



Skill Development in Fecal Sludge and Septage Management (FSSM) sector in Indian Towns and Cities: Phase 2

Year 4, Quarter 3: January 2024 to March 2024

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Implemented by: Water, Sanitation and Hygiene Institute (WASH Institute)



1. PROJECT OVERVIEW/SUMMARY

Program Name:	Skill Development in Fecal Sludge and Septage Management (FSSM) sector in Indian Towns and Cities
Activity Start Date and End Date:	3 rd July 2020 to 3 rd January 2025
Name of Prime Implementing Partner:	Water, Sanitation and Hygiene Institute (WASH Institute), New Delhi
Contract/Agreement Number:	72038620CA00010
Name of Subcontractors/ Sub awardees:	None
Major Counterpart Organizations	BMGF, HCL Foundation, ITC Limited and CPHEEO (MoHUA, GoI)
Geographic Coverage (cities and or countries)	Pan-India
Reporting Period:	January 2024 to March 2024

ACRONYMS AND ABBREVIATIONS

AMRUT	Atal Mission for Rejuvenation and Urban Transformation
ATI	Administrative Training Institute
BIPARD	Bihar Institute of Public Administration and Rural Development
BMGF	Bill & Melinda Gates Foundation
CAWST	Centre for Affordable Water and Sanitation Technology
CDD Society	Consortium for DEWATS Dissemination Society
CFAR	Centre for Advocacy and Research
CPHEEO	Central Public Health and Environmental Engineering Organisation
CSAP	City Sanitation Action Plan
CSE	Centre for Science and Environment
CSR	Corporate Social Responsibility
CMMU	City Mission Management Unit
DPR	Detailed Project Reports
EY	Ernst & Young
ESCI	Engineering Staff College of India
ERSU	Emergency Response Sanitation Unit
FCRA	Foreign Contribution (Regulation) Act
FSSM	Fecal Sludge and Septage Management
FSTP	Fecal Sludge Treatment Plant
GOI	Government of India
HCL Foundation	Hindustan Computers Limited Foundation
IIT	Indian Institute of Technology
ITC Limited	Imperial Tobacco of Company India Limited
IWA	International Water Association
JJM	Jal Jeevan Mission
KILA	Kerala Institute of Local Administration
KWA	Kerala Water Authority
LMS	Learning Management System
LWM	Liquid Waste Management
MEL	Monitoring, Evaluation and Learning
MKU	Madurai Kamaraj University
MoHUA	Ministry of Housing and Urban Affairs
MOOCs	Massive Open Online Courses
MoU	Memorandum of Understanding
MTU	Mobile Treatment Unit
MUDA	Manipur Urban Development Agency
NFSSM	National Fecal Sludge and Septage Management
NGOs	Non-Government Organizations
NIUA	National Institute of Urban Affairs
NMCG	National Mission for Clean Ganga
NSATI	Netaji Subhas Administrative Training Institute

NSDC	National Skill Development Corporation
NSQF	National Skill Qualification Framework
NSS	Non-Sewered Sanitation
OSS	On-Site Sanitation
OSSI	Office of Social Sector Initiative
OWSSB	Orissa Water Supply & Sewerage Board
PG	Postgraduate
PMU	Project Management Unit
PPE	Personal Protective Equipment
PSI	Population Services International
RCUES	Regional Centre for Urban & Environmental Studies
RFP	Request for Proposal
RPL	Recognition of Prior Learning
SBM	Swachh Bharat Mission
SCORM	Shareable Content Object Reference Model
SCGJ	Sector Council for Green Jobs
SeTPs	Septage Treatment Plants
SFD	Shit Flow Diagram
SHG	Self Help Group
SIPRD	State Institute of Panchayat & Rural Development
SKP	Swachhata Knowledge Partner
SLA	Service Level Agreement
SLIEM	Salt Lake Institute of Engineering and Management
SMMU	State Mission Management Unit
SSC	Sector Skill Council
STP	Sewage Treatment Plant
SUDA	State Urban Development Agency
TC	Training Centre
TNUIFSL	Tamil Nadu Urban Infrastructure Financial Services Limited
ToT	Training of Trainer
TRP	Technical Resource Person
TWAD Board	Tamil Nadu Water Supply and Drainage Board
UAoA	Uttarakhand Academy of Administration
ULBs	Urban Local Bodies
UMC	Urban Management Centre
UNICEF	United Nations Children's Fund
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development
WASH Academy	Water, Sanitation and Hygiene Academy
WASH Institute	Water, Sanitation and Hygiene Institute
WWM	Wastewater Management
WWQM	Water & Wastewater Quality Management

1.1 Project Rationale

Over 48% of urban households in India depend on On-Site Sanitation (OSS) facilities; only 32.7% of households (Census 2011) are connected to sewerage networks, and the rest are all on OSS systems. India has faced a period of sharp urbanization, growing from 19.9% of the population residing in urban areas in 1970 to 31.2% in 2011. This population is expected to continue to climb from 410 million (2014) to 840 million (2050). Water and sanitation infrastructure facilities available in India are already stressed and this increase in urban population along with economic growth has severely aggravated the issue. Under the Swachh Bharat Mission (SBM) efforts to eliminate open defecation in India, most of the households have obtained access to toilets mostly through OSS systems. Since, the majority of the households have OSS systems and as there are no treatment facilities in the majority of towns/cities, the desludged septage from the OSS systems are often dumped in an open environment, especially in water bodies.

In the past few years, there has been considerable attention from non-Governmental and certain think tanks within the Government to recognize the importance of managing this fecal sludge. This has led to significant momentum in terms of the Government rolling out programs and funding support for implementing Fecal Sludge and Septage Management (FSSM) infrastructure. However, there are no mainstream programs or initiatives yet that assess and build the capacities of decision-makers and implementing personnel at the ground level. Many Government staff working with urban local bodies are still unaware of the realm of FSSM and its approaches. Therefore, to realize the success of FSSM programs and initiatives, these Government and other implementation-related stakeholders must be made capable of understanding, planning and delivering better services to citizens.

In addition to strengthening the demand side, the supply side also needs enhancement in its capacity to appraise the opportunities and intricacies of fecal sludge management. Thus, becoming an effective partner along with the Government in FSSM or wastewater-related service delivery.

The capacity building program titled “Skill Development in Fecal Sludge and Septage Management (FSSM) sector in Indian towns and cities” commenced on 3 July 2020, with Water Sanitation and Hygiene Institute (WASH Institute) being the implementing agency and USAID as the funding partner. The implementation of the project's first phase (3rd July 2020-2nd July 2023) has been completed, and the extension period has commenced (3rd July 2023-3rd Jan 2025). As part of the first phase of the project, WASH Institute was able to build the capacities of 8238 stakeholders including 1920 sanitation workers, 4860 Govt. officials, 251 NGO representatives, 318 STP/FSTP operators, 80 private enterprise representatives, 440 academicians and other stakeholders.

For the extension period, all the learnings and challenges from the previous phase were taken into consideration to develop implementation strategies. The primary goal of the extension period is to build a skilled sanitation workforce to address the demand in the Fecal Sludge and Septage Management (FSSM) sector in Indian towns & cities. To achieve this, orientation, training, capacity building, technical handholding support, and development of e-modules for learning and exposure visits of various relevant

stakeholders will be undertaken to enhance FSSM service delivery and wastewater Management across Indian towns & cities. Moreover, in this phase, handholding support will be provided to states (especially Kerala), more workshops (regional, state, and national) will be conducted, a cadre of master trainers will be created, e-modules will be developed, studies will be conducted on hilly regions etc.

1.2 Project Description / Introduction

The “Skill Development in Fecal Sludge and Septage Management (FSSM) in India”, project aims to increase the number of skilled professionals in the Water, Sanitation, and Hygiene sector at state, city and town levels across India and enhance access to people in safely managed disposal services through FSSM. To achieve this, WASH Institute is conducting various capacity building trainings/certificate courses on FSSM across the country through classroom training/ online training.

The overall outcome of the Capacity Building program is envisaged to be that Urban Local Bodies (ULBs) will efficiently address FSSM issues in their cities and will use data-driven planning execution and management of WASH delivery through the creation of a knowledge management database. The capacity-building initiatives are targeted to support activities as envisaged to address the knowledge gap in the sector. The key objectives of the project are as follows:

1. Overall Improvement in the knowledge and skill set of the Government Officers/Engineers/Sanitary Inspectors/NGO professionals and Sanitary workers on FSSM and Wastewater management.
2. To establish a supportive and capacitated environment for the delivery of 100% coverage of FSSM across Indian towns and cities through mainstreaming of Non-Sewered Sanitation Treatment Technologies.
3. To establish platforms for continuous learning, re-learning and cross-learning by beneficiaries.
4. To create a pool of fully capacitated and skilled youth to manage the FSSM and related infrastructure.
5. To make cities inclusive with sanitation-related infrastructure and services.
6. To strengthen institutions for WASH service delivery.
7. To create a cadre of skilled Master Trainers on FSSM & WWM to carry out sustained trainings throughout the towns and cities of the country.
8. To ensure gender balance, equity and inclusivity, and promote higher women and other non-binary gender participation and acceptance in the Sanitation & FSSM workforce.

2. ACTIVITY IMPLEMENTATION PROGRESS

2.1 Progress Narrative

The narrative below details the progress made by the project during the 3rd quarter (1st Jan-31st Mar 2024) as part of its second phase (3 Jul 2023-3 Jan 2025) of the project. The project has continued to undertake trainings, supplementing the national programs on wastewater and FSSM – namely SBM-U 2.0 and AMRUT 2.0, creating a cadre of skilled Master Trainers and providing technical handholding support. Trainings were held to facilitate and support the Govt. officials and provide technical support to the ULBs for the review and preparation of DPRs to efficiently manage used water, focusing on FSSM, orientation workshop on NAMASTE Scheme, state-level workshops on UWM and a conclave on UWM. In this quarter, 732 trainees were trained, including 655 government officials, 33 NGO personnel, and 44 academicians. These stakeholders were trained from 29 new ULBs in Bihar, Karnataka and Tamil Nadu.

Moreover, post the workshop on the NAMASTE scheme, WASH Institute has successfully enrolled 403 sanitation workers into welfare schemes. Through their advanced level training, WASH Institute supported the preparation and review of CSAPs of 187 ULBs from 4 states and assisted in the review of 89 DPRs from 2 states. Till now, 12 CSAPs (annexure 3A) have been approved in Kerala, and 46 CSAPs in Jharkhand have been approved. Among the DPRs reviewed and prepared, 4 in Uttar Pradesh have been approved, and 3 in Kerala have been tendered out. WASH Institute continues to provide follow-up support to the ULBs to prepare and review CSAPs, DPRs and other technical documents.

The WASH Institute, with the support of USAID and in partnership with Sakthi Institute of Teacher Education and Research (Dindigul), conducted a 3-day Water Quality Management training, emphasising practical learning experiences, with positive feedback from participants. Additionally, advanced-level training on DPR preparation was organised for AMRUT officials in Kerala and Bihar officials in RCUES, Uttar Pradesh.

Furthermore, state-level workshops on UWM and FSSM were conducted in Karnataka focusing on used water management and participatory training techniques to strengthen skills and collaboration among stakeholders. Orientation sessions such as the NAMASTE Scheme aimed at equipping officials with the necessary knowledge and tools for effective scheme implementation and inclusiveness in sanitation interventions. A four-day DEWT workshop was conducted in collaboration with CAWST and Sehgal Foundation, aimed to enhance participants' training skills in WASH themes, focusing on participatory approaches and maintaining engagement during sessions.

Events like the Kerala Urban Waste Management Conclave, organised in collaboration with Suchitwa Mission and Kerala Water Authority, provided a platform for policymakers, technical experts, and practitioners to discuss emerging trends and strategies for sustainable waste management, fostering collaboration and knowledge exchange for a resilient and environmentally sustainable future in the state.

