens in these areas.

1. Desludging of onsite sanitation systems
2. Maintenance of sewerage network
3. Cleaning of open drains
4. Operation and Maintenance (O&M) of Sewage Treatment Plants/ Faecal Sludge Treatment Plants
5. O&M of institutional, public and community toilets



Identifying workers involved in any of the five job roles, whether through formal or informal means, is a crucial initial step. While formal workers directly engaged by Urban Local Bodies (ULB) or parastatals, as well as those employed through contractors, could be accounted for through camps at ULB offices, the challenge remains of enumerating informal workers, who often remained unseen. To address this, a comprehensive survey of workers at their residences should be done.

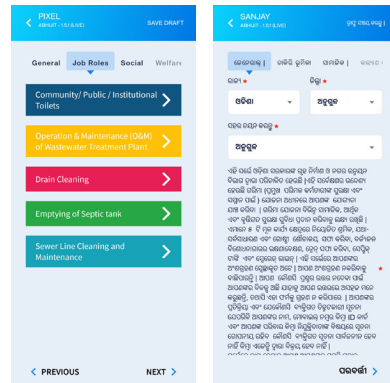
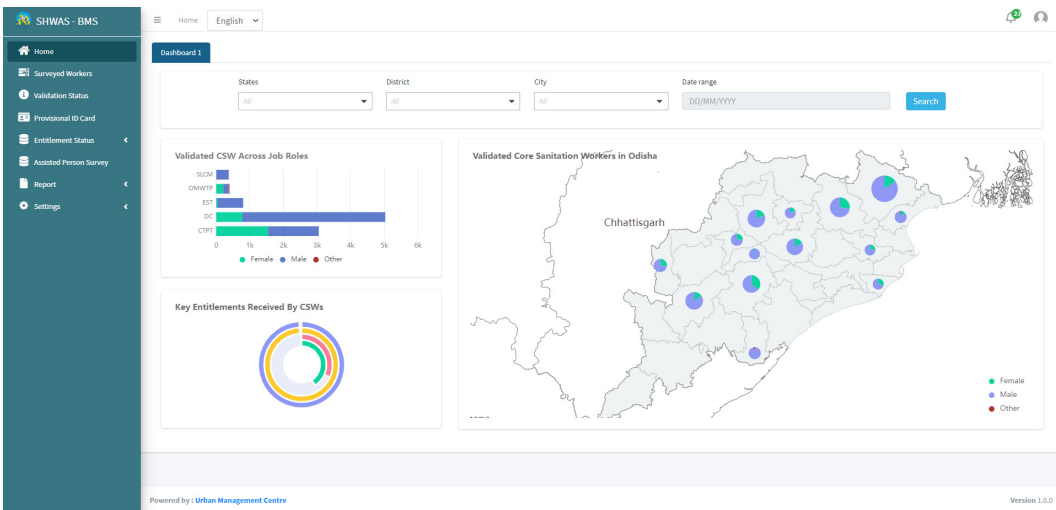
The uncertainty in the number of workers, especially de-sludgers and absence of required data impedes enforcement and monitoring by local governments. To address the challenges in acquiring data of the workers and monitor the practices adopted by their employers, the Urban Management Centre developed SHWAS (Breath- in Sanskrit). The SHWAS portal comprises Beneficiary Management System (BMS) and Employer Management System (EMS). To simplify and streamline the reporting and monitoring process for employers and local governments, the platform has been developed through an iterative process of stakeholder consultations including state government, parastatal agencies and contractors. Both ULB officials and contractors appreciated the EMS as it will help streamline recording attendance and making wage payments to sanitation workers.

Read more about SHWAS:
<https://bit.ly/SHWAS>



SHWAS is being used by the Government of Odisha under the *Garima* scheme and by the Government of Tamil Nadu under Sanitation Workers Development Scheme (SWDS) and under the NAMASTE scheme for facilitating recognition of sanitation workers and their access to social and financial security.

BMS consists of a mobile application and a web portal for easy enumeration of sanitation workers. Using BMS application, the states have surveyed more than 22,000 workers including de-sludgers, collecting vital information like contact details, work-related details, linkage to existing entitlements etc. The range of data collected can be analyzed through real-time dashboards on the BMS web portal. For instance, many workers have been linked to a Ration Card for subsidized food and to the Biju Swasthya Kalyan Yojana—a Government of Odisha’s health insurance scheme covering the cost of medical treatment of workers and their families.