In March, efforts under the 14 towns project focused on consolidating CT/PT survey data analysis and advancing implementation plans. Following a February meeting in Dindigul, additional analysis points were incorporated into Toilet 2.0 works, alongside the finalisation of model contracts, SLA (service level agreements), and monitoring frameworks for CT/PTs. Spatial analysis and site identification for new toilets in various ULBs were prioritised, with strategies and recommendations set for discussion with respective ULBs after validation.

Simultaneously, data collection for Used Water Management (UWM) interventions in 9 targeted towns progressed significantly, covering water supply and used water management practices. This comprehensive survey aims to understand micro-level water management and inform UWM strategies and planning documents. Findings will be shared with ULB officials for input towards framing strategy and planning documents for their respective areas. Additionally, in the Manhole to Machine hole vertical, sanitation worker enumeration commenced in 5 towns, with over 2000 workers already enumerated, scheduled for completion by May 2024 with collaborative assistance.

The tables below show the total number of CSAPs and DPRs prepared, reviewed and approved.

Table 1: CSAPs prepared

Sr. No.	State	Number of CSAPs prepared	Status (approved)
1	Kerala	76	12 (only annexure 3A approved)
2	Uttarakhand	32	-
3	Jharkhand	46	46 Approved
4	UP	33	-
Total		187	58

Table 2: DPRs reviewed

Sr. No.	State	Number of DPRs reviewed	Status
1	UP	58	4
2	Kerala	31	3 tendered
Total		89	7

The details of the activities and developments carried out in this quarter are listed under their respective headings:

Recruitment and Staff attrition

In this reporting quarter, there were no changes in the project staff.

Learning Management system (LMS)

Customised Online Training Module Built-in Vernacular Languages: WASH Institute, with the support of USAID and in collaboration with Toilet Board Coalition (TBC), has developed an online training module for CT/PT operators in 6 languages, including Hindi, Malayalam, Odia, Tamil, Telugu & Assamese. These videos have also been uploaded on YouTube for better reach. Since January 2024, the videos have a total of 6600 views.

WASH Institute plans to develop the E-learning modules on the following topics and upload them on the LMS in the upcoming quarters:

1. Using GIS to identify suitable sites for STP
2. Nature-based treatment system for UWM
3. Sewerage system – Feasibility and pre-requisites for DPR
4. Design of sewer networks
5. Do's and Don'ts in Sewer Network Design
6. Integrating CWIS in UWM
7. Emergency Response Sanitation Unit (ERSU) and RSA
8. Public Private Partnership (PPP) in UWM
9. Operational models in UWM – Case studies
10. Standard Operating Procedures (SOP) for desludging operations for Septic tank cleaners

Delivery of trainings

During the reporting quarter, the following trainings were undertaken and delivered. A detailed report on each of the trainings conducted is listed in [Annexure 1](#).

Short Term Trainings

1. Three Days Training on Water Quality Management, Tamil Nadu (8-10 January, 2024):

WASH Institute, with the support of USAID and in collaboration with Sakthi Institute of Teacher Education and Research, Dindigul, conducted a 3-day training on Water Quality Management from 8-10 January 2024. A total of 44 students from B.Sc, B.Ed, and M.Sc academic backgrounds attended this training. This training included group activities, role plays, and in-depth technical sessions. More than 97% of the participants gave positive feedback on the training curriculum, content, and delivery.

The workshop successfully enriched the UWM-related knowledge of the students, which will help them sharpen their expertise in Water Quality Standards, Water Testing, Water Safety, and Grey Water management. This will not only improve the knowledge and expertise of the students but also increase the pool of trained resources in the country under these themes.



2. 4-Day Advanced Training on Preparation of DPRs for Sewage & Septage Projects for AMRUT 2.0, Kerala, 12-15 February 2024 (Batch 2):

WASH Institute, with the support of USAID and in partnership with AMRUT 2.0 Kerala and Kerala Water Authority (KWA), has successfully conducted the second batch of Advanced Training on the Preparation of Detailed Project Reports (DPR) specifically tailored for Sewage and Septage Projects. This specialised training program catered to AMRUT Kerala and Kerala Water Authority officials. The training program occurred from the 12th to the 15th of February 2024 in Thiruvananthapuram, Kerala. The collaborative

efforts were aimed at enhancing the knowledge and skills of the participants, thereby contributing to the effective planning and implementation of sewage and septage projects in the region.

The training was designed with the primary objective of enriching participants' knowledge and expertise in preparing and reviewing Detailed Project Reports (DPR) for Sewage and Septage Projects, specifically focusing on Sewer networks and the implementation of Sewage Treatment Plants (STPs) and Faecal Sludge Treatment Plants (FSTPs) in AMRUT cities. The training sessions were not only in-depth but also practical and insightful, featuring hands-on activities such as evaluating DPRs, analysing case studies, and using checklists for reviewing DPRs. Furthermore, participants gained valuable field experience through a practical session focused on assessing a functional STP. This multifaceted approach aimed to strengthen the knowledge and capacities of the government officials from AMRUT Kerala and Kerala Water Authority (KWA) with theoretical knowledge and practical skills, fostering a comprehensive understanding of sewage and septage project management. A total of 44 Govt. officials participated in this training.

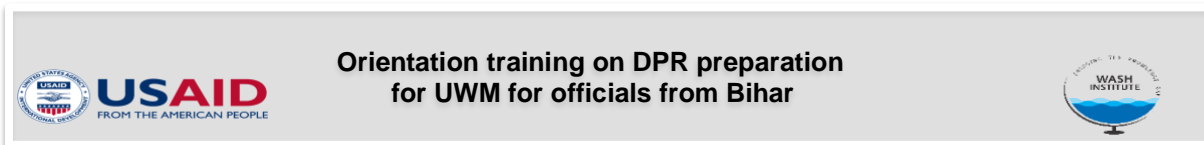


3. Advanced training on DPR preparation for UWM for officials from Bihar Lucknow, 4-6 March 0 2024 (Batch 1):

WASH Institute, with the support of USAID and in collaboration with RCUES, Lucknow, Uttar Pradesh, conducted the first batch of a three-day capacity building workshop on DPR preparation and review for UWM for officials from Bihar in Lucknow from March 4-6, 2024.

The workshop aimed to provide technical guidance and orientation on the various critical aspects of DPR preparation, including the key components of sewerage design and network, key components in DPR preparation, various technologies used for water management, understanding the ground challenges and finalising potential solutions for the same. The key participants included Executive Engineers and an assistant from BUIDCO, a parastatal body responsible for preparing DPR in the state. A total of 18

participants actively participated in the workshop. During the 3-day workshop, an exposure visit to STP Bharwara and SPS Gwari and Co-treatment facility Bharwara was also organised.



Workshops/Meetings/Visits

1. One day State Level Orientation Workshop for NAMASTE Nodal Officers, Kerala (7 February, 2024):

WASH Institute, with the support of USAID and in collaboration with Suchitwa Mission Kerala, recently organised a one-day State Level Orientation workshop focused on the NAMASTE Scheme for its Nodal Officials. This specialised workshop, held on February 7th in Trivandrum, Kerala, was specifically tailored for officials from all the ULBs of Kerala.

The training was strategically designed to achieve the following objectives:

- Familiarise Nodal Officers with the NAMASTE scheme, including its targets, components, and beneficiaries.
- Clarify the roles and responsibilities of ULBs regarding the NAMASTE Scheme, particularly concerning the enumeration of SSWs and the formation of an ERSU unit.
- Identify bottlenecks and implement effective workarounds in the rollout of the scheme in Kerala.
- Familiarise Nodal Officers with the requirements of the NAMASTE Action Plan.

By addressing these objectives, the workshop aimed to equip Nodal Officials with the necessary knowledge and tools to effectively implement the NAMASTE Scheme in their respective areas of

responsibility. A total of 167 stakeholders (Mission Director, State Nodal Officers, Director, Project Officers, Young Professionals, Senior Public Health Officers, Secretary, and Municipal Commissioner) from Suchitwa Mission and NAMASTE participated in this workshop.



2. Consultation workshop on "City-wide inclusive sanitation" New Delhi (8 February 2024):

WASH Institute participated in a half-day consultation workshop on "Citywide inclusive sanitation". The workshop focussed on key thematic areas, including Toilet 2.0, Man-hole to Machine-hole and Used Water Management (UWM). The consultation meeting included various specialists in gender and from USAID and its implementing partners in India. The key aim of the consultation workshop was to have a holistic discussion and engagement of the various organisations to provide suggestions to the WASH Institute to formulate strategies towards inclusiveness in its intervention across the 14 pilot towns in WASH.

During the workshop, WASH Institute presented the various challenges and best practices followed in the 14 towns study which were reviewed. Suggestions were received and discussed on how the challenges in these 14 towns, from an inclusion lens, can be overcome in ways that can be scaled across the country. A total of 20 participants attended the consultation workshop, including SEWA Bharat, USAID India, Centre for Advocacy and Research (CFAR), Centre for Urban and Regional Excellence (CURE India), and WASH Institute staff.



Consultation workshop on "City wide inclusive sanitation", New Delhi



3. State-Level Workshop on Used Water Management Focusing on FSSM for Officials from Karnataka, 27 February, 2024 (Batch 1):

WASH Institute, with USAID's support, helped coordinate and manage the State Level Workshop on Used Water Management, which focused on FSSM for Officials from Karnataka. The workshop was conducted by Urban Water & Sanitation in India (SUWASI)- USAID program in collaboration with the State Mission Directorate, Swachh Bharat Mission Urban, UDD Karnataka.

The first batch of the workshop was held in Belagavi, Karnataka, on February 27, 2024. A total of 110 participants, including Executive Engineers, Deputy Directors, and Chief Officers, attended the workshop. The workshop aimed to provide orientation on the following topics: status of FSSM in Karnataka, state policies & guidelines related to FSSM, approaches to Sanitation along with benefits of onsite sanitation, daily operation, weekly and periodical maintenance, Safai Mitra Suraksha and NAMASTE, Institutional arrangement across FSSM value chain, and Reuse of byproducts & revenue generation.

**State Level Workshop on Used Water Management
Focusing on FSSM for
Officials from Karnataka (Batch 1)**





4. State-Level Workshop on Used Water Management Focusing on FSSM for Officials from Karnataka 5 March, 2024 (Batch 2):

WASH Institute, with USAID's support, helped coordinate, facilitate and manage State Level Workshop on Used Water Management Focusing on FSSM for Officials from Karnataka. The workshop was conducted by Urban Water & Sanitation in India (SUWASI)- USAID program in collaboration with the State Mission Directorate, Swachh Bharat Mission Urban, UDD Karnataka.

The second batch of the workshop was held in Bengaluru, Karnataka, on 5 March 2024. Over 95 participants, including Executive Engineers, Deputy Directors, and Chief Officers, attended the workshop. The workshop aimed to provide orientation on the Status of FSSM in Karnataka, state policies & guidelines related to FSSM and approaches to Sanitation. The workshop aimed to provide an overview of the status of FSSM in Karnataka, state policies and guidelines related to FSSM, and sanitation approaches including the benefits of on-site sanitation, daily operations, and regular maintenance schedules. It also covered topics such as Safai Mitra Suraksha and NAMASTE, institutional arrangements along the FSSM value chain, and strategies for reusing byproducts to generate revenue.



**State Level Workshop on Used Water Management
Focusing on FSSM for
Officials from Karnataka (Batch 2)**



5. Delivering Effective WASH Training (DEWT) Workshop, Jaipur (12-15th March, 2024):

With USAID's support, WASH Institute organised a four-day DEWT workshop spanning from March 12th to 15th, 2024. The workshop was conducted in collaboration with CAWST and Sehgal Foundation. Over 100 registrations poured in, leading to the shortlisting of 26 candidates for participation. Participants learned proficiency in crafting, facilitating, and customising lessons focused on water, sanitation, and hygiene (WASH) themes throughout the workshop. They engaged in discussions regarding learners' requirements, enhanced skills in establishing a conducive learning atmosphere, motivating learners, and ensuring the appropriateness and relevance of information. Furthermore, the participants acquired the ability to formulate effective queries, address learners' needs, and navigate challenging training scenarios through theoretical insights and hands-on experience.

Throughout the workshop, the theory of active learning and effective training skills is reinforced through practical training materials. The participatory workshop included theory, practical components,

participatory activities, and varied discussion types to share experiences. The participants were able to prepare and practice training techniques as part of the workshop.



6. Three-Day Kerala Water Conclave on Used Water Management for Building Water Resilient Kerala, Thiruvananthapuram (20-22 March 2024):

The WASH Institute, with the support of USAID and in partnership with Kerala Water Authority and Suchitwa Mission, hosted a highly successful Kerala Urban Waste Management Conclave convened from 20-22 March 2024, with a comprehensive agenda aimed at addressing the challenges and advancing strategies for effective urban waste management in the state. The event brought together a diverse array of stakeholders, including policymakers, technical experts, and practitioners, to deliberate on emerging trends, innovative technologies, and policy frameworks conducive to sustainable urban waste management.

The conclave enhanced the understanding of UWM roles, identified emerging trends, deliberated on policy frameworks, and established collaboration avenues. The conclave served as a pivotal platform for knowledge exchange, collaboration, and strategising towards sustainable urban waste management. The event provided valuable insights and actionable recommendations to address the multifaceted challenges of waste management, laying the groundwork for a more resilient and environmentally sustainable future. This conclave saw the participation of 212 stakeholders.



Kerala Water Conclave on UWM for Building Water Resilient Kerala - 2024



2.2 Implementation Status

A time period-wise snapshot of various activities carried out in the third quarter of the fourth year has been illustrated below:

Act ivit y No.	Activity Name	Sub Activ ity No.	Sub Activity Name	Jan'24	Feb'24	Mar'2 4
A1	Advanced training for Government and Non-governmental	A1.1	Partnership with government/ Parastatal and other development partners for capacity-building engagement			

	stakeholders in WWM and FSSM	A1.2	Customise training content for new programs of the national and state governments			
		A1.3	Mapping and engaging with local/potential trainers/training partners			
		A1.4	Delivery of the trainings			
		A1.5	Post training monitoring of outcomes			
2	Training of sanitation workers/ERSU teams	A2.1	Partnership with government/parastatal and other development partners for capacity building engagement			
		A2.2	Delivery of the trainings			
		A2.3	Post training monitoring of outcomes			
3	Creating a cadre of Master trainers on WWM, FSSM	A3.1	Partnership with government/Parastatal and other development partners for capacity building engagement			
		A3.2	Identifying the Master Training along with the Partner for the specific Training delivery			
		A3.3	Customise training content for effective use of the content by the Mater Trainer to the target audience			
		A3.4	Mapping and engaging with local/potential trainers/training partners			
		A3.5	Delivery of the trainings			
		A3.6	Post training monitoring of outcomes			
		A3.7	Continues Assessment and handholding of the Master Trainer during Training and when they are delivering the Training			
4	Organise national, regional and state level workshops and	A4.1	Partnership with 10 State governments and the 14 ULBs to understand the capacity building needs			

	consultation meetings on topics of WWM, FSSM	A4.2	Customise content for the national and state government workshops.			
		A4.3	Delivering the Workshop			
		A4.4	Post Workshop monitoring of outcomes			
5	Support the state of Kerala in piloting FSSM and WWM initiatives in pilot towns	A5.1	Support in developing standard documents, Templates & Designs			
		A5.2	Support in FSSM Clustering for Urban-Rural Convergence			
		A5.3	Support in providing FSSM Plan, Vendor List, Guidelines for Establishing RSA and ERSU			
		A5.4	Support in Capacity Building various stakeholders on FSSM & WWM			
		A5.5	Develop Training content for FSSM & WWM			
		A5.6	Support ULBs to improve in Manhole to Machine-hole interventions			
6	Create a cadre of master trainers in Kerala, who can act as technical resource persons	A6.1	Partnership with government/ Parastatal and other development partners for capacity-building engagement			
		A6.2	Identifying the Master Training along with the Partner for the specific Training delivery			
		A6.3	Customise training content for effective use of the content by the Mater Trainer to the target audience			
		A6.4	Mapping and engaging with local/potential trainers/training partners			
		A6.5	Delivery of the trainings			
		A6.6	Post training monitoring of outcomes			
		A6.7	Continues Assessment & handholding of the Master Trainer during Training and when they are delivering the Training			
7	Training of officials from Kerala on	A7.1	Partnership with Kerala government/ Parastatal and other development			

	topics related to WWM and FSSM		partners for capacity building engagement			
		A7.2	Customise training content for new programs of the national and state governments			
		A7.3	Mapping and engaging with local/potential trainers/training partners			
		A7.4	Delivery of the trainings			
		A7.5	Post training monitoring of outcomes			
8	Provide technical handholding support to ULBs/districts	A8.1	Support in Review of DPRs prepared by ULBs/Districts			
		A8.2	Support in Training ULB/District officials on FSSM & WWM			
		A8.3	To identify Master Trainers to train the ULBs/District Officials			
9	Develop e-learning modules on WWM and FSSM	A9.1	Engagement with the States and the Partners to analyse the need for the content required.			
		A9.2	Develop or Modification course modules to suit the requirements of the State or Partner			
10	Develop training modules on thematic areas such as hilly areas, climate change and gender in WASH	A10.1	Engagement with the States and the Partners of Hilly areas to analyse the thematic area and need of the content			
		A10.2	Develop the content with the input from the internal technical and expert Organisation for the Climate Change modules.			
11	Organise workshop on thematic areas such as challenges of WWM in hilly areas, climate change	A11.1	Partnership with 10 State governments and the 14 ULBs to understand the capacity building needs			
		A11.2	Customise content for the national and state governments workshop.			
		A11.3	Delivering the Workshop			
		A11.4	Post Workshop monitoring of outcomes			

12	Certificate training of STP/FSTP operators	A12.1	Collaboration with NSDC/SCGJ			
		A12.2	Partnership with regional training partners			
		A12.3	Marketing, Promotion & Stakeholder Engagement for the skilling & certification program			
		A12.4	Train, Assess and certify trainees			
13	Course on Water and wastewater quality management	A13.1	Delivery of classroom and practical sessions as per syllabus			
		A13.2	Explore industry/Government partnerships for practical learning, placement of students and increase visibility of the courses			
14	Value-added course on FSSM and WWM	A14.1	MoU with academic institutions like universities, colleges and government agencies for facilitating Workshop, Value added Courses, Trainings etc			
		A14.2	Nurturing students' interest by conducting 3 days value added courses on "Non sewerred sanitation, liquid waste Management, Wastewater management" etc in various engineering and science colleges.			
		A14.3	Delivery of the trainings			
		A14.4	Post training monitoring of outcomes			
15	International exposure visits of government officials	A15.1	Facilitate exposure visits of key staff from Government and parastatal agencies to demonstration sites in Indian cities and abroad			
16	National Exposure visit to government officials	A16.1	Facilitate exposure visits of key staff from Government and parastatal agencies to demonstration sites in Indian cities and abroad			

2.3 Implementation Challenges

Unclear Election Dates: The uncertainty surrounding the dates of elections in UP disrupted scheduling and planning, making it challenging to organise training sessions in March. Without clear election dates, it was difficult to coordinate logistics and ensure participation from relevant stakeholders.

ULBs encounter a significant challenge in determining new public toilets (PT) locations. In densely populated or core areas, in and around landmarks such as temples, markets, etc, there is a high demand for toilets, yet space availability is limited. Conversely, there may be ample space in less populated areas, but the demand for toilets is low, making it financially unfeasible to establish a PT. This dilemma highlights the need for innovative solutions to effectively balance demand and space constraints in urban areas.

2.4 Indicators for Reporting

The indicators to report for the outcomes in the 3rd quarter of the 4th year are as follows:

Indicator No.	Key Performance Indicators (KPIs)	Project Target & Status (2 nd Phase)				Remarks
		Quarterly Target for Q3 (Jan-Mar 2024)	Achievement for Q3 (Jan-Mar 2024)	Cumulative Target up to Q3 (July 2023-Mar 2024)	Cumulative Achievement up to Q3 (July 2023-Mar 2024)	
Goal Level Indicators						
1	Number of locations, where the project activities have contributed to improving the service quality of FSSM & Wastewater Management, thereby leading to a positive impact on environment and public health in Indian towns & cities	NA	29	NA	61	ULBs were covered from Bihar, Tamil Nadu, and Karnataka during this reporting period
2	Number of Government Officials, CSR/NGO Professionals, Private	215	732	511	1870	A total of 4 trainings and 4 workshops/concl

	Entrepreneurs, Sector Professionals & Students Trained/Upskilled with regard to FSSM & Wastewater Management					ave were conducted in this reporting period.
3	HL.8.3-3 Number of water and sanitation sector institutions strengthened to manage water resources or improve water supply and sanitation services as a result of USG assistance	NA	NA	NA	NA	This will be reported at the end of the project period.
4	HL.8.4-1 - Value of new funding mobilized to the water and sanitation sectors as a result of USG assistance	\$20,000	\$58,635.94	\$60,000	\$136,607.9	
Outcome level Indicators						
5	At least 30% of the participants of short term trainings demonstrate retainment of knowledge post 6 months of training completion	NA	106	NA	106	
6	At least 30% of the master trainers demonstrate improvement in the quality of training delivery post-attending the learning techniques course	5	5	5	5	5 master trainers were evaluated on fixed parameters. The findings of the assessment were positive. We are continuing to encourage them to do better and providing them

						with constant feedback.
7	At least 30% of the ULB officials find knowledge products useful and use them for undertaking interventions.	NA	177	NA	177	As per the feedback calls made, 177 ULB officials said that they found the knowledge products useful. 109 number officials were from Phase 2 and others (68) were from Phase 1.
8	At least 1000 sanitation workers benefit by enrolling into welfare programs	200	403	200	403	Ayushman Cards were Downloaded and distributed among 403 sanitation workers in 88 ULBs of Kerala.
9	At least 300 Govt./Non-Govt/ officials are trained on WWM & FSSM by the Master Trainers	50	0	50	259	Master trainers have successfully trained the participants (sanitation workers) in the state of Tamil Nadu (topic-safety and dignity of Sanitation workers.)
10	Atleast 30% of the cities/towns provided with technical handholding support records progress towards WWM/FSSM (Eg: CSAP/DPRs prepared etc.) (100	NA	3	NA	7	31 DPRs were evaluated and reviewed at Suchitwa Mission, among which 3 have been tendered (Appolo colony, Attingal

	ULBs will be given technical handholding support)					FSTP and ETP of Slaughterhouse in Nedumangad)
11	Atleast 3 of the Kerala towns wherein support has been provided for piloting of WWM/FSSM interventions demonstrate progress towards WWM/FSSM in their respective areas	NA	NA	NA	NA	We have identified 10 towns in discussion with Suchitwa Mission, where the UWM interventions will be piloted.
12	At least 30% of the students who complete the one-year PG Diploma academic courses are placed in relevant jobs	0	4	6	7	During this reporting period, 2 students have been placed in the Water Quality Lab in Dindigul, 1 student in SPD Solutions in Chennai and 1 in Green Link Lab, Coimbatore.
13	At least 30% of the trained STP and FSTP operators/Lab Technicians have demonstrated better performance on their job (STP and FSTP operations/Laboratory)	10	0	10	0	1 batch of training is under progress with ASAP, Kerala. This will be reported in the next quarter.
14	Atleast 30% of the officials who have undergone exposure visit have initiated FSSM/WWM related initiatives in their respective states/cities	NA	NA	NA	NA	This will be reported in the next quarter.
Output level indicators						
15	200 government and non-government officials trained on	50	18	125	131	During this reporting period, government

	WWM & FSSM through advanced classroom sessions					officials of Bihar were trained in DPR preparation.
16	180 sanitation workers/ERSU staff trained	30	0	90	0	Trainings with the sanitation workers/ERSU staff have been planned to be conducted in the next quarter.
17	45 Master trainers trained on topics of WWM and FSSM	0	0	15	32	32 Master trainers were trained in Dindigul, Tamil Nadu in the previous quarters (topic- Safety and dignity of Sanitation workers)
18	Number of participants attending national level, state level and regional level workshops on WWM & FSSM	NA	600	NA	1082	During this reporting quarter, 1 orientation workshop on the NAMASTE Scheme in Kerala, 2 state-level workshops on UWM and FSSM in Karnataka and 1 UWM Conclave in Kerala have been organized.
19	5 towns of Kerala supported to pilot FSSM & WWM initiatives	2	1	3	1	In this reporting quarter, WASHi facilitated the establishment of sanitation worker facilities in Kozhikode.