The survey tool is comprehensive and covers details across:

1. socio-economic profile of the workers
2. job-related details that capture the nature of engagement (formal or informal); income
3. linkages with existing social and financial schemes
4. details of other family members (since sanitation work is intergenerational and it is important to capture details of their spouse and children)

The survey process is broadly divided into the following components:

1. survey
2. error flagging and quality checking
3. validation
4. provision of unique ID



Development of Digital tool- Employer Management System (EMS)

A digital tool, Employer Management System (EMS) to enable ULBs and parastatals ensuring that all employers fulfil their responsibilities towards ensuring safety of sanitation workers is developed by the UMC. The EMS allows to:

1. Ensure accountability and transparency in counting days of work for CSWs.
2. Simplify the process for ULBs and RSA to empanel PSSOs
3. Collect relevant information from employers to ensure compliance with the Garima scheme
4. Make the compliance process streamlined, transparent and simple for contractors, workers and the government
5. Ensure convergence across the sanitation value chain for sanitation workers safety

The EMS has provision for registration and empanelment of all employers; tracking attendance of CSWs; enabling payment to CSWs through EMS for monitoring compliance to wage norms, risk and hardship allowance; tracking of provision of PPE and training of CSWs. The attendance feature of EMS is uniquely designed to capture the number of days CSWs perform their jobs, including half days. The attendance captured is used to automatically calculate the minimum wages, and risk & hardship allowance the CSW is eligible to receive. EMS has a feature to enable digital payment of wages directly. This will enable ULBs to monitor that all CSWs receive minimum wages and they are not exploited or underpaid by their employers.

The EMS has been tested with PSSOs of five cities in Odisha and UCO Bank is the preferred partner. The PSSOs see benefit in using the EMS and have demanded to add other features like payroll system to enable them to further use the EMS for providing other entitlements to CSWs.

To ensure enforcement of the PEMSAR Act, it becomes important to track the information of their employer as well. The EMS serves as a platform for employers to list all the sanitation workers engaged with machines and available devices. EMS has a provision to track attendance and make wage payments digitally. It also enables ULBs to monitor whether employers adhere to legislations, by capturing employers reporting on provision of PPE, training, PF, ESI etc.



Under the Garima scheme, the H&UDD, Govt. of Odisha, a survey methodology was piloted in six cities and then was scaled up across all the remaining 109 urban local bodies. Upon completing surveys in a settlement, closure meetings were held with the communities to update them and seek their assistance in reaching out to any workers inadvertently omitted from the survey. The digital survey tool incorporates a snowballing methodology to ensure comprehensive coverage.

H&UDD provided Garima ID cards to all validated workers. These IDs hold paramount importance for workers as it confers upon them a formal government-recognized identity, rendering them eligible for a range of entitlements under the Garima scheme. To facilitate this process, Garima camps were systematically organized across Urban Local Bodies (ULBs).

These camps served as comprehensive hubs for gathering additional information crucial for linking sanitation workers and their family members to various entitlements. Aadhaar kiosks were established to assist workers in updating their Aadhaar IDs, bank kiosks were set up to facilitate the opening of bank accounts for workers, and a dedicated health kiosk was established to record the blood groups of the workers. These initiatives aimed to enhance the overall accessibility and inclusivity of the Garima scheme by providing essential services and information to the sanitation workforce.

The H&UDD has now also established systems to ensure that this enumeration remains dynamic and covers the new incoming workforce.

Similarly, in Tamil Nadu, the state government initially piloted the enumeration in five cities (Chennai, Pudukottai, Madurai, Pollachi and Cheranamahadevi) and this has now been scaled up across all the remaining 644 urban local bodies of the state.

In both Odisha and Tamil Nadu, members of self help groups have been trained to use the digital application and are being engaged to go from settlement to settlement and survey sanitation workers.

Under the NAMASTE scheme that aims to survey two job roles across the 4800 urban local bodies of India, city level teams have been trained to use this digital application to survey workers in a camp mode. Nationally the tool is being used to survey around 1 lakh Sewer and Septic Tank Workers (SSWs) in 4800+ cities.



4 | Supporting Occupational Safety

Ensuring access to appropriate and adequate PPE and safety devices

Ensuring the safety of sanitation workers is imperative due to the inherent risks associated with their tasks, which include exposure to biohazards, sharp objects, toxic chemicals, and physical hazards. Personal Protective Equipment (PPE) plays a vital role in safeguarding these workers. Essential items like gloves, masks, goggles, and coveralls provide a protective barrier against direct contact with pathogens and chemicals, mitigating the risk of infections and respiratory issues. Additionally, safety devices such as helmets and reflective vests enhance visibility and protect against head injuries and accidents, especially when working on busy streets. Well-equipped sanitation workers not only safeguard their own health but also contribute to the cleanliness and hygiene of our communities while minimizing occupational hazards.