						<p>WASHi has also developed e-learning for operators in Mavelikara, provided orientation on UWM in Kalpetta, and conducted a feasibility study for FSTP plants in Chelakkara.</p> <p>WASHi continues its support in the development of standard documents, Templates & Designs, support in FSSM Clustering for urban-rural convergence, and support in providing FSSM plans, Vendor lists, and Guidelines for Establishing RSA and ERSU.</p>
20	30 Master trainers trained in the state of Kerala to become technical resource person	30	0	30	56	Master trainer pool created on LWM, at least 1 Suchitwa Mission official trained from every district.
21	100 Govt. officials trained from Kerala on	25	44	50	141	During this reporting quarter, DPR preparation

	topics related to WWM and FSSM					training was organized for AMRUT officials from 14 ULBs.
22	100 ULBs/districts provided with technical handholding support on FSSM / WWM related initiatives	20	32	50	58	During this reporting quarter, WASHi provided technical support for the preparation of DPRs of 14 ULBs of Kerala and 18 ULBs of Bihar.
23	360 minutes of e-learning modules content developed on WWM and FSSM	120	0	240	185	During the next reporting quarter, 10 E-learning modules on topics like GIS, Nature-based treatment system for UWM, Emergency Response Sanitation Unit (ERSU) and RSA etc, are scheduled to be developed.
24	2 training modules developed on thematic areas such as hilly areas, climate change and gender in WASH	0	0	1	0	WASHi has initiated preliminary work including conducting survey studies, for the preparation of the documents, and they are scheduled to be prepared by the

						upcoming quarter.
25	3 workshops organized on thematic areas such as challenges of WWM in hilly areas and climate change	1	0	2	0	Workshops are planned to be conducted in the next quarter.
26	Number of people trained on thematic areas such as challenges of WWM in hilly areas and climate change	NA	NA	NA	NA	This indicator is planned to be reported in the next quarter, as the workshop is planned to be scheduled.
27	125 persons successfully completed the course on operations of STPs/ FSTPs and desludging operations	25	0	75	0	1 batch of training is under progress with ASAP, Kerala. This will be reported in the next quarter.
28	20 students/professionals completed the 1 year post graduate diploma course in 'Water & Wastewater Management'	NA	NA	NA	NA	In the last year, we were able to enrol only 1 student despite our best efforts to advertise the course through various platforms, such as newspaper, advertisement in buses, Vazhikaatti Campaign, Flyer distribution, poster display, MoU with colleges etc. However, we were not able to secure

						enrolments due to limited job opportunities for girls in the field/industry-oriented jobs. In this academic year, starting from June 2024, we are hopeful to increase the number of enrolments significantly through FM radio telecasts, college campaigns, local announcements via vehicle etc in addition to the earlier mentioned platforms.
29	150 students completed elective/ value added courses on Wastewater & Non-Sewered sanitation	30	44	90	140	During this reporting quarter, 44 students were trained at Sakthi Institute of Teacher Education and Research on Water Quality Management in Dindigul, Tamil Nadu.
30	6 senior Govt. officials taken for learning international level exposure visits	0	0	6	3	
31	20 senior Govt. officials taken for learning	5	0	10	0	Exposure visits are being planned with Kerala

	National level exposure visits					government officials in the next quarter.
32	GNDR-8 Number of persons trained with USG assistance to advance outcomes consistent with gender equality or female empowerment through their roles in public or private sector institutions or organizations	135	44	310	230	Gender sensitization and inclusivity sessions will be integrated into all trainings in the upcoming quarter.

2.5 Kerela's Hand-holding support

WASH Institute is assisting the state of Kerala in implementing pilot projects in faecal sludge and septage management (FSSM) and wastewater management (WWM) in selected towns to enhance sanitation and waste management standards. In the reporting quarter, WASHi has helped create standardised documents, templates, and designs for procurement and liquid waste management in various locations and conducted site visits and inspections to evaluate and support projects in Kollam, Kochi, and Trivandrum. Additionally, training materials have been designed, and capacities of different stakeholders, such as district Suchitwa Mission and Local Self-Government officials, have been built to encourage adherence to best practices in sanitation and WWM. The team of WASHi has also prepared concept notes and 3D models for the Clean Schools Campaign.

WASHi’s initiatives also involved forming a cadre of master trainers in Kerala to serve as technical resources for capacity-building initiatives. A total of 56 officials from Suchitwa Mission were trained to become Master Trainers. These master trainers have further conducted 38 training batches in 14 districts of Kerala on LWM.

Other initiatives include collaborations with the government, parastatal, and other development partners to provide advanced training and organise events like the Kerala UWM Conclave 2024. The objective is to establish a network of skilled individuals who can spread knowledge and practices related to FSSM and WWM across the state. Ongoing evaluation, monitoring, and support for the master trainers during and after training are key elements of the strategy to guarantee the successful delivery and application of training programs.

WASHi has also liaised with the Corporation and NAMASTE ULB officers to secure written confirmation of the creation of an ERSU Unit and enumeration camp. With the help of the enumeration camps, 83 SSWs (Sewer and Septic Tank Workers) have been identified, and ERSU has been notified in the municipality. WASHi has also offered support for the ERSU training to be held in the upcoming quarters. WASHi has also coordinated with local authorities in Kozhikode to establish an ERSU Unit and enumeration camp for sanitation workers, with 403 workers enumerated under NAMASTE. In Mavelikara, e-learning modules were developed for CT/PT operators, drain endpoints were surveyed, and ERSU training was provided to sewer entry operators, while in Kalpetta, orientation on UWM was provided, water pollution hotspots were identified, and drain points surveyed. Additionally, in Chelakkara, an initial feasibility study for proposed FSTP plants across four sites was conducted.

WASHi has continued supporting FSSM clustering for urban-rural convergence, including site visits and technical input on infrastructure. Additional activities involved training stakeholders on FSSM and WWM, conducting workshops and online training on DBOT models and advanced training for DPR preparation, and supporting ULBs in improving interventions from manhole to machine-hole.

2.6 14 Towns Project

WASH Institute has been one of the main partners of the Ministry of Housing and Urban Affairs (MoHUA), Government of India, since 2015, supporting the Swachh Bharat Mission (SBM). As part of the 14 towns project under SBM 2.0, WASHi is focusing on improving Used Water Management (UWM), Toilet 2.0, and transitioning from Manhole to Machine hole (M2M) in 14 Urban Local Bodies (ULBs) across 10 states. These ULBs, chosen through comprehensive research, represent diverse demographic, topographical, and hydrogeological characteristics. With many small and medium towns relying on on-site systems, we are building technical capacities at the ULB level that are crucial for implementing UWM strategies outlined in SBM 2.0. Under the project, City Support Units (CSUs) at the ULB level have been created, backed by offsite technical teams, facilitating planning, implementation, and innovation support to the 14 towns. The project aims to generate knowledge products and disseminate them widely, contributing to policy discussions on sanitation and facilitating the adoption of innovations and best practices nationwide.

The following progress has been made in each town:

I. Medchal Town

A. CT/PT: The CT/PT report for Medchal town was finalised after discussions with key ULB Medchal officials. Once the strategies and recommendations are finalised, the report will be presented to the ULB and other concerned stakeholders of the town.

B. M2M: Regarding enlisting sanitation workers for the NAMASTE Scheme, a meeting was organised with Medchal ULB officials, during which the enumeration of more than 200 sanitation workers engaged in different types of sanitary works in Medchal town was discussed.

C. UWM: An extensive survey of households, and institutional and commercial generators 450 were completed for Medchal town. This survey was conducted to understand water supply, wastewater generation, and grey water management at the micro level, which was re-completed for Medchal town. This survey was conducted to understand water supply, wastewater generation and grey water management at the micro level, i.e. at the household or individual generators' level. The survey was conducted over February and March 2023 and included 400 samples of individual households and 50 samples of other categories, including institutions, offices and commercial generators.

II. Goalpara Town

A. CT/PT: The CT/PT report for Goalpara town was finalised after discussions with key ULB Goalpara officials. The project's backend team will be visiting the town next month, and further discussions will be held with ULB officials to fine-tune challenges and make recommendations for each toilet. Once the strategies and recommendations are finalised, the report will be presented to the ULB and other concerned stakeholders of the town. This report will be submitted to the ULB Goalpara, which will help them manage their CT/PT better.

B. M2M: A meeting was held with the ULB officials to understand their preparedness to undertake the enumeration of sanitary workers. Additionally, two desludging workers from Goalpara town were also surveyed to enlist them for central and state-sponsored welfare schemes.

C. UWM: As part of (UWM) interventions, more than 250 households, institutional and commercial generators were surveyed. The survey was conducted between February – March 2024. This survey was conducted to understand water supply, wastewater generation and grey water management at the micro level, i.e. at the household or individual generators' level. A sample survey of households was conducted to understand the dependency on groundwater sources. Through this survey, we also tried to capture the depth at which water is found in town.

III. Dhenkanal Town

A. CT/PT: The CT/PT report has been finalised. The locations of proposed toilets were visited, and the opinions of stakeholders of vegetable markets and petrol pumps were taken. Discussions were held with the SHG members and ULB officials on the key challenges and recommendations for the CT/PT. The project backend team visited the town, and discussions were held with the ULB officials, SHG groups, and PT Operators to understand their concerns about running the day-to-day operations and the challenges to meet the required service standards. This report will be submitted to Dhenkanal ULB, which will help them manage their CT/PT better.

B. M2M: Under M2M, Dhenkanal ULB has carried out the enumeration activity as stipulated by Orissa State's Garima scheme, covering more than 250 workers. Also, three desludging operators were surveyed in the town as part of a detailed profiling exercise.

C. UWM: A survey of 450 samples covering 400 households and 50 institutions and commercial generators were taken up in Dhenkanal town. The water survey and assessment of soak pits will be taken up next month. This survey was conducted to understand water supply, wastewater generation and grey water management at the micro level, i.e. at the household or individual generators' level.

IV. Mavelikkara Town

A. CT/PT: The CT/PT report for Mavelikkara town was finalised after discussions with key ULB officials. The project's backend team will be visiting the town next month, and further discussions will be held with ULB officials to fine-tune challenges and make recommendations for each toilet. Once the strategies and recommendations are finalised, the report will be presented to the ULB and other concerned stakeholders in the town. This report will be submitted to the ULB Goalpara to help them better manage their CT/PT.

B. M2M: Based on the directives of the State Government, Mavelikkara town has enumerated all the sanitation workers engaged in liquid waste management under the NAMASTE scheme. WASHi at the State and ULB levels supported the enumeration process by interviewing the sanitation workers and desludging operators.

C. UWM: The sample survey of 400 households and 50 commercial and institutional generators has been completed. A detailed mapping of the available land has been conducted to understand the availability of land for the construction of FSTP in the town. Flow measurements at drainage endpoints were also taken. The survey report will prepare the UWM plan for Mavelikkara town.

V. Mapusa Town

A. CT/PT: The new locations for setting up PTs as per the CSAP (City Sanitation Action Plan) were visited to understand potential footfall and undertake basic stakeholder interactions. Other locations proposed were also visited to assess the operational viability of the PTs. The report for CT/PT has also been completed. This report will be submitted to Mapusa ULB to help them better manage their CT/PT.

B. M2M: A discussion was held to understand ULB's willingness to enumerate Sanitation workers in the ULB. Additionally, a survey of 2 desludging operators was held to understand the process of desludging as practised in Mapusa and the overall living conditions of desludging operators. In Goa, desludging facilities are shared by different towns. This state-specific perspective has also been found by visiting the state's shared FSTP/ STP facilities.

C. UWM: A survey of 400 households and 50 institutions and commercial generators has been completed. The houses using open wells were visited to understand the depth of the water table, pre-treatment of water, if any, before drinking and the use of filtration media in soak pits. The data generated through the Household survey and additional water analysis will help prepare UWM strategies and plans for Mapusa town.

VI. Ranchi

A. CT/PT: All the CTs and PTs, including the city's modular toilets, were surveyed during the past week. Based on the collected data and spatial analysis, the report is in the final stage. The ULB officials were informed about the status of the CT/PT report. This report will be submitted to ULB, which will help them manage the CT/PT better.

B. M2M: A detailed discussion was held with the Zonals and Supervisors working in various city wards about the enumeration/profiling of all the Sanitation Workers involved in various sanitation activities working under Ranchi Municipal Corporation. They were informed that the profiling process would follow the same pattern as the NAMASTE Scheme. They informed WASHi that the sanitation workers could be profiled. They suggested that it can be done in a cluster-wise manner; probably, ward-wise, the sanitation workers can be enumerated.

A discussion was held with a few desludging operators, and they informed us that they are executing the disposal of fecal sludge at the new site, a recently opened STP plant in Bandghai, Ranchi. In addition to a survey of desludging operators, the Ranchi Municipal Corporation enumerated 25 operators under the NAMASTE scheme.

VII. Nainital Town

A. CT/PT: The CT/PT report for Nainital has been finalised. The revenue and the costing sheet was finalised with the help of the private operator head. This report will be submitted to the Nainital ULB, which will help them manage their CT/PT better.

B. M2M: With the help of the ASCI research team, a series of focused group discussions were held with the ULB officials and core sanitation workers to understand the need for PPE and its suitability to the climatic conditions of Nainital. The discussions helped the team understand that awareness about the use of PPE is quite low, and there is no training by the concerned authorities. This issue has been taken up with the ULB officials.

VIII. Chunar Town

A. CT/PT: Discussions were held with the ULB Sanitation and Food Inspector regarding new Chunar locations to establish new toilets. It was observed that some toilets are closed but can be reopened using a proper strategised mechanism. Rapport was built with shopkeepers in the main market to identify the best location for new toilets. It was found that due to the inaccessibility and absence of signage, nearby toilets are either closed or unknown to the public. Upon discussion, they agreed to the new toilet's location as proposed by the WASH Institute near the Chowk location. The survey report will be submitted to Chunar ULB to help them better manage their CT/PT.

B. M2M: Discussions were held with ULB officials on their willingness to roll out the enumeration of sanitary workers. The ULB has shown their willingness to enumerate all workers engaged in managing liquid and solid waste in the town. With the assistance from WASHi, a detailed enumeration and profiling exercise will be carried out in the coming months.

C. UWM: A survey of 400 households and 25 institutional and commercial generators was completed in Chunar. Through the Household, Commercial and Institutional survey conducted for UWM, it was found that all the houses use septic tanks without soak pits to contain used water. Only a few septic tanks are connected with soak pits, mainly found in schools. A water source survey was also conducted to understand groundwater dependency and depth of groundwater. The findings of this survey will be used to prepare the UWM management plan for the town of Chunar.

IX. Bundu Town

A. CT/PT: The CT/PT report has been finalised. A discussion with ULB officials was held for the location of new toilets. 3 to 5 locations for the new toilets have been proposed to the ULB, and a detailed analysis of business models and revenue potentials will help them finalise the locations. The survey report will be submitted to ULB Bundu to help them better manage their CT/PT.

B. M2M: A meeting was conducted with the ULB officials on implementing the enumeration of sanitary workers in the town. ULB has shown its willingness to carry out a detailed enumeration and profiling exercise for all sanitary workers across their job roles and employment types.

C. UWM: Under UWM, household data about water supply sources and households' dependency on groundwater was collected across the wards. The depth of the water table was also collected from the primary survey. This survey observed the variation of groundwater levels across different wards. Based on the data collected, the team is working on the demand and supply gap analysis.

X. Guwahati

A. CT/PT: A detailed analysis of the profit and loss of each public toilet was done. This analysis will be included in the finalised CT/PT report of the town, which will help the town assess the current model being followed. A visit was made to the LIONS' club-operated toilet to understand the business model of aspirational toilets. The inputs from this visit will be incorporated into the business model analysis of the CT/PT report, which will help the ULB better manage the contract for the CT/PT.

B. M2M: A survey was conducted to collect data from the desludging workers for their enumeration in the centrally and State-sponsored scheme. This survey gave us an insight into the sanitation-related challenges they face regularly. To further enrich our understanding, a site visit to the Boragaon FSTP was undertaken, in which the team understood how faecal waste disposal is currently being managed/treated. This practical exposure added another layer of detail, building a more comprehensive picture of the sanitation issues prevailing in the town.

Focussed group discussions (FGD) with municipal officials and sanitation workers were also conducted to understand the requirements and suitability of PPE kits for these workers. The outcomes of this research will be used by the ULB to procure the PPE kits for the sanitary workers.

XI. Madurai

A. CT/PT: The CT/PT report was modified, and some components, like the preparation of CAPEX for all the CT/PT, as well as immediate requirements, were added. The mapping of common Open Urination areas was completed and shared with the ULB. A few of the PT/CT facilities and a few 'Open Urination' areas were visited for observation, and discussions were initiated with the officials from health, engineering sections and SBM cells. The CT/PT report will help the ULB manage the CT/PT better.

B. M2M: The ULB has completed the enumeration of sanitation workers in the scheme. WASHi will be helping the ULB in a survey of all desludging operators. Also, a meeting with the SBM cell was conducted

to understand the training needs of the sanitation workers. Post-general elections, health camps, and training will be held for sanitation workers by WASHi.

XII. Palani Town

A. CT/PT: The CT/PT report has been completed. Mapping of high-activity zones and open urination areas has been completed. The findings of the report have been discussed with the ULB. This report will help the town manage its CT/PT better.

B. M2M: ULB has completed the enumeration of more than 250 sanitation workers in Palani. In the next phase, WASHi will organise health camps and training for these sanitation workers. Additionally survey of 7 desludging operators was also completed in Palani, which will give details on FSM practices in the town.

C. UWM: A survey of 400 households and 50 institutions and commercial generators was completed. A survey of water resources, including the depth of the water table and soak pits, was also conducted in Palani town. This survey report will help the town in preparing UWM plans and strategies.

XIII. Lucknow

A. CT/PT: The CT/PT report is in the final stages. A detailed cost and revenue analysis of each toilet was taken up. A discussion with the ULB officials was also held to understand the reasons why many defunct toilets or toilets do not have a caretaker. The CT /PT report for the town will be shared with the ULB, which will help them better manage their CT/PT.

B. M2M: As part of the M2M intervention, the ASCI team visited Lucknow and researched the suitability of PPE kits for sanitation workers. The research was conducted through FGD with a range of sanitation workers. The findings of this study will be incorporated into understanding access, usage and storage of PPE and will be shared with MoHUA and respective ULB.

XIV. New Barrackpore Town

A. CT/PT: A visit was conducted to all the CP/PT locations, accompanied by the backend team members, to assess the ground reality and the status of all operational toilets. During the visit, meetings with stakeholders, residents, and ULB officials were conducted to discuss the current status of existing facilities and upcoming or required toilets. The findings of these visits will be incorporated into the CT/PT report and shared with the ULB.

B. M2M: A meeting was conducted with the Sanitary Inspector of the ULB in New Barrackpore to assess the state of welfare of sanitation workers. This will be incorporated as part of the case study for New Barrackpore. The Sanitary Inspector was interviewed to gather insights regarding job roles, employment types and welfare schemes of the State Government. Additionally, a survey of all 5 desludging operators was also conducted.

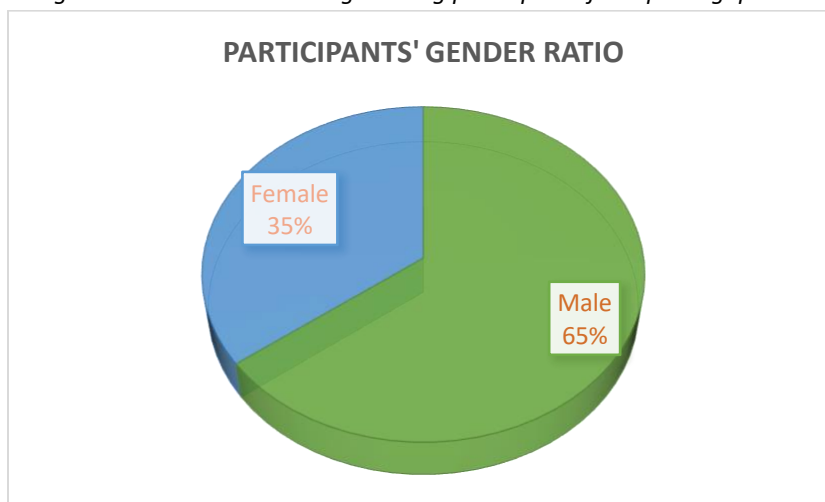
C. UWM: A survey was undertaken for a total of 24 households to understand the source of water, depth of water available, etc., as a continuation to the earlier Household Survey. This data will be required by the UWM team to prepare the final report on UWM. A survey of selected households with septic tanks and soak pits will also be conducted to assess the filter media of the soak pit. The findings of this survey will form an integral component of the final UWM report.

3. INTEGRATION OF CROSSCUTTING ISSUES AND USAID FORWARD PRIORITIES

3.1 Gender Equality and Female Empowerment

Modules have been developed on POSH (Prevention of Sexual Harassment), and they are planned to be rolled out in the next quarter.

Figure 1: Gender ratio among training participants for reporting quarter



During this quarter, 35 per cent of the participants were female, and 65 per cent were male. Participation was seen in the advanced level, academicians, NGO and other (workshops, consultative meetings, etc.) trainings.

3.2 Sustainability Mechanisms

1. WASHi has successfully become a Swachhata Knowledge Partner (SKP) for SBM. We have submitted applications to partner with the states of Madhya Pradesh and Rajasthan, demonstrating a commitment to advancing Water, sanitation and hygiene initiatives in these regions.