To optimize the effectiveness of PPE, the Urban Management Centre with support from the H&UDD, Govt. of Odisha, conducted a rapid assessment study, seeking feedback from sanitation workers on a sample kit tailored to their specific job requirements. This study delved into ergonomic considerations such as sweating, fitting, and ease of movement during tasks. It also focused on human-centric and gender-inclusive PPE design, maintenance, and the level of protection offered against various risks and hazards leading to physical injuries. Insights gathered from this study were used to provide valuable feedback to manufacturers for ongoing improvements.

There is a need for every state to bring out clear advisories specifying PPE requirements for different job roles, including standards and frequency of provision.

In Odisha, the Housing & Urban Development Department (H&UDD) issued advisory for its urban local bodies specifying the PPE and its specifications. The state has facilitated design of a standardized uniform for Garima Sanitation Workers and supervisors. Working with PPE manufacturers, the design was modified and uniforms were procured for workers.

The State has empaneled regional vendors for supplying PPE, and a standardized procurement mechanism has been implemented to ensure quality and standardization. The H&UDD regularly monitors PPE usage through WhatsApp groups, with geotagged photos and updates on cleaning activities provided by the Responsible Sanitation Authorities of respective cities. This comprehensive approach aims to ensure the continuous improvement of safety measures for sanitation workers.



Assessment of Vehicles and Equipment used in Operations and Maintenance of Sanitation Systems

Cities in India have been increasingly procuring machines for the cleaning of drains, sewer lines, and septic tanks – to adhere to the PEMS Act, 2013, and modernize the operation and maintenance (O&M) of India's sanitation infrastructure. However, due to the vast differences in topological conditions, age, and design of sanitation systems, as well as the varying capacity of operators, the effectiveness of mechanized cleaning of sanitation systems often falls short of expectations. This can be attributed largely to the choice of vehicles and equipment used for addressing the problems.

UMC with technical support from Saniverse conducted an assessment study to determine the scope of upgrading mechanical cleaning operations to ensure safety in sanitation systems where some amount of manual intervention may still be needed.



UMC assessed the machines used in cleaning sewer lines, septic tanks, and open drains. The team observed the cleaning operations in progress to assess the effectiveness and challenges of using the machines and equipment, and interacted with the workers operating the machines, their supervisors (either private contractors or officials from the ULB/ parastatal agencies) and senior officials from the ULB and parastatal agencies involved in procurement of the machines to conduct semi-structured interviews.

This study concluded with preparation of a decision matrix that ULBs and other decision makers could use to aid in deciding which machine to procure to solve their sanitation O&M problems.

Institutionalization of safe cleaning of sewer lines and septic tanks

Realizing that there are extreme situations when a sewer or septic tank gets blocked and in situations where machines are rendered inaccessible due to narrow road widths or where mechanical cleaning are not able to solve the problem of blockages, the Ministry of Housing & Urban Affairs (MoHUA) issued guidelines to establish Emergency Sanitation Response Units (ERSUs) through an advisory in 2019. The ERSUs will ensure provision of professional, well trained, motivated and appropriately equipped workforce for the maintenance and management of sewers and septic tanks, thereby eliminating the deaths caused by entry of workers into sewers and septic tanks without proper PPE &



training, and nonadherence to security protocols.

The MoHUA advisory also mentioned setting up of a helpline number to request desludging services. In Odisha, toll free no. 14420 has been set up in each ERSU and the 14420 operators of the pilot cities have been trained to accept the calls, document the requests and coordinate with the duty supervisors to enable provision of safe desludging services.

In Odisha, the Housing & Urban Development Department (H&UDD) adapted the ERSU guidelines to the Odisha context, developed a SOP and issued it to all 115 ULBs of the state. The SOP laid down operational guidelines for ERSU; laying stress on issuing “Command Certificates” from duty supervisor to Private Service Sanitation Organizations (PSSOs) for permitting mechanical cleaning or undertaking hazard assessment and getting written permission from the Responsible Sanitation Authority to perform any manual cleaning of septic tanks and sewer lines. Organizations and agencies were delegated responsibilities as the Responsible Sanitation Authority in various urban areas for establishing ERSU and to avoid overlap.



Supporting Systemic Skilling and Training of Sanitation Workforce | 5

A majority of sanitation workers operate with little to no formal training on the occupational risks of their work. They work largely on traditional practices rather than experiencing new technologies.