2. WASHi's engagement extends to collaborating with key training institutes such as KILA, UK ATI, and NIUA, as well as various NGOs and CSR organisations. Through initiatives like "Delivering Effective WASH Training," WASHi aims to enhance the skills of its partners in effectively delivering WASH (Water,

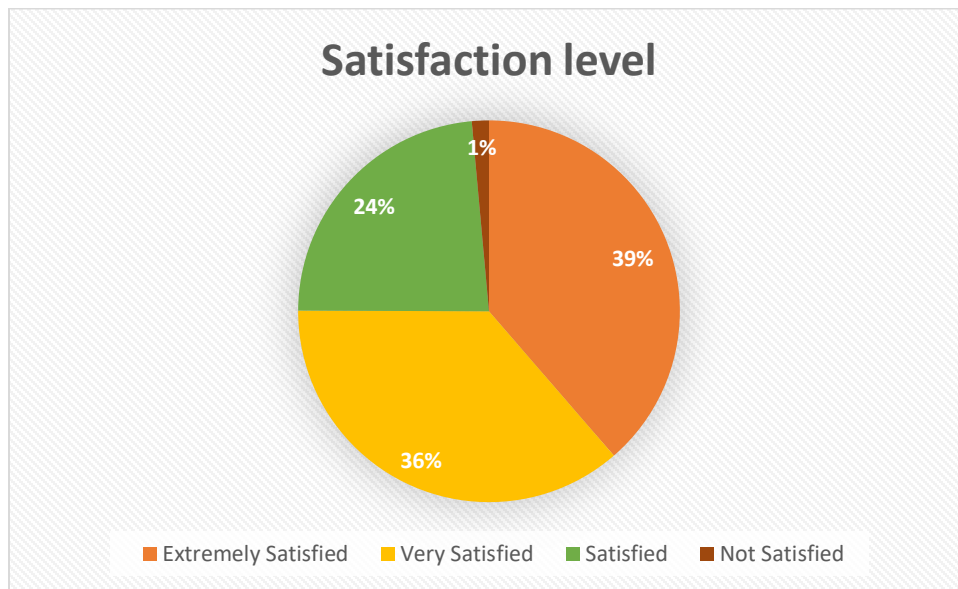
Sanitation, and Hygiene) training, thereby strengthening the implementation of sanitation and hygiene programs.

4. STAKEHOLDER PARTICIPATION AND INVOLVEMENT

A total of 1487 trained personnel have been interviewed telephonically, including 154 trainees in this reporting quarter. The respondents included mostly Government officials and some sanitation workers. Over 4000 calls were made, 450 in this quarter, to people trained under this project to achieve this number. However, despite our best efforts, many did not receive the calls, and some said they didn't have time to respond.

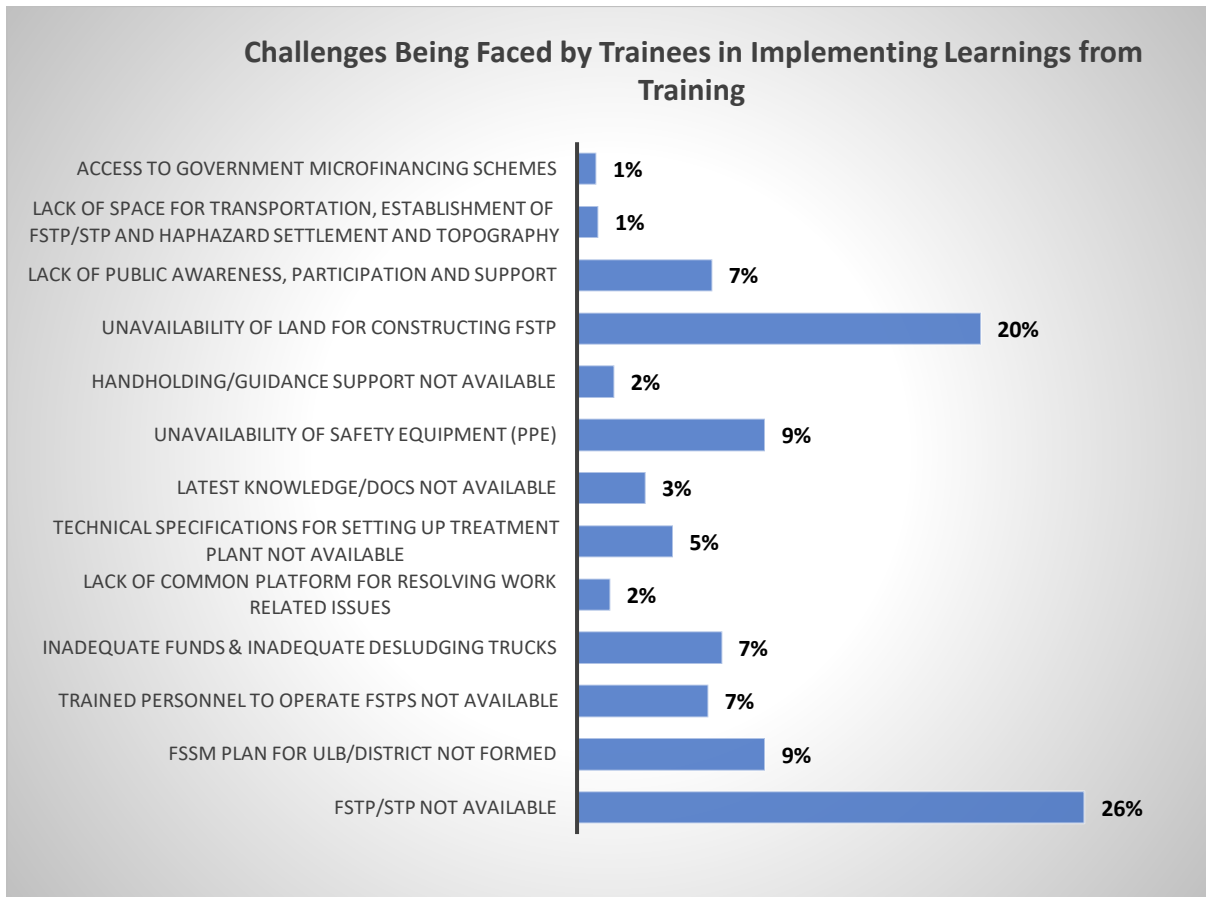
Following are the key findings from the feedback calls successfully conducted (1487) thus far under this project:

Figure 2



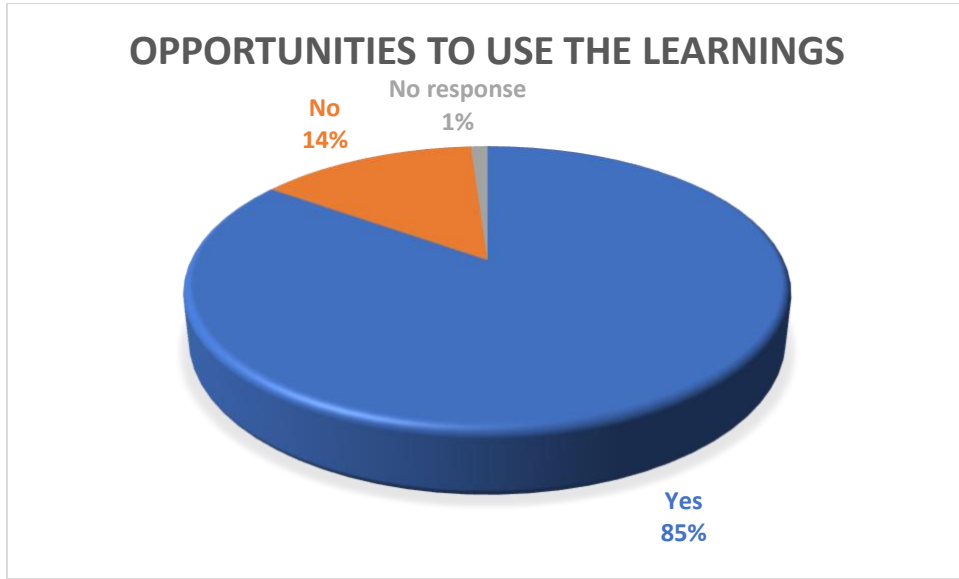
It can be inferred from the above graphical representation that 99 percent of the trainees were satisfied with the trainings. This shows that the overall content and quality of the trainings met the expectations and requirements of almost all the trainees. However, 1 percent of the respondents, who were not satisfied, shared that more trainings and refresher trainings should be conducted, and should not be discontinued. Also, they stated that the content could include more regional case studies and the duration of the trainings should be increased as well. Further, they also suggested that the training methodology and tools could be improved.

Figure 3



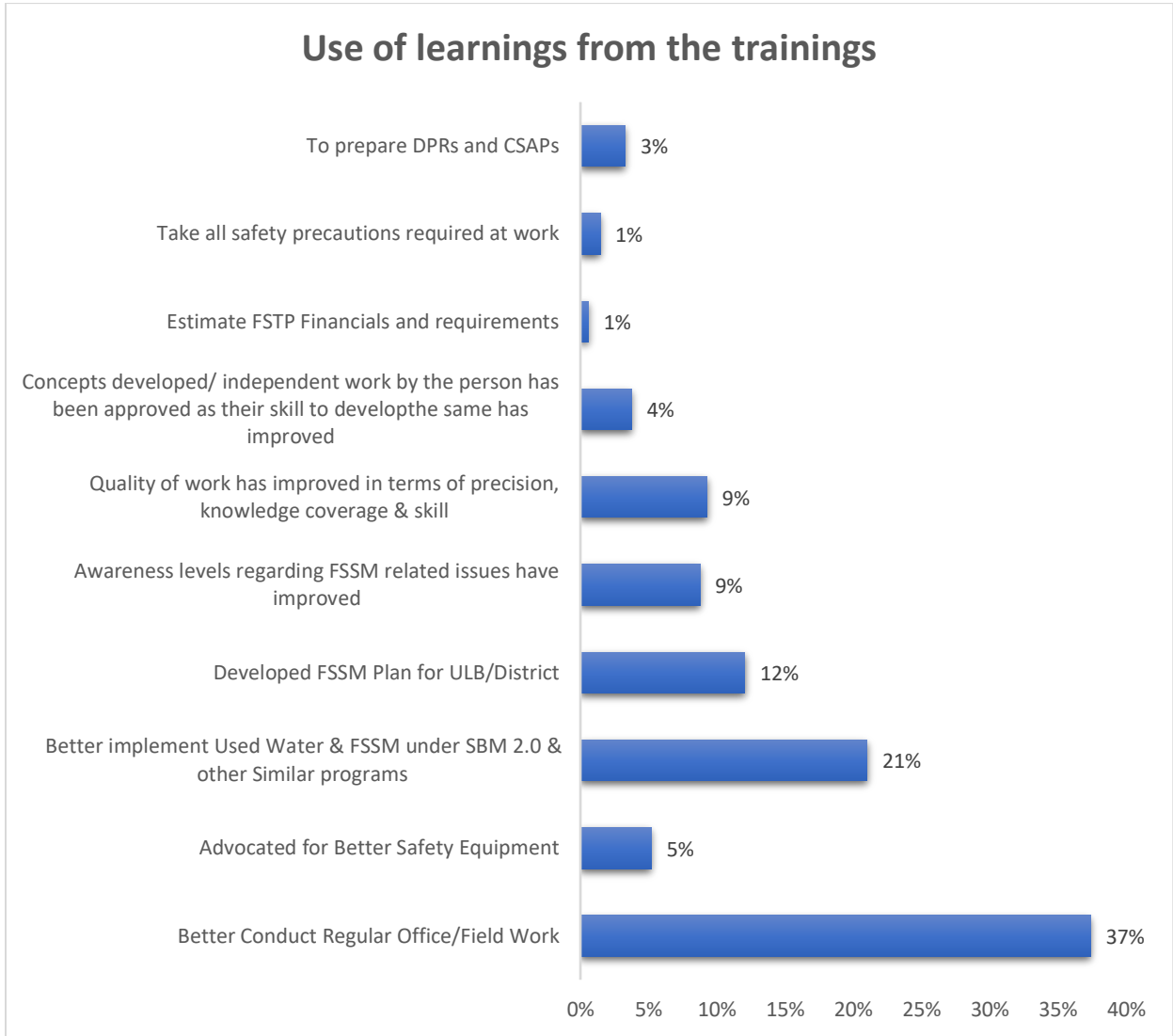
The major issues that the trainees faced in implementing the learnings from the trainings include unavailability of FSTP/STP (26%), absence of FSSM plan for the ULB/district (9%), unavailability of trained personnel to operate FSTPs (7%), inadequate funds and inadequate desludging trucks (7%), unavailability of land for the construction of FSTP (20%), unavailability of safety equipment (9%) and lack of public awareness and support (7%). Apart from these, there are gaps in the availability and access to the latest knowledge and technologies. Moreover, the trainees mentioned that there is a lack of guidance, handholding support and a platform to resolve work-related issues. Some trainees also shared that the difficult terrain/topography of the regions poses many challenges during the implementation process.