Even the training that is imparted does not stress on practical training and demonstration as a methodology. There is a lack of a training ecosystem with focus on hands-on training of all stakeholders.

Integration of Sanitation based Skilling Programs with the National Skilling Ecosystem

The Sector Skill Council for Green Jobs (SCGJ) established under the National Skill Development Corporation (NSDC) is mandated to identify skilling needs of service users as well as manufacturers/ service providers, within green businesses sector including sanitation, and implement nation-wide, industry-led, collaborative skills development & entrepreneur development initiatives that will enable meet India's potential for "Green Businesses".

In 2018-19, UMC conducted a comprehensive skill assessment study in the sanitation sector including a focused skill gap study for the FSSM sector. This skill gap study aimed to achieve standardization in the skill trainings conducted in the FSSM sector and to overcome the demand-supply skill gap in terms of numbers of estimated human resources and required skills. UMC developed three Qualification Packs (QP)/National Occupational Standards (NOS) which were approved by National Skill Qualification Committee (NSQC) in 2019 for the National Skill Qualification Framework (NSQF) as mentioned below:

Qualifications Pack (QPs) comprises a set of Occupational Standards (OS), together with the educational, training and other criteria required to perform a job role. However, OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently.

Read more about-

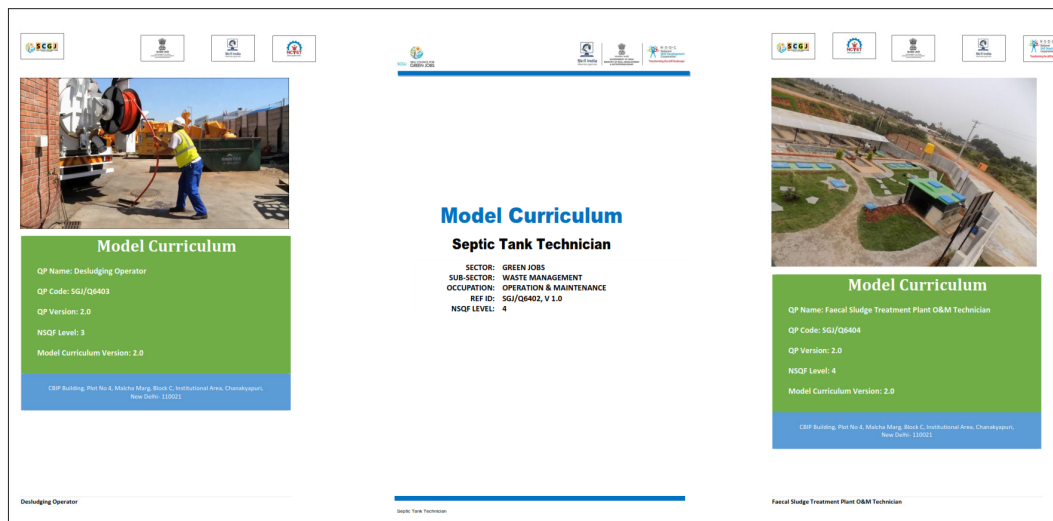
STT: <https://www.nqr.gov.in/qualifications/913>

DSO: <https://www.nqr.gov.in/qualifications/3644>

FSTP O&M: <https://www.nqr.gov.in/qualifications/3815>

1. Septic Tank Technician (STT) - SGJ/Q6402
2. Desludging Operator (DSO) - SGJ/Q6403
3. Fecal Sludge Treatment Plant Operator and Maintenance (FSTP O&M) Technician - SGJ/Q6404

Post the preparation of these QPs, UMC also prepared a detailed model curriculum, training material and participant guidebooks for all the three QPs .



Access to SEP training module: <https://umcasia.org/wp-content/uploads/1-Training-module-for-Sewer-Entry-Professionals.pdf>

Similarly, UMC is supporting the creation of participant handbooks for the Sewer Entry Professionals.

Creation of Training Pedagogy and training modules for sanitation workers

UMC has developed a comprehensive training module in compliance with the PEMSR Act and the ERSU advisory based on the following principles:

1. Facility-based: Training at a dedicated regional facility, to provide a comfortable learning environment.
2. Competency-focused: Succinct content delivery in regional language to enhance knowledge, with live demonstrations, simulations, and new skills.
3. Inspired Training Infrastructure: Infrastructure consisting of a model maintenance hole and septic

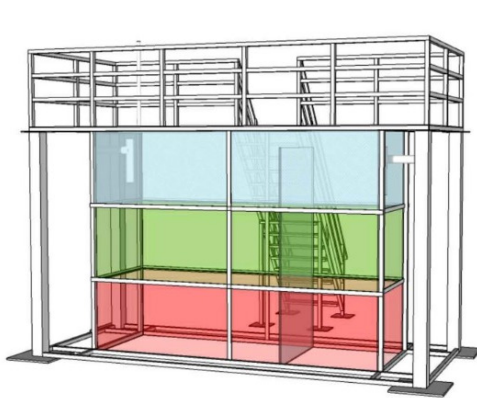
tank in training centres; safety devices and gear such as gas monitor, full bodysuit, etc. and machines like cesspool vehicle.

4. Simulation and Case-based Learning: Emphasis on hands-on simulation, case studies, and interactive game-based exercises.
5. Practical Assessment: Pictorial, verbal and practical assessments designed to gauge understanding of trainees.
6. Certification: Certification to trainees with desired knowledge and skill levels enabling their formal employment and ensure job performance as per standards.

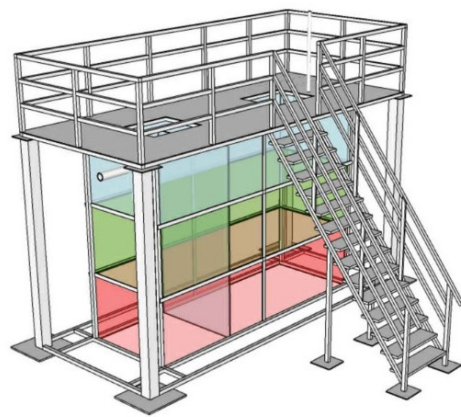
The training includes construction of simulation models of a manhole and a septic tank for providing practical demonstration to all training participants, enabling them to practice and experience the use of PPE and various safety devices that should be used while working in the field.



A Simulation Septic Tank in Chennai used for training workers, Photo courtesy: CM WSSB, Govt. of Tamil Nadu

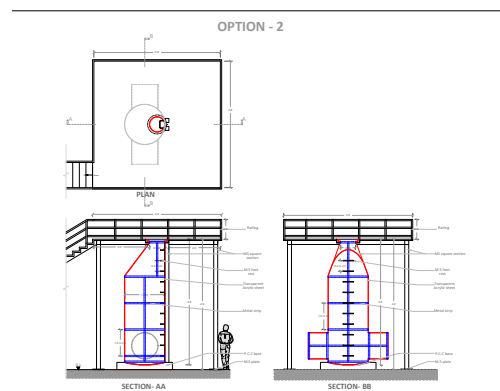
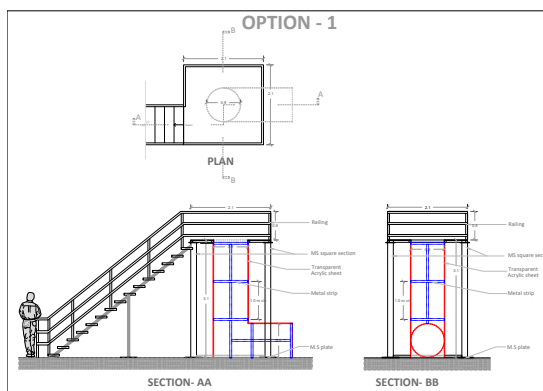


View from the front of the simulation tank



View from the rear of the simulation tank

View of simulation design of septic tank (for training and demo purpose only)



View of simulation design of maintenance hole

In addition, the Odisha Urban Academy (OUA), which has been set up by Govt. of Odisha under the Housing and Urban Development Department as a pioneering training and capacity building institution in the field of water and wastewater sectors is imparting trainings to all stakeholders required to implement the NAMASTE Scheme. Simulation models of maintenance holes and septic tanks are utilized for practical demonstration of the use of evacuation and safety devices and to measure gases etc. Apart from Bhubaneswar, the Government of Odisha has established two more such regional training centers, all of these have the requisite PPE and safety devices as well.

Leverage SHGs to create livelihoods | 6 in urban sanitation

Since 2013, the National Urban Livelihoods Mission (NULM)—a flagship mission of the Ministry of Housing and Urban Affairs (MoHUA)—has been federating groups of urban poor women into self-help groups (SHGs) and creating opportunities that provide them access to skill building, livelihood opportunities, and affordable credit.

For SBM, the challenge was finding adequately skilled operators or individuals who could maintain toilets. Without them the investments made to promote behaviour change actions that encourage toilet use were proving futile. NULM, on the other hand, was keen to explore alternate livelihood opportunities for its communities. Meanwhile, sanitation work continued to be high-risk, low-income, and caste-based.