Figure 4



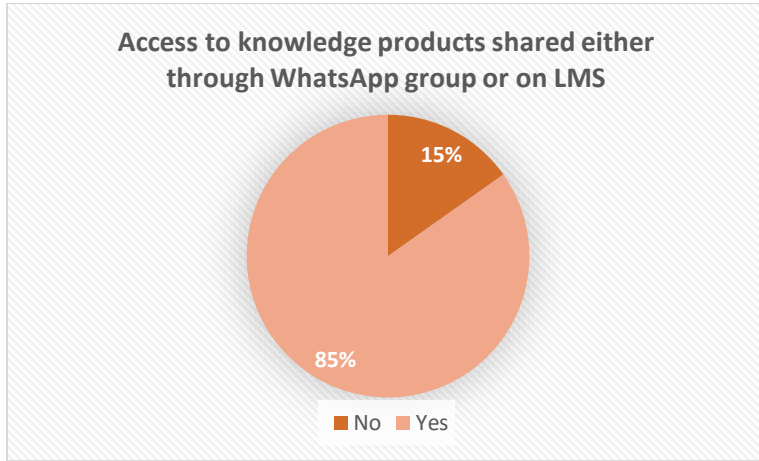
WASHi was happy to see that among the respondents, 85 percent of the trainees had the opportunity to use the learnings gained from the trainings, while 14 percent of the trainees were not able to use the knowledge.

Figure 5



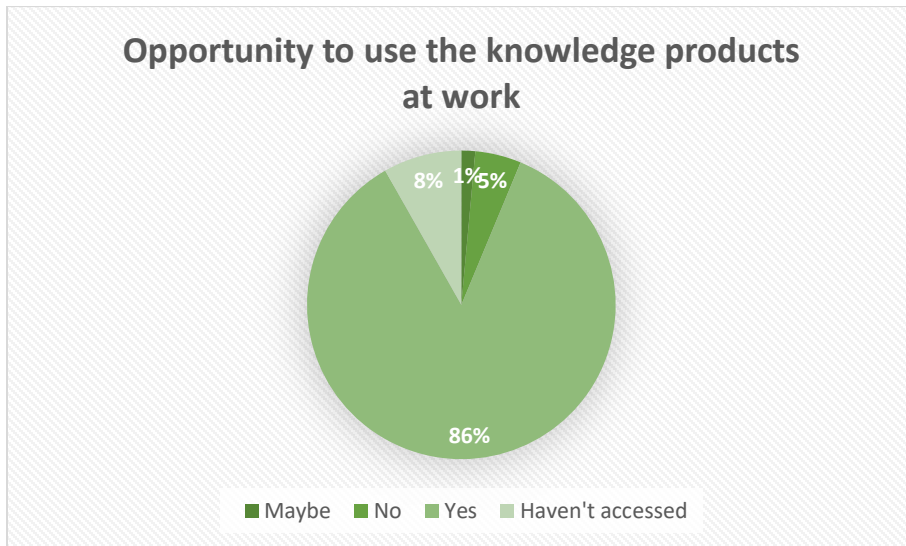
Most of the trainees mentioned that the trainings helped them to better conduct regular office and field work and implement used water and FSSM under SBM-U 2.0 and AMRUT 2.0. The trainings also helped improve the quality of their work in terms of precision, knowledge coverage, skill, and awareness about FSSM. Some of the trainees mentioned that the trainings have also helped them develop FSSM plans, DPRs and CSAPs for their respective ULBs. Moreover, trainees have been able to advocate for better safety equipment in their workplace.

Figure 6



85 percent of the trainees had access to knowledge products like guidebooks, tutorials, SOP, guidelines, and modules, which were shared on WhatsApp groups or the LMS. However, 15 percent of the trainees didn't have access to the knowledge products. Either they were not part of the Whatsapp group or couldn't log in to the LMS account.

Figure 7



WASHi was happy to see that among the people who did have prior access to the knowledge products, 86 percent of them found the products useful and had the opportunity to use them at work at some point in

time. However, 5 percent of them said that they have not yet used the products, 1 percent were unsure how to use them and 8 percent haven't accessed them yet.

Figure 8



The trainees have requested the WASH Institute to conduct future trainings in the areas wherein they lacked clarity and wanted a detailed orientation and training. The top five requested areas of training are Wastewater Management (453), Advanced training on FSSM (260), Design and implementation of FSTP projects (224), Solid waste management (184) and Awareness generation (159). The trainees also wanted to learn more about the reuse of treated by-products and hazardous waste management. They were also keen on learning about stakeholders' engagement, the advocacy of funds and the engagement of the private sector and their legal framework. A few of them also suggested that trainings regarding operations and maintenance, and management of STP/FSTP in the hilly areas of the country should be conducted.

5. MANAGEMENT AND ADMINISTRATIVE ISSUES

There are no management and administrative issues to be reported in this quarter.

6. LESSON LEARNED

In larger urban local bodies (ULBs), there's often a lack of coordination in managing public toilets and community toilets (CT/PT). Various departments handle different aspects without integration, leading to inefficiencies and neglect. To improve, a centralised body or cell is essential for coordinating and monitoring these efforts. This body should ensure collaboration among departments like revenue, SBM (Swachh Bharat Mission), and engineering to streamline processes, monitor contracts, enforce SLAs (Service Level Agreements), and align infrastructure decisions with operational needs.

Prioritising CT/PT within policy and budget frameworks is crucial for effective management and service delivery in big ULBs.

7. PLANNED ACTIVITIES FOR NEXT QUARTER INCLUDING UPCOMING EVENTS

Due to upcoming elections, major training activities in April and May 2024 will be challenging to plan and implement. Instead, the focus will be shifted towards content development for e-learning modules and undertaking preparatory work for future quarters. However, efforts will still be made to conduct online training sessions and webinars or provide training for sanitation workers during this period.

Planned activities for the next quarter include:

1. Initiating a study in the Hilly regions, followed by a workshop.
2. Establish a pool of trainers on STP operators/ERSU/Sanitation workers accredited by the National Skill Development Corporation (NSDC).
3. Conduct CT/PT assessments, including training of assessors and generating PT report cards using the KOBO tool.
4. Train desludging operators and sanitation workers in Lucknow, Ranchi, and Chunar.
5. Conduct sanitation worker training sessions in Goa, Uttar Pradesh, Jharkhand, and Uttarakhand (Nainital), with support from Urban Local Bodies (ULB) and coordinators.
6. Initiate efforts to rejuvenate Ashtamudi Lake in the Kollam district of Kerala.
7. Start a new Skill Development batch in collaboration with the Additional Skill Acquisition Program (ASAP) in Kerala.
8. Follow up on the NAMASTE initiative and conduct training sessions for Sanitation Workers (SSWs) in Dindigul.

6. ANNEXURE

Annexure 1: Links to Training reports

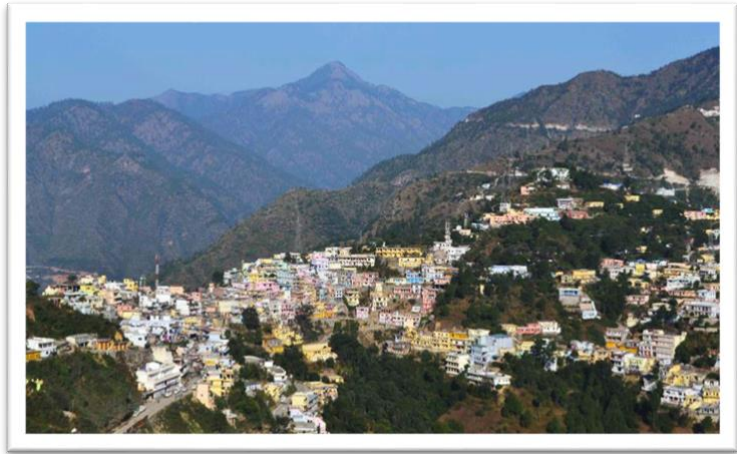
Below are the links to the training reports for the online trainings conducted in the quarter. These training reports have the participants' details as well. Kindly note that these links will be valid for 6 months from the submission of this document.

S. No.	Training Name	Links to the training report
1	Three Days Training on Water Quality Management, Tamil Nadu (8-10 January, 2024)	https://tinyurl.com/bdd2c4zt
2	One day State Level Orientation Workshop for NAMSTE Nodal Officers, Kerala (7 February, 2024)	https://tinyurl.com/3hj6h7cz
3	4-day Advanced Training on Preparation of DPR for Sewage & Septage Projects for AMRUT 2.0, Kerala, 12-15 February, 2024 (Batch 2)	https://tinyurl.com/95ewsejv
4	State-Level Workshop on Used Water Management Focusing on FSSM for Officials from Karnataka, 27 February, 2024 (Batch 1)	https://tinyurl.com/3cdyyhkc
5	Advanced training on DPR preparation for UWM for officials from Bihar Lucknow, 4-6 March, 2024 (Batch 1)	https://tinyurl.com/yc4nhfrw
6	State-Level Workshop on Used Water Management Focusing on FSSM for Officials from Karnataka, 5 March, 2024 (Batch 2)	https://tinyurl.com/3cdyyhkc
7	Delivering Effective WASH Training (DEWT) Workshop, Jaipur (12-15 March, 2024):	https://tinyurl.com/482jfc47
8	Three-Day Kerala Water Conclave on Used Water Management for Building Water Resilient Kerala, Thiruvananthapuram (20-22 March 2024)	https://tinyurl.com/28xcyd86

Annexure 2: Case Studies

USAID Supported WASHi Interventions in the state of Uttarakhand

Uttarakhand is comprised predominantly of hilly regions located in the foothills of the Himalayan mountain ranges. Due to the relentless efforts of the Swachh Bharat Mission, the state achieved the status of 100% Open Defecation Free (ODF) in the year 2017, which essentially means no one is found urinating or defecating in the open. Subsequently, the state is on its road to achieving the status of 100 % Open Defecation Free Plus (ODF+), which not only indicates that no one is found defecating and/or urinating in the open but all community and public toilets are functional and well maintained.



However, attaining the status of ODF++ presents a unique plethora of challenges for the state because along with the components of ODF+, the state would also have to ensure that faecal sludge/septage and sewage are being safely managed and treated, with no discharge and/or dumping of untreated faecal sludge/ septage and sewage in drains, water bodies or open areas.

This presents Uttarakhand's picturesque and mountainous region with a unique set of challenges in managing wastewater due to the intricate topography and diverse & tough terrains. The hilly landscapes of Uttarakhand pose significant obstacles to conventional wastewater management systems, demanding innovative and customised solutions. The steep slopes and uneven topography make installing traditional sewer networks difficult, as conventional systems are not feasible in such rugged and uneven environments. Additionally, the region's susceptibility to landslides and flash floods further complicates wastewater management infrastructure planning and implementation. All the wastewater from the towns flows directly to the Ganga River and its tributaries and pollutes them as the state is situated upstream of these rivers.

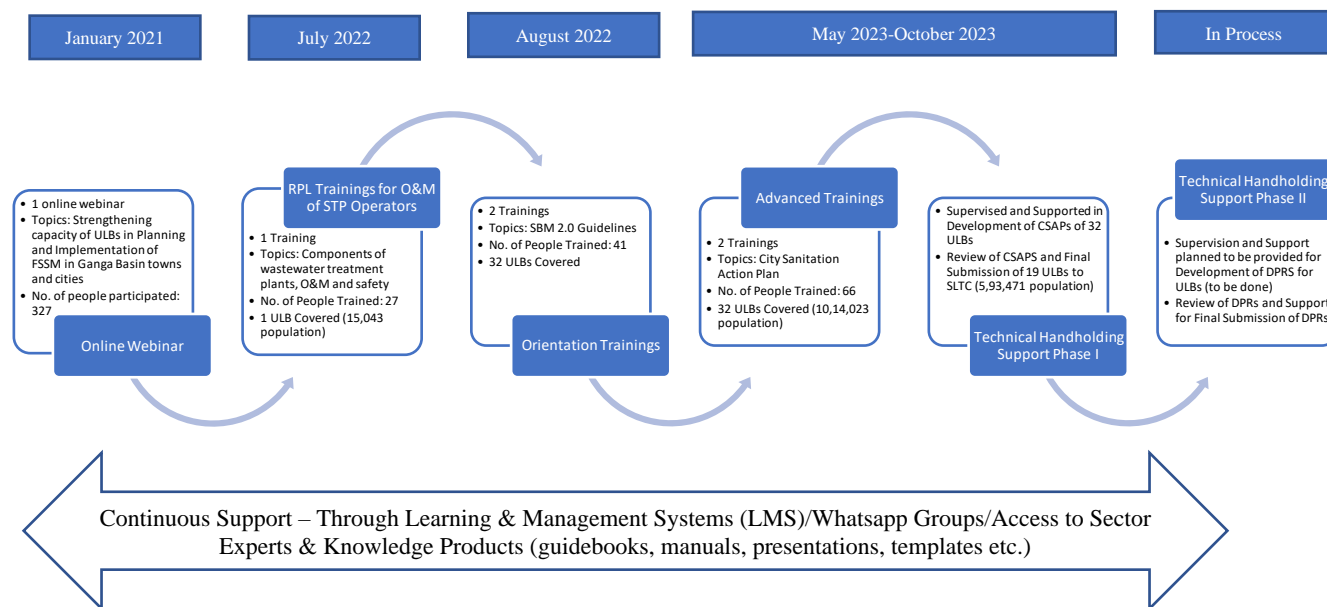
Growing urbanisation in the state, coupled with haphazard planning undertaken over decades and difficult terrain, has led to acute solid waste, drainage, and sanitary issues in the state. In most towns, the drains are open, and wastewater is collected from the properties and flows to the lowest point, which is usually rivers. Unlike plain terrains, where centralised sewage treatment plants can efficiently serve large populations, scattered settlements in the hills necessitate decentralised and resilient solutions. Moreover, the traditional approaches will become more expensive in the hilly areas as the locations are remote, posing accessibility challenges, not being reliant on electricity and unavailability of spare parts.

Implementing effective wastewater treatment in this context requires a careful balance between adapting to the land's natural contours and addressing each community's specific needs. Considering the environmental sensitivity of these areas, sustainable and eco-friendly wastewater management practices become imperative to safeguard the delicate ecosystems and water resources.

To help the state of Uttarakhand address these unique wastewater management challenges, WASH Institute, with the support of USAID and its state partner Dr. R. S. Tolia Uttarakhand Academy of Administration (ATI), planned to extend their support. WASH Institute began its journey in July 2022 and started with undertaking trainings for the state STP/FSTP operators to strengthen their existing knowledge, skills, and capacities on O&M of Jagjeetpur STP, Haridwar.

This was followed by a series of orientation trainings on SBM 2.0 guidelines and advanced-level trainings on City Sanitation Action Plan (CSAP) preparation for state sanitation department’s government officials from January 2021 onwards. Till now, a total of 8 trainings have been conducted, building the capacities of 173 government officials (Executive Officer, Sanitary Inspector, Junior Engineer, A.A.E, Assistant Engineer, Junior Engineer, Accountant).

Model of WASHi Support for the State of Uttarakhand



Apart from the orientation level trainings, two major advanced-level trainings cum workshops on CSAP preparation were held in different batches so that the ULB officials could enhance their capacities and knowledge about financial assistance for the development of sanitation-related infrastructure, different treatment technologies, development initiatives, increased awareness, context-specific solutions, and technical handholding support in 2023. In the first and second batches, CSAPs of 19 ULBs and 13 ULBs were prepared and finalised, respectively. A total of 66 government officials from the ULBs, Pey Jal Nigam and Jal Sanstha participated in these trainings. The trainings were designed to help the ULB officials grasp the procedures and requirements for securing funds and choosing treatment technologies specific to their respective towns/ULBs.

As usual practice at WASH Institute, we created a “WhatsApp group” in which all the participants were added. We also registered the participants in our Learning and Management (LMS), an integrated training, knowledge and learning portal. All the necessary information, knowledge products, documents, and

templates for the training were shared. The participants were also contacted before the training, to follow up on them and make sure that the required backend data for the training was collected beforehand to save precious time during the actual training. This step helped us ensure that the training continued smoothly and was well organised throughout. Along with the Learning & Management System (LMS), the Whatsapp group has been kept active and works as a knowledge exchange and a repository post-training. Templates on Google Sheets were developed in accordance with Annexures 3A and 3B to accelerate the data entry process.

The team of WASH Institute was constantly engaged and interacted with the participants throughout the training, wherein feedback about the sessions was taken verbally at the end of each day and overall feedback after wrapping up the training. The strategies for each town/ULB were created during the training after lengthy discussions and considerations. The towns were divided into plain towns, hilly-ridge/slope towns, and hilly-river cum valley towns. The strategies were developed in the local and topographical contexts of each town. Whichever method(s) and treatment technologies were sought to be suitable and viable were finalised.



As WASHi was undertaking the trainings, participants provided diverse opinions and suggestions as feedback. While most of the towns were hilly in their terrain, some were plain-river towns as well, which initially posed a conjecture that only the conventional approaches could be adopted. However, as the training continued and discussions commenced, the participants started brainstorming about possible and potential context-specific solutions for their towns. They said that the training was very helpful and it was a very engaging workshop. The training helped them strengthen their existing knowledge about used water management strategies, operational guidelines, treatment technologies, CSAP methodology, current demographic profile, gauging future growth trends in the town, identification of solutions for ULB problems, and review of approaches and technologies for Sewage and Septage Management. Many participants also mentioned that group activities like town mapping for the adoption and selection of treatment technologies were helpful for them.

Diverse Types of Approaches

A diverse set of options and approaches were discussed, and after due deliberations and discussions, customised solutions were made for CSAPs addressing the set of terrain and other challenges prevalent for each of the 32 ULBs.

In terms of toilets, many towns have proposed the conversion of insanitary to sanitary toilets and the construction of new individual household latrines as well. However, some towns have also proposed a couple of community toilets (CT) and public toilets (PT).



For used water management, towns have mostly considered a hybrid modality for effluent conveyance and treatment. Some have opted for Partial Sewerage Network with STP cum FSTP, in which sewerage can be implemented in core areas, and the remaining areas are accessible through Fecal Sludge Management. Fecal sludge will be co-treated with wastewater in the STP.

The towns with difficult and hilly terrains, where the population is scattered in pockets throughout the region, co-treatment along with carrier lines have been proposed to ensure that most of the population is covered.

The plain towns have selected a complete sewage network with STP, in which the sewage generated shall be entirely treated in the centralised STP. The towns with households connected to on-site systems, a complete FSM with FSTP has been proposed where FS will be treated at a centralised FSTP.

In July 2023, 19 CSAPs were submitted to the state government for approval. The CSAPs from the second batch are yet to be submitted for approval.

WASH Institute constantly follows up with the Special Point of Contact (SPOC) in Uttarakhand and the executive officers. It was gathered that some towns have started their survey to construct STP/FSTP in their respective ULBs.



WASH Institute plans to review and provide technical handholding support during the implementation of the infrastructure of the DPRs.

WASHi recognises that addressing these challenges also involves recognising the cultural and socio-economic aspects of the region. Customised sanitation and wastewater management plans are thus being developed, considering the unique needs and practices of each ULB. WASHi is trying to ensure that the CSAPs and DPRs are developed by adopting Eco-friendly technologies combined with community-based approaches, which will play a pivotal role in ensuring efficient and sustainable wastewater management in Uttarakhand's challenging terrain in the near future.

Testimonials

Nisha Rawat (Junior Engineer, Pey Jal Nigam, Ganga Gopeshwar):



“My role entails broadly looking at the development plans in the ULBs and the Gram Panchayats; this training has provided me with the opportunity to expand my knowledge about the entire process of developing the CSAP. Now I understand how to collect the appropriate data and the technical aspects of FSTP and STP. The main challenge was selecting a treatment method(s) that would cover the entire population and cater to the topographical issues of Pokhari. After this training, and with the trainers' help, we concluded that would accommodate all the people in our ULB. This training has helped us immensely.”

Meenaxi Chauhan (Junior Engineer, C&M Unit (Ganga), Pey Jal Nigam, Srinagar Garhwal):

“Through this training, I gained a lot of knowledge about mitigating the issues of Liquid waste management. Ukhimat is a hilly region and requires proper planning and development that caters to this topography and can accommodate the population. During the training, we received a lot of technical assistance, and most of our queries were answered. I would request that a training session on developing a DPR also be conducted soon.”



Chandra Shekhar Sharma, Executive Officer, ULB – Laksar:



“Though I had gone through the SBM guidelines earlier, only after this training did I learn about the approaches that can be followed as per the terrain-related challenges, how these approaches can be executed, and which model will be best suited for us. Through this training, we received comprehensive knowledge and have now been able to develop our City Sanitation Action Plan (CSAP). I am very hopeful that my colleagues from other ULBs and I can now address our Used Water Management challenges successfully.”

YouTube Link for Uttarakhand Officials Testimonials:

<https://youtu.be/bkLQa0myMs?si=M3y6E9jT0ckEvB6I>

The trainers' views about the participants:

The trainers observed that the participants were not aware of technical terms and lacked knowledge in this sphere. Although they had the basic knowledge, the Pey Jal Nigam engineers were more active. There was a good partnership between the executive officers and the engineers while preparing the CSAP. While the officers were aware of the socio-economic and geographic conditions and population distribution in their ULBs, the engineers worked on the best approaches to the town.

One suggestion that the trainers provided was that the participants fill in the data themselves and that there should be an online session prior to the main training, orienting the participants about data and procedures.

Any changes made from the 1st batch to the 2nd batch:

During the 1st batch of the training, the participants shared that they would have been more comfortable if the templates/annexures were shared before the session. So, for the 2nd batch and the follow-up calls before the training, the annexure was shared in the WhatsApp group so that the officials get time to collect the required data accordingly. Because of this practice, the training proceeded smoothly, as the participants came with all the data. Moreover, the participants were provided access to the lab to use the computers for data entry. Hence, data entry was faster as well. The trainers also observed they were more prepared this time, and the load seemed less as only Annexure 3B was to be filled.

Learnings from Hilly regions:

Initially, the trainers stuck to the same approach, broadly explaining the SBM 2.0 guidelines, discussing decentralised approaches to FSM, and topographical analysis. As the discussion progressed, finding one solution posed a huge challenge. It was later followed by group activities in which unique problems in each town were identified. The difficult terrain and location were holding back the participants from seeking approaches to be adopted. Since most of the towns/ULBs are hilly, isolated and prone to water scarcity, it was difficult to implement a sewer network. Although interception and diversion seemed feasible and applicable, there was confusion regarding funds from the government. The trainers mentioned that more research was required to find suitable solutions. They also suggested that Ladakh's model could be implemented in the next training(s). The next step would be to conduct a DPR preparation training.