To leverage these programmes to support each other, and to encourage inclusivity, community ownership, and participation in the urban sanitation life cycle, the MoHUA introduced the NULM-SBM Convergence Guidelines in 2018. Urban Management Center (UMC), where we work, collaborates closely with MoHUA as their Technical Support Unit, and was involved in conceptualising these guidelines.



The guidelines aim to provide realistic and actionable targets for Urban Local Bodies (ULBs) that are backed by regular support and guidance from the mission management units of both programmes. For example, under NULM, cities were advised that 10 percent of their SHGs¹ should comprise of sanitation workers and other vulnerable communities. Under the SBM, cities are given marks in the annual Swachh Survekshan (Cleanliness Survey)² to engage SHGs in the operation and maintenance of public and community toilets. The guidelines also elaborated on how to make occupations—such as the recovery of recyclables from waste and the management of composting plants—safe, professional, and formal. These activities were already major deliverables under SBM, and would now lead directly to livelihoods within NULM—a win-win for both. By using community-based platforms such as SHGs, ULBs can gain the advantages that come with outsourcing daily operations, while SHG members are empowered financially.

SHGs have demonstrated that, with training and education, they exceed the standards expected of private operators or contractors. As members of the community, they go beyond their contractual responsibilities and have become champions of Open Defecation Free (ODF) cities.

The Housing & Urban Development Department (H&UDD), Government of Odisha is pioneering the Community Partnership Model that is the core of Odisha's decentralised, inclusive urban governance. Mission Shakti self-help groups are empowered with knowledge, skill, and agency to lead urban transformation. They are the partners of change managing operation and maintenance of sanitation facilities and civic infrastructures, which is a paradigm shift in urban development, ensuring the last mile connect in service delivery.

Urban Management Centre as a Technical Support Unit to the H&UDD has been supporting capacity building of these SHGs as well as other stakeholders in the ecosystem.

Ensuring wellbeing | 7

Sanitation workers face numerous occupational health hazards, manifesting in various reported physical and medical conditions directly linked to their line of work. These include headaches, dizziness, fatigue, asthma, gastroenteritis, cholera, hepatitis, typhoid, eye and skin burns, as well as other skin irritations. Additionally, sanitation workers are susceptible to musculoskeletal disorders, contributing to issues such as back pain, wounds, cuts, trauma, and, tragically, even fatalities. The gravity of these occupational hazards is exacerbated by the living conditions of sanitation workers, characterized by inadequate access to Water, Sanitation, and Hygiene (WASH) facilities and poor access to nutritional food.

In order to ensure that all core sanitation workers undergo health check ups regularly, the urban local bodies need to converge with health departments. UMC developed a SOP based on the CPHEEO advisory of the ERSU (Emergency Response Sanitation Unit). The guidelines clearly map out the fitness tests Sewer Entry Professionals (SEPs) have to go through for being fit for manual entry. They map out health issues such as high blood pressure, claustrophobia, Asthma and limited joint movement which are undesirable for a candidate to carry out manual entries in high pressure environments. The following is the table for type of the disease and frequency in which the consultations and check ups need to happen.

In Odisha, the Urban Department issued guidelines for the Health Department to conduct half-yearly health camps for sanitation workers. A Standard Operating Procedure (SOP) was issued which mapped out the Diseases/ Specialists and tests that need to be carried out under the NIDAAN scheme. A detailed list with frequency of consultations for Grade I and Grade II Core Sanitation Workers (CSWs) was prepared. In the pilot cities, camps were organized in a decentralized manner for full body check-up of CSWs. The workers were tagged to their nearest Primary Health Centres (PHCs). Health files and cards were issued to sanitation workers which were used to attach prescriptions and test reports. These documents would be placed with the National Urban Health Mission (NUHM) team and the ULB to monitor the overall health of sanitation workers. If any worker is detected with major health problems, they are further referred to local government hospitals for a follow up.

These health cards are now enabling the government to keep a track of regular vaccinations and health of the sanitation workers and has also enabled the workers to access their nearest government health centres for seeking health services.



Health camps for Garima Workers in Odisha



Table: Type of disease and Frequency of consultations requirements for Sanitation workers

Sl No	Name of the Diseases	Frequency of Check Up	
		Grade – I CSWs	Grade -II CSWs
1	General Consultation	Quarterly	Quarterly
2	Chronic Skin Disease	Quarterly	NA
3	High Blood Pressure	Quarterly	Quarterly
4	Asthma, bronchitis or a shortness of breath on exertion	Quarterly	Quarterly
5	Deformity or disease of the lower limbs limiting movement	Quarterly	NA
6	Serious defects in eyesight	Quarterly	Quarterly
7	Lack of sense of smell	Quarterly	Quarterly
8	Back pain or joint trouble that would limit mobility in confined spaces	Half - Yearly	Half - Yearly
9	History of heart disease or disorder	Half - Yearly	NA
10	History of fits, blackouts, fainting attacks	Half - Yearly	NA
11	Meniere's disease or disease involving loss of balance	Yearly	NA
12	Deafness	Yearly	Yearly
13	Claustrophobia or nervous or mental disorder	Yearly	Yearly

Core Sanitation Workers (CSWs) deal with hazardous waste in difficult settings including extreme weather conditions and are mandated to wear the prescribed PPE. Initial discussions with sanitation workers revealed that they faced severe challenges due to lack of washrooms to wash themselves after performing their jobs as well as lack of any dedicated space to wash and store their personalized PPE. Furthermore, they cannot even find a decent space to rest between jobs or have a meal. It is important that the ULBs provide such centres or lounges. UMC prepared standardizing the design as well as the Operations & Maintenance (O&M) of these centres for Odisha.

H&UDD issued an advisory to establish such resting centres and called it Garima Grihas, in all ULBs. The Garima Grihas serves as a restroom for the workers consisting of seating spaces, facilities to wash, dry and store PPE, bathing rooms and toilets. As of now, Garima Grihas have been constructed and are being used by CSWs in 5 cities of Odisha.



Ensuring Financial safety | 8

Recognising sanitation workers as highly-skilled workers and ensuring increased wages

Sanitation work, by its nature, is a complex occupation. Septic tank cleaners, and sewer line cleaners often have to enter into confined spaces with low visibility and lack of oxygen to identify and rectify damages to critical infrastructure, or clean the sludge that has been depositing for years, sometimes as long as 15-20 years. The skills and knowledge a sanitation worker needs are highly specialized, even without considering the tremendous hazards they experience while performing their profession. The constant risk of contact with faeces and contaminants, risk of falling or drowning, and inhaling hazardous gases that build up in pipes and tanks – are recognised in almost all other industries as representing a severe threat to life and limb.

It was seen that despite these risks, none of the states in India have recognised this profession as skilled, relegating the workers to receiving minimum wage with no focus on building their capacity through focused training programs. UMC researched the minimum wages provision in all states of India and across various job sectors like mining, construction, sanitation etc. In majority of the states, sanitation work is not included in the scheduled list of employment and even if it is, all types of work dealing with solid and liquid waste are categorized together as unskilled labour, without taking into consideration the skills required to perform the job and the hazards involved. Sanitation workers often also do not receive any support or additional allowances for insurance, healthcare, and counselling, nor do they receive hazard allowances for the high risks they take.

While sanitation is mostly done by state urban development departments; the mandate of modifying the Scheduled Employments rests with the state labour departments.

In Odisha, the H&UDD advocated to the Labour & Employees State Insurance (LESI) Department of the Govt. of Odisha to recognise sanitation work of directly dealing with faecal matter as skilled and highly-skilled job categories under its Scheduled list of

Employment. On 5th July 2021, LESI included sanitation work into the list of Scheduled Employments of the state as a separate item, in accordance with the Minimum Wages Act, 1948. This makes Odisha the first state in India to acknowledge that the work being done by sanitation workers requires specific skills.

Before being recognised as skilled and highly-skilled workers, they were entitled to a minimum wage of Rs. 303/day as unskilled labourers. After the amendment, the minimum daily wage for highly-skilled CSWs was established at Rs. 483/day, and for skilled CSWs Rs. 423/day. Fixing minimum wage ensures financial security for CSWs. Subsequently, the minimum wages were further revised to Rs. 502/day for highly-skilled CSWs and Rs. 442/day for skilled CSWs. Overall, this change in the employment categorization is expected to increase the wages of sanitation workers by around 50%.

The H&UDD also decided to pay a risk and hardship allowance for CSWs engaged in the cleaning of septic tanks and sewers. Recognizing the extreme hazards faced by highly-skilled sanitation workers, the state issued an order to WATCO & PPSOs that both formal and informal highly-skilled workers are entitled to a risk and hardship allowance, amounting to 15% of the minimum wages, whenever they undertake such tasks.



Ensuring linkages with social and financial entitlements | 9

Sanitation workers, who predominantly belong to the most marginalized & underprivileged castes, primarily from the Scheduled Castes (SC) and the Scheduled Tribes (ST) communities, face social ostracism and often lack fair access to education, health, land, housing, livelihood opportunities and financial security. Acknowledging the social and financial vulnerabilities as well as discrimination experienced by sanitation workers, the Government of India and state governments have launched numerous programs and schemes, incorporating social protection measures specifically designed for sanitation workers. However, these initiatives remain far from the reach of sanitation workers primarily due to a lack of awareness, limited understanding of the process to access, and insufficient documentation to avail the benefits from these schemes. The Beneficiary Management System (BMS) provides information and data of all enumerated CSWs, of their existing Social Security benefits such as food security, Aadhaar cards, the Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJY), and the Pradhan Mantri Suraksha Bima Yojana (PMSBY).

The Garima Scheme also aims to provide CSWs with the following Social Security benefits – mobile and two-wheeler allowance, food security, Biju Swasthya Kalyan Yojana, accidental and life Insurance, linkages with microfinance for self-employment, land rights or housing support and support for education.



10 | Sensitizing the citizen workers, citizens at large and decision makers (IEC, awareness)

Information, Education and Communication (IEC) can be instrumental in creating a safety-conscious culture among sanitation workers, and ensuring effective communication to safeguard the well-being of sanitation workers. On the other hand, it can also play a crucial role in addressing and dismantling caste biases among citizens concerning sanitation workers and highlight their critical role in keeping our communities clean and healthy.

The key IEC messaging for different target groups for citizens, decision makers and also for sanitation workers need to be prepared. Many audio-video materials targeting various audiences have been prepared by the UMC and are available on the YouTube channel. With an intent to serve as constant reminders on good practices, and encourage them to adopt safe and healthy practices at the workplace, posters need to be placed for the CSWs. These posters cover messages around prohibition of manual scavenging, PPE required to be worn during mechanical cleaning, processes to be followed during confined space entry and the do's and don'ts while donning and doffing PPE.

IEC Collaterals



Awareness films

Profiling under NAMASTE Scheme



A tutorial for ULB NAMASTE Nodal Officers on the process for profiling of Sanitation Workers under the NAMASTE Scheme



Hindi

Zindagi bula rahi hai

A film to encourage sanitation workers to use Personal Protective Equipment (PPE)



The film highlights the importance of PPE and how to use it. While many types of PPE exist, the workers require specific equipment based on the work they perform.



Hindi
Odia
Tamil

Tutorial on Emergency Response Sanitation Unit



The film explains the process of setting up an ERSU and steps to be taken by various ULB, district and parastatal officials to ensure smooth functioning of ERSUs.



Hindi
Odia
Tamil

Khabar rahe

A film for citizens' awareness on safety of sanitation workers



A film to popularize 14420 and inform the citizens of their responsibility towards seeking safe sanitation services



Hindi
Odia
Tamil



Manvita Baradi
Founder and Director, Urban Management Centre

She is a prominent advocate for better cities in India for almost three decades. She played a pioneering role in professionalizing urban management and has worked in five countries and with over 300 city governments. Ms. Baradi has actively supported urban development reforms, decentralization, and enhanced people's participation in governance. Her impactful work includes major contributions to the National Urban Livelihoods Mission and mobilizing community groups in 200+ Indian slums. In the last three years, she has strengthened core municipal functions in 10 cities through the Urban Management Centre.

Additionally, Ms. Baradi has held roles such as the founding Dean of the Faculty of Management at CEPT University, Convener of the Gujarat chapter of INTACH, and consultant for global organizations like the World Bank, ADB, USAID, and DFID. As the Executive Director of the Theatre and Media Centre, she also focuses on preserving Gujarati theatre and nurturing modern creators.



Meghna Malhotra
Deputy Director, Urban Management Centre

She is an expert on the design and operation of human centric infrastructure. Meghna is currently leading UMC's partnership with Government of Odisha to implement the Garima Scheme program and ensure safety and dignity of sanitation workers. She is also instrumental to UMC's comprehensive support to the Deendayal Antyodaya Yojana-National Urban Livelihoods Mission (DAY-NULM). Meghna has facilitated an emphasis on convergence between DAY-NULM, Swachh Bharat Mission (SBM) and other flagship missions.

She is a visiting faculty at CEPT university. Since, 2001, she has been managing city-to-city partnerships programs between Indian and global cities to facilitate peer learning and collaboration. She holds master's degree in Environmental Planning and brings a holistic approach to local development. She has developed courses that have reached government officials in over 200 cities.